

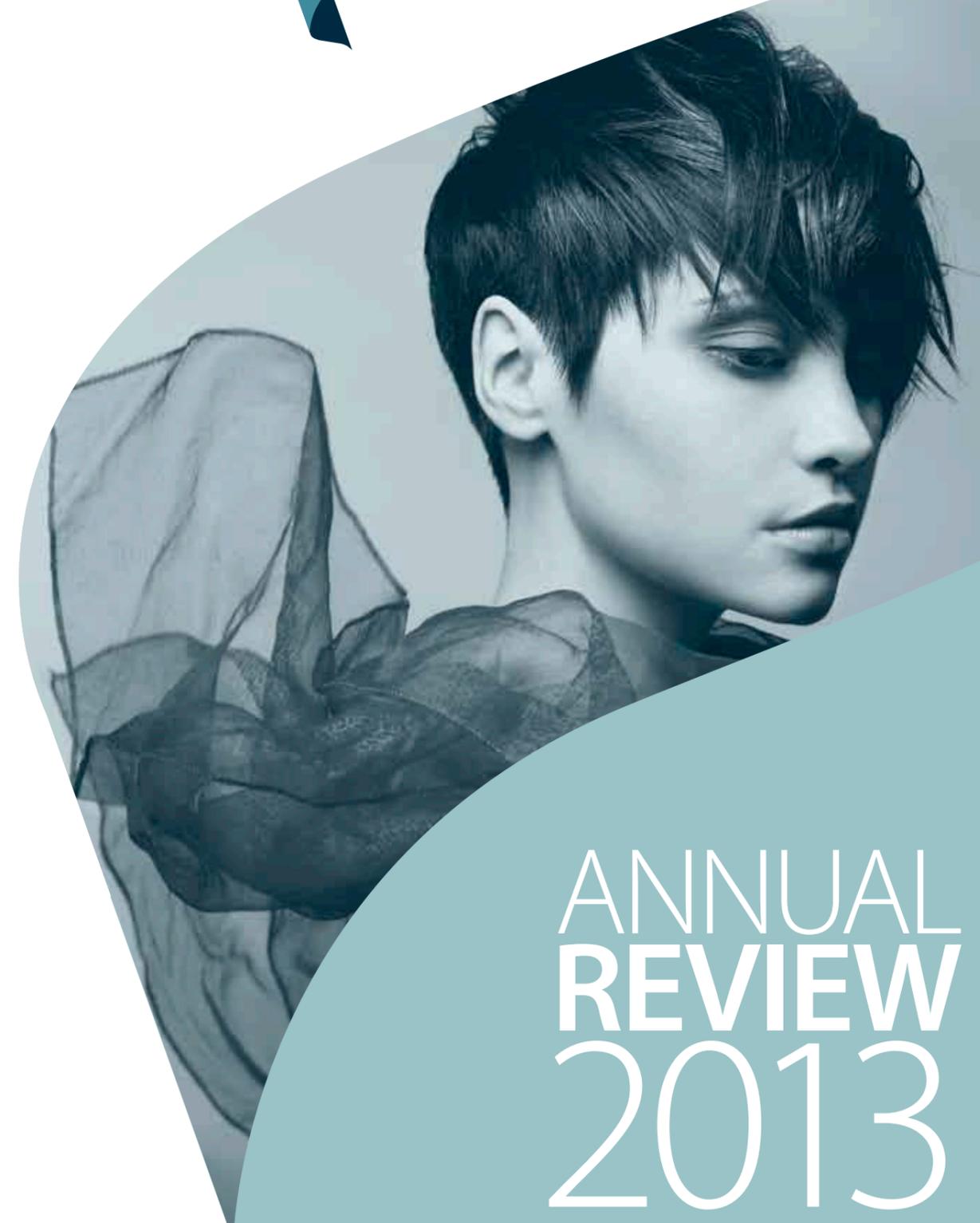


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whichPLM  
ANNUAL REVIEW 2013



# ANNUAL REVIEW 2013

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# WELCOME

to the WhichPLM Annual Review 2013

**In my introduction to last year's Annual Review, I predicted that 2012/13 would be "eventful". One of my more profound understatements, as it turned out.**

Not only have the past twelve months been exceptionally busy in terms of core industry events and software developments, they have also seen rather significant, tectonic shake-ups to the PLM landscape - from the top down. This has proven to be the year that cloud-based PLM deployments took off; the year that more small-to-medium and boutique businesses began to realise the benefits of PLM; the year that the previous market leader's position was usurped; the year that WhichPLM underwent its first comprehensive rebranding.

Most importantly, 2012/13 was the year in which the power, where PLM is concerned, transitioned from the marketing departments of vendors around the world into the hands of the customers.

Despite what the name might suggest - and it's a name we stuck firmly to at the time of our redesign in November 2012 - WhichPLM's job has always been to describe and to try and circumscribe what PLM actually is. Ours has been a dual role ever since the company was founded, five years ago, and we have always understood that to have any hope of empowering retailers, brands and manufacturers to figure out "which PLM?", we must provide them with the tools to understand the market in the first place.

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...EQUIPPED WITH TOOLS LIKE THE WHICHPLM ANNUAL REVIEW, CUSTOMERS ARE NOW FIRMLY IN THE DRIVING SEAT. RETAILERS AND BRANDS IN 2012/13 ARE NO LONGER WAITING IT OUT, AND NEITHER ARE THEY SATISFIED WITH BEING DUPED.

This has been less simple than it sounds, and the steady, tidal upheaval of education and empowerment has occupied much of our time and the time of other industry bodies and forward-thinking vendors. From 2008 to 2011, our business might have been better described as "what's PLM?". Nowhere near as catchy a hook, I'm sure you'll admit. But so shrouded in spin, mis-selling and misperception was the marketplace that the bulk of our insight, interviews, tools and articles from that period landed on the descriptive end of the spectrum rather than the decisive one.

That isn't to say that people haven't been picking PLM in that time - they have - but rather that even those businesses that could quantify and qualify a need for PLM were in many cases unsure what, precisely, choosing and implementing a solution would mean for them.

This is no longer the case. More often than not, retailers and brands approach us with a firmer understanding of their requirements. They no longer need to be told, as I proclaimed to the industry in last year's introduction, that "PLM, properly chosen, sensibly planned and well implemented, works". Whether they deal in hundreds of pieces per month or tens of thousands, these companies are no longer paddling with fevered strokes into uncharted waters, spurred on by nothing more than a nebulous need for something new. Instead, educated and empowered customers come to market having identified a clear opportunity on the horizon, or having developed a clear understanding of what it will take for them to remain afloat.

This represents a dramatic shift in the dynamic of the PLM marketplace, and one whose results are felt in every section of this year's Annual Review - from customer satisfaction to exclusive articles, and from market analysis to predictions for the future. Today, the biggest vendors aren't necessarily selling the most, and in areas like Adobe Illustrator integration, end users are beginning to make their wishes

known - sealing or condemning deals not on the basis of who gave the glitziest presentation, but which vendor offers the raw tools they need to do their jobs, day in and day out.

In order to recognise the import of this sea change, though, it's vital to understand how things once were - a time where the biggest and the boldest were automatically considered the best.

In many ways, the PLM marketers of today are fighting back against their own past selves. The perfect confluence of technology and optimism that characterised the early years of PLM created a fertile breeding ground for salespeople: they had an ill-defined product to sell, a clear audience to pitch it to and, crucially, prospective customers whose margins were being constrained by inefficiencies but lacked any real knowledge of what their money could buy.

Needless to say, the PLM industry became known for bold claims and for attempts to bury the spectre of notable failures beneath layers of polish and immaculately rehearsed spin.

In 2008, at the time WhichPLM was founded, PLM for fashion was confused and contradictory. Visualise an actual, physical marketplace where every stall owner is selling ostensibly the same thing, but whose racks and carts are heaving with produce that, to the untrained eye, looks completely heterogeneous. You're ushered in on strict instructions that you must buy something in order to remain competitive. And in order to gain access to this metaphorical bazaar, you've been forced to open your purse for inspection, and to employ the services of a guide who, more likely than not, is on a stall owner's payroll.

Thrust into that situation, could you confidently say that you had emerged on the other side having made the best and most informed choice for your business?

Because before you know it you may have been designated your company's PLM expert, and entrusted with making an enterprise-level business case for something you're hard-pressed to explain yourself, instead rehearsing the mantras you picked up from whomever shouted the loudest.

This was shopping for PLM between 2005 and 2011. Poorly understood, sometimes flagrantly mis-sold, and given nowhere near the degree of consideration it deserves as an enterprise system with a business impact to rival ERP. But, equipped with tools like the WhichPLM Annual Review, customers are now firmly in the driving seat. Retailers and brands in 2012/13 are no longer waiting it out, and neither are they satisfied with being duped. They stride into the marketplace equipped with the right questions to cut cleanly through sales pitches. And vendors are catching on, too, placing a renewed emphasis on delivering business value and exposing successful implementation references and case studies, rather than trusting their feature sheets to do the talking.

In short, prospective customers know what PLM is, and I feel as privileged as ever to be part of the team that brings them this year's Annual Review. Packed with exclusive content, the results of our long-running customer survey, supplier profiles, market intelligence and more, you hold in your hands (or on your tablet) the latest tool in an arsenal of exciting, empowering initiatives that I firmly believe will create a fairer and more prosperous market for many years to come - one where consumers can confidently ask themselves, "which PLM?".



BEN HANSON  
Editor

## The Annual Review at a Glance

Clocking in at more than 115 pages, this year's Annual Review is the deepest, most comprehensive picture assembled to date of PLM for the retail, footwear and apparel industries. It is also an exhaustive compilation of material by any definition of the word. But the Annual Review is by no means impenetrable; whether you find yourself only just beginning to investigate the PLM market, or whether you're fast approaching a decision on which solution to adopt, these pages contain a wealth of useful information designed to help you make sense of an often opaque and obtuse market.

Depending on the stage you are at in your investigation of the PLM marketplace, you may wish to jump directly to one of the headline sections listed below. Alternatively, the Annual Review is structured in such a way that the introductory section (containing our best features from the past twelve months) provides a grounding for the ones that follow it, meaning that this entire publication can be read in sequential order to develop a complete and accurate understanding of PLM for fashion as it exists today.

**Page 08** Turn to page 08 to learn a little more about the driving forces behind WhichPLM, and how we came to be in the position of authority we occupy today.

**Page 12** An exclusive briefing on the role of mobile devices and applications, presented by our partners at Speak, occupies pages 12 and 13.

**Page 14** The best articles from our unparalleled roster of Editorial Contributors are collected between pages 14 and 59.

**Page 60** Turn to page 60 to dive straight into the results of our industry-defining Customer Survey and learn from the hindsight and experience of retailers, brands and manufacturers all over the world who have implemented PLM.

**Page 79** Pages 79 to 83 collect our exclusively informed market analysis, including insight into who is buying PLM today, the size of the industry from its inception up to 2012/13, and the geographical distribution of this year's new PLM adopters.

**Page 84** Companies who understand PLM and have begun to try and distinguish between the vendors who serve the marketplace today should turn to page 84, where each of 2012/13's biggest players was given the opportunity to explain what makes them unique.

**Page 112** Our own conclusions about those vendors occupy pages 112 and 113.

**Page 114** Finally, turn to page 114 to get a glimpse of the future of PLM.

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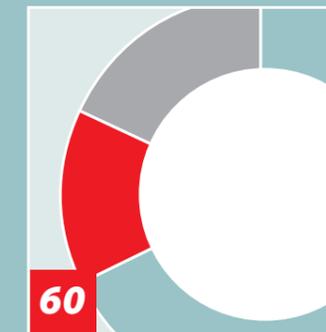
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# 40 Years On...

AN INTERVIEW *with* OUR FOUNDER

**On the eve of his fortieth year in apparel, Mark Harrop, founder, primary consultant and Managing Director of WhichPLM, talks about the transformations the industry has undergone and the role he sees WhichPLM playing in its future.**

**Q.** The past twelve months have seen some real transformations in the breadth and the scope of technology for the fashion industry. For someone who's been involved in that industry for almost 40 years, just how different are things today than they were when you started out?

**A.** The fashion industry today is, in a lot of ways, the same as it's always been. We still make and sell (or at least try to sell) the right garments for the right markets; we still source materials from all over the world to make our clothing, footwear and accessories; and we still employ designers to envision them, technicians to make them practical, marketing teams to advertise them and so on.

In a host of other ways, though, the actual "business" of fashion has changed dramatically, influenced by the technological revolution that has transformed a range of other industries since the commercialisation of the Internet in 1995.

In 1974, when I started working on the cutting room floor at Lawtex, there were no computers. All of our cutting tools were handheld and motorised. We developed patterns by hand in 1/5th scale with little in the way of concrete details to help us visualise how they might look full size - a little like taking photos outdoors and not being able to see the fruits of your labour until you went into the darkroom.

Today's cutting rooms would be practically unrecognisable to a factory worker plucked from 40 years ago. We have processors built into cutting and sewing machines, with the blades and needles guided by entirely digital patterns in exacting detail. Our designers create those initial designs on touchscreen tablets, using standardised canvases to build their silhouettes and grades upon. In some cases, those designs can then be draped - in a choice of materials that react realistically according to their cloth characteristics - over

three-dimensional virtual avatars, allowing them to see a fully-realised prototype without ever leaving their desks... let alone going into the "darkroom"!

When I started out, all of that designing and manufacturing tended to be done in the same place - or at least in the same country. Today, garments are very rarely conceived in the countries where they're manufactured, or manufactured in the countries where they're sold. A huge amount of footwear and apparel is made in countries like China, Vietnam, Bangladesh and Sri Lanka, and then shipped over to Western retailers. But even this looks to be coming to an end, as those same manufacturers start to develop their own brands to compete with the influx of foreign names.

So we can manufacture more quickly and in more places than ever before - thanks to mechanised, intelligent machinery and the collaborative potential of the Internet.

But that's not all: in changing, retailers and brands didn't just digitise what they'd done before. Forty years' worth of progress has enabled the industry to take advantage of opportunities that simply didn't exist until now.

Over half of all adults in the UK have bought products online, and a prominent retail research agency suggests that online channels may account for between 10-15% of all fashion sales this year in our home country (UK) alone. The same patterns (or even more pronounced) are being mirrored in the US, Europe, the Middle East and Australia, and coupled with the ubiquity of mobile devices, these trends have even created a whole new category of shoppers. Called "showroomers", these consumers visit brick-and-mortar stores to touch products and experience the brand lifestyle, but do so with a smartphone in hand, searching for better deals on the same products from online mega-retailers like Amazon.

That kind of access to information - the encapsulation, really, of just how much everything's changed since I joined the industry - doesn't just empower consumers, though. Retailers and brands can leverage a massive amount of information (from cutters and sewing machines, to merchandise planning systems and 3D-prototyping software) using a centralised data repository like PLM to coordinate their business intelligence and make truly informed decisions.

They couldn't have done any of that forty years ago!

**Q.** On that subject, technology for fashion - primarily PLM and ERP, but also things like CAD, CAM, CRM and planning - has become such a large and enduring industry that there must be many people working in it today who've never had the real experience of actually making a garment. Can you tell us more about how your early hands-on knowledge has helped in your career?

**A.** My first cutting room job, as I said, was at a company called Lawtex. When I started out, aged sixteen, I was working directly with fabrics myself. It wasn't long, though, until I

was promoted to running the cutting room, where I worked to bring in new and improved methods and handling techniques, increasing our output by 20%.

I eventually moved into production management, where I ran a factory of 200 staff, producing uniforms for companies like British Airways and the Ministry of Defence.

I owe a great deal to that firsthand experience - from the initial apprenticeship right the way through to my first management role - since it

**"I OWE A GREAT DEAL TO THAT FIRSTHAND EXPERIENCE - FROM THE INITIAL APPRENTICESHIP RIGHT THE WAY THROUGH TO MY FIRST MANAGEMENT ROLE..."**

allows me to talk to virtually everybody who's involved in the product lifecycle. There have been times when I've walked into a brand office or factory in my suit, laptop under my arm, ready to meet the board, and been greeted with... shall we say a bit of scepticism from designers and pattern makers. To them, I looked like just another I.T. salesman. In those cases, being able to roll up my sleeves and talk shop with everybody, from the purchaser to the cutter to the production manager, has really given me the edge.

I have also seen that manufacturing transition I talked about - from domestic factories to offshore hubs - happen in real-time. And that's an opportunity very few people will ever experience, seeing a complete transformation in the way an industry works, enabled by mechanisation and technology.

Although I would never change my background, it does make me a little sad from time to time to think that unique skills and experience like mine (and that of a lot of the other WhichPLM Editorial Board members) will eventually disappear, leaving us with an industry where all the hands-on manufacturing expertise is second-hand, passed down from the new experts offshore.

Luckily, though, those skills and experience serve me very well in my consultancy work for some of the world's biggest brands.

**Q.** It seems like wherever you went, technology followed - or vice versa. At what point in your career did you notice that, instead of just helping companies to design, cut, and sew garments, technology was becoming capable of managing the product lifecycle in its entirety?

**A.** The CAD industry was doing extremely well in the mid-1980s - prices were high, competition was low, and the software was selling almost as quickly as the vendors could fill out order forms. We might reasonably have expected that to be the end of it - the most that technology could do for fashion. At least until 1987, when an enterprising group of people (I don't mind calling them that, since I was one of them!) brought the concept of product data management (PDM) from the aerospace industry and into fashion, working under the banner of Microdynamics.

PDM may have started off small, but it quickly became a revolution, forever changing the way the retail, footwear and apparel industry managed its data. Today most of us know the central idea as PLM, but at the time PDM was something entirely new - a way to move information from paper scattered on people's desks to a centralised database, bringing with it predictability, efficiency, and the ability for designers and executives alike to trust in their information.

How that original solution became today's massive PLM marketplace is another story entirely...

**Q.** Well, we know that there are now around 60 companies selling PLM to the fashion industry today, so I'm sure our readers will want to know how we got here.

**A.** Well, I've mentioned that in the late '80s Microdynamics were the only company selling PDM to the fashion sector. It didn't take long for new competition to emerge, though - about two or three years. As with any new development, imitation trumped innovation, and most of the competition understood the end result - PDM - but not the processes and the journey that had brought us there.

Over the next decade, however, other vendors became smarter and more efficient. Methods were improved upon as staff moved from

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company to company, sharing their knowledge and expertise. Soon enough the competition became advanced enough to start challenging our (Microdynamics') market leading position.

Being in the privileged position of watching other vendors improve their efficiency and process support year on year, though, had the benefit of allowing us to remain one step ahead, deepening and broadening the scope of our solution as often as we could.

That, in turn, allowed Microdynamics (which was acquired by Gerber Technology in the early 1990s) to take the lion's share of the market. By combining the original solution with their own WebPDM system to create what they termed at the time a "second generation" solution, the company managed to remain market leaders until the early part of the new millennium.

At that time, I had left Gerber-Microdynamics to join a company called Freeborders. We were a young team, with big ambitions - all of us coming from well-known fashion industry companies. It was there, in 2003, that we launched what was to become, for a short while at least, the successor to PDM: Collaborative Product Management, or CPM.

As it turned out, CPM became more of a stopgap solution between the eventually-web-enabled PDM and the truly web-based PLM. We can see that from CPM's much shorter shelf life - just a few years, compared to thirteen years of PDM and, to date, ten years of PLM.

In those ten years, though, PLM has grown more rapidly than PDM or CPM ever did. At the start of the millennium there were around five vendors, and today the industry is home to almost sixty companies selling advanced PLM solutions. And, this figure will only increase as retailers, brands and manufacturers become better informed and better able to realise the true value of adopting a PLM solution.

**Q. Being part of that growth must have been instrumental in your decision to branch out on your own and found WhichPLM? Tell us more about that.**

**A.** In 2007, after thirty-three years in manufacturing and technology, I'd reached a

point where I felt like I had gained some really valuable experience from two sides of the technology divide, as a customer and as a supplier.

So, I thought, what better way to use that knowledge than to help others? I knew from experience that retailers and brands were making large - and very expensive - technological investments without necessarily being in possession of all of the facts.

PLM had become such a massive market, so quickly that it had created an environment where all the power rested in the hands of the salespeople. Those retailers and brands knew they needed something to help them manage their product development, and they were told PLM was the solution, but most of them had

**"WE DIDN'T NECESSARILY SEE OURSELVES BECOMING A MAJOR DESTINATION FOR FASHION TECHNOLOGY NEWS, BUT TODAY WE HAVE A CIRCULATION OF AROUND 30,000 READERS..."**

very little idea what it was, let alone how to go about comparing the solutions available in order to find the best fit for them.

And with fifty solutions (at the time) being pitched to inexperienced companies as the complete solution to all of their problems, it's little wonder that many customers were taken in by the marketing spin and wound up implementing inadequate or unsuitable solutions.

So I decided to use the insight I had from both sides of the equation - buying and selling solutions - to provide impartial and unbiased information about PLM: what it is, who it's for, how to implement it and, giving rise to the company name, which vendor's solution to pick.

**Q. Since you wanted to act almost as the 'police' for the PLM industry, did you find that people were receptive to the idea of WhichPLM?**

**A.** For the readers - the retailers, brands and manufacturers who wanted to understand PLM and make their own, informed choices - we were providing a service they desperately

wanted, so many of them jumped at the chance. In fact, within a week of founding the company I was approached by Benetton to help them on their PLM journey.

Despite knowing that WhichPLM was something the industry needed, though, we started out with pretty modest goals. We didn't necessarily see ourselves becoming a major destination for fashion technology news, but today we have a circulation of around 30,000 readers, and we're seeing new and exciting brands engaging with our content every week.

This all goes to show that the market itself is still growing - and growing fast. Because so many companies are realising the potential of PLM each year, the need for what we do has only increased, since there have always been - and still are - too many vendors overselling their products, solutions and services, and under-delivering on those promises.

That may sound as though we have an antagonistic relationship with suppliers, when in fact we enjoy strong, productive and professional links to the vast majority of the world's PLM vendors. Yes, at times those relationships will get a little rocky, since we firmly believe that the "right" PLM choice is the one that's right for the client, not the one that's in a supplier's best interests.

Rather than treating a rejection as an opportunity to learn and improve, there are certain suppliers who will look for reasons outside of their own organisation to blame for their not winning a deal. The smarter vendors will instead use our expertise and the feedback they've received from their prospective client to improve their products and services, and be better prepared for the next time a retailer or brand asks themselves, "which PLM?".

**Q. It sounds like your ethos has always remained the same, but presumably WhichPLM hasn't been static since day one. Can you tell us about some of the most important developments and changes you've made to the company and the website over the past few years?**

**A.** From humble beginnings, we've grown to become the most-visited website in our category, and in order to accommodate the needs of so many new readers we've undertaken two complete website re-designs. The second of those was in late 2012, and was accompanied by our first full re-branding, with a new logo



and an entirely new look to complement some exciting new content.

Content is something we've always put first, and so our 2012 redesign was accompanied by a big recruitment drive for our Editorial Board, which now comprises experts in everything from tailoring to enterprise resource planning. Those experts, as well as our own in-house team, are committed to providing up-to-the-minute and exclusive articles, information, education and thought leadership completely free of charge to all readers.

We've also worked tirelessly to build on the quantity as well as the quality of our content; you're reading our second Annual Review (containing our third industry survey), which in a very short space of time has become a landmark industry event. And our range of tools and tips has only increased, too.

But it isn't all about content. In the past five years we've built a small but extremely capable team of people to manage our consulting work, our online magazine, our relationships with suppliers, and some new initiatives we're very excited about.

**"I WANT TO THANK ALL OF OUR LOYAL WHICHPLM READERS AND OUR DEDICATED TEAM FOR MAKING THESE AND OTHER EXCITING INNOVATIONS POSSIBLE, AND I LOOK FORWARD TO PROVIDING THE SAME UNCOMPROMISING AND PROFESSIONAL CONTENT AND SERVICES FOR MANY YEARS TO COME."**

**Q. On a personal level, how do you feel about the past five years?**

**A.** I'm lucky, really - not only do I spend my working days doing something that I truly enjoy, I also get a huge sense of satisfaction from knowing that my advice benefits others who are in a less informed position.

Trust is a huge thing, and knowing that retailers and brands all over the world have confidence in me, my team, and our guidance is immensely flattering. And equally I have absolute respect for them, whether they come to us through their designers, technicians or executive team. Helping an enterprise to realise their technological ambitions is as rewarding for me as it is for them, and I'm as excited about doing that as I was on the day we launched WhichPLM.

The day that changes will be the day I seek out the next challenge and leave WhichPLM in extremely capable hands.

**Q. Speaking of seeking new challenges, the market as a whole is beginning to understand that PLM is not the only solution that apparel companies need to succeed - do you have any plans to bring the WhichPLM ethics and brand to any other part of the industry?**

**A.** When I started WhichPLM, the PLM industry was the most obvious target for the work we wanted to do. My own experience was in PDM and PLM for fashion, and I knew that the market would benefit from the kind of advice that we would be able to put out there: informed, impartial and insightful.

There's still a great deal that I want to do with WhichPLM itself, since I firmly believe our core services are more sought-after now than ever before, and I want to make sure that we can bring everything we do, intact, to everybody who has a role in the product lifecycle.

A big part of that will involve education, since there is still a great deal of reticence - particularly from creative teams - to adopt something they don't necessarily understand, and in some cases see as a threat. To that end, we plan to soon launch WhichPLM Academy, a brand-new initiative and a brand-new website designed to deliver world-class PLM training (from the basics upwards) around the world. I'm thrilled about the team we have lined up to deliver these courses, and I'm excited to be able to tell our audience more about it all soon.

The Academy isn't the only initiative I'm able to talk about now, though, and this one is, if anything, even more exciting. I mentioned that PLM was the logical destination for us when we started out, and I've always recognised the limitations of my knowledge and experience. So, when we began to be asked (more frequently than ever this year) about the possibility of founding "WhichERP" based on the same principles as WhichPLM, I always dismissed it as falling outside my area of expertise, or mentally filed it away under a list of things to do when time permitted.

As it turns out, time never really permits, so instead we chose to just get on with it and found WhichERP! We found a counterpart for me on the ERP side, who will be working closely with WhichPLM Editor Ben Hanson - who'll be heading up WhichERP also - and the rest of the team to be able to offer the same level of ethics and expertise to an entirely new market in 2014.

I want to thank all of our loyal WhichPLM readers and our dedicated team for making these and other exciting innovations possible, and I look forward to providing the same uncompromising and professional content and services for many years to come.

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**Befitting a digital-first publication that we predict will be read primarily on the move, this exclusive article from Karen McCandless examines the role of mobile devices and applications in bringing speed and agility to product development and retail. The Editor of Speak - a Microsoft magazine for retail, consumer industries and hospitality - Karen brings her considerable retail experience to bear in predicting a future driven by unfettered access to data, and by carefully curated applications designed to enhance the PLM experience.**

A PARTNER BRIEFING ON...

# Mobile PLM



by  
KAREN MCCANDLESS

**Retail and consumer goods companies are becoming increasingly global, with design and production facilities located in all corners of the globe. The organisations have expanded their operations across the globe to secure their place at the forefront of product innovation. This means that teams have to work more closely together than ever to design smarter, connected products in a shorter time frame while fostering creativity and innovation.**

In addition, consumer demands and expectations have soared while their loyalty has plummeted. They expect access to more innovative products at a more competitive price, no matter where or when they are shopping - whether it is online, in store, on their mobile device, or across social networks. If these expectations are not met, they will have no qualms about going elsewhere. For example, if the product is not in stock at one retailer and they can't order it online with next day delivery or pick it up from another store, they will go to the retailer down the road.

For retail and consumer goods companies, ensuring consumers have access to innovative products at a time that suits them across any channel has never been more important. This makes collaboration across the entire supply chain key to close the gaps between the designer, the factory floor and the end customer.

This collaboration - both internally and across the entire value chain - is being facilitated by the rise of mobility in product lifecycle management (PLM). There are a myriad of devices of different shapes and sizes for different functions and users that are available on the market today. Corporate users can access their information with a tablet device wherever they are, whether they are travelling to another design facility, standing in the queue at Starbucks or in their home office. Meanwhile, fashion designers can take snaps on their mobile devices when inspiration strikes them and warehouse and logistics workers can access their data on a more ruggedised device that is secure and durable with a longer life battery.

These mobile devices deliver the relevant information to the right person at the right time to ensure better, smarter and quicker decision making. Product designers can work together in tandem on new concepts, providing feedback and ideas for new products. They can then communicate these ideas to their suppliers and the manufacturers who can then feed back if there are any issues or necessary alterations - for example if the manufacturer does not have the right equipment or can see a more efficient and cheaper way of working. As all parties in the supply chain can access this information on the go at any time of day, the review and approval process becomes much quicker and more efficient.

The sheer quantity of mobile platforms can make development of these kinds of applications a daunting prospect, but generally speaking the predominant mobile operating systems are Windows 8 (seen most prominently on Microsoft's Surface Pro laptop-replacement tablet), iOS (making its home on Apple's iPads and iPhones) and Google's ubiquitous Android. Choosing the right hardware for the right environment is a task that today's IT departments should approach with the same consideration for user experience, stability, and enterprise support as any other aspect of technological architecture, since these mobile devices are being adopted in greater numbers each year at every stage of the product lifecycle and extended supply chain.

While the hardware is certainly important, true mobility is also dependent on the software that runs on these devices. A number of PLM vendors have released mobile apps that do more than just enable web access to their existing PLM front-end via a mobile device. These apps have been specifically designed to help with the idea capturing process, which companies in the fashion industry will normally define as the progression from inspiration to instantiation, via storyboards and collections. The electronic capturing of trends and inspirations in mood boards that can be shared both inside and outside the office (via mobile applications) supports both

internal and external collaboration, including work with supply chain partners.

Traditional PLM companies like Dassault Systèmes, Siemens PLM Software and PTC currently offer mobile functionality within their existing PLM solutions, but there are also industry specific mobile applications that have been developed by the likes of TXT e-solutions and Centric - companies that I believe are currently leading the charge where considered use of mobility is concerned.

The TXT mobile platform for retailers provides the company's PLM, buying, merchandising, assortment planning and in-store visibility capabilities on Windows 8 mobile devices, packaged as several discrete mobile applications:

**StyleClipboard** supports the creative phase of collection development, with the ability to capture images and ideas remotely and make them immediately available to all participants in the design phase. **CollectionBooks** are accessible on the move and can be updated on-demand. **SellingSessions** enables consumers to collect orders, access planning data and collections' targets from the buying conference. And **BuyingSessions** provides the ability for users to update the buying plan on the go, add new values and images, as well as constantly monitor targets.

TXT's new solutions are being enriched to include in-store assortment capabilities, which will allow store managers to see on tablet computers the portion of the assortment plan that is most relevant to them. That mobile device can also be used to receive corporate guidelines regarding store set-up and style in a handy format, speeding the configuration of floor and hanger space when new collections are received.

Centric Software also provides mobile apps (in this case built on iOS) that aim to make the product development process faster and more efficient for retail, apparel, footwear, luxury and consumer goods companies. These include:

**Collection Book for Fashion**, an application linking a collection of styles from the Centric 8 PLM system to customers through an interactive mobile device. **Capture It**, an application allowing users to take and upload photos

directly to the Centric 8 PLM system for instant review, mark-up and analysis. **Sample Review Mobile App**, allowing users to quickly view and edit sample and style data with easy-to-use, robust editing tools. And **Factory Audit Mobile App**, a component of social compliance work, designed to allow users to conduct and document onsite factory audits, and streamline the online onsite vendor compliance process.

While the examples above are unquestionably smart uses of mobile devices to enhance existing job roles, and permit more far-reaching access to information, the use of mobile applications tied into PLM can also aid decision making by enabling the sharing of information across communities of peers and experts. With increasingly complex design environments and processes, these kinds of social communities provide valuable input and insight into the product design process. They can bring the design community together to share knowledge and ideas, removing the traditional constraints of location. Dassault Systèmes, for example, offers My Social Innovation as part of its My Collection 3D EXPERIENCE business platform for the consumer goods and retail industry. This allows organisations to share and exchange unstructured information through social communities, both internally and externally, and serves a strong example of an application that both relies on the capabilities of PLM and leverages those to provide new opportunities enabled by technology.

This kind of collaboration is not just pipe-dreaming either, and can reduce the cost of product development and bring products to market quicker by enabling fewer errors in design, sourcing and labelling, as well as providing earlier visibility into potential supply chain issues that might affect when a product can be brought to market.

Collaboration and the creation of social communities can also improve the idea-capturing process and enable companies to create their breakthrough product. Listening and soliciting input from the whole company

can also instil confidence in a product, improving the company culture, and empowering workers to bring about innovation. And company culture is a significant driver here, since the demands of the new digital workforce (i.e. those staff who use mobile devices and applications elsewhere in their lives) are also driving the creation of social communities by retailers - not just management initiative. This new generation of workers collaborates by default, and is accustomed to working in sharing and supportive environments, leading to the drive to create business equivalents of social networks like Facebook, Twitter and Pinterest.

Both social communities and mobile apps can also be used to capture the voice of the customers and bring them into the product development process, enabling them to play a greater role in the creation of new products and revisions in existing ones. This is key today, as consumers are calling the shots more and more, with retailers no longer able to dictate product features and availability to consumers. And failure to keep up with trends can frustrate consumers, which runs the risk that they will take their business to a retailer that does listen and capture these trends and changes accordingly. The earlier testing of concepts with consumers can precipitate changes earlier in the product development process and increase the chance of a successful new product launch.

Whatever form or format they come in, mobile applications and devices and social computing have the power to transform the way colleagues, suppliers and customers interact throughout the entire product lifecycle. They provide insights and an immediacy which is unsurpassed even by face-to-face interactions. And the most forward-thinking PLM vendors are already beginning to play a major role in how the entire organisation and supply chain works together, creating applications that allow their customers to work alongside each other and source inspiration and ideas from virtually anywhere with a data connection.

**MOBILE APPLICATIONS AND DEVICES AND SOCIAL COMPUTING HAVE THE POWER TO TRANSFORM THE WAY COLLEAGUES, SUPPLIERS AND CUSTOMERS INTERACT**

To read more of Karen's work, access the latest edition of *Speak* at: [www.onwindows.com](http://www.onwindows.com)

**SPEAK**

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# Texprocess 2013



by  
BEN HANSON

The  
WhichPLM Report



## A lot goes into the development of a garment. Four gargantuan, multi-tiered halls' worth, as it turns out.

This June, as summer started to hold sway over much of Europe, Frankfurt became the sweltering haunting ground - for the second time - of the ghost of IMB. Once the textile industry's biggest and brightest exhibition, attracting tens of thousands of visitors from around Europe to its home in Cologne, IMB underwent a series of face-saving facelifts leading up to its eventual cancellation in 2012.

Its spirit didn't wander far, though; it drifted two-hundred-or-so kilometres, crossed the Main river, and came to roost in the rafters of Messe Frankfurt. There, from 10th to 13th June, it occupied a staggering amount of floorspace across those four separate halls, manifesting itself as TexProcess and TechTextil - dual shows with a shared purpose.

TexProcess is vaunted as "the leading international trade fair for processing textiles and flexible materials", while its sister show, TechTextil, is an "international trade fair for technical textiles and non-wovens". In practice, TexProcess had a focus on form - cutters, computer aided design, colour matching - while TechTextil looked at function, with composites, performance materials and agrotexiles ruling the roost.

While there was undoubtedly a great deal of crossover between the two shows - evidenced by the number of delegates who came staggering into the sunlight-pierced corridors and walkways between the halls - my primary interest lay with TexProcess, home to core and extended PLM and ERP vendors. And although WhichPLM tries to be an all-encompassing publication, there are times when a little more focus is needed to bring the right insight to our readers.

### This is one of those times.

A lot goes into the development of a garment, then. Materials, threads and trims; forms and files; drawstrings and data. More than each of us sometimes realises, and more, certainly, than we appreciate until we find it laid out before us in halls like these. If writing about a show like TexProcess is hard, then navigating one is a feat worthy of Marco Polo: sewing machines rattle,

points of sale ring off, product data reels from pillar to post, and everywhere a voice clamours that what they do makes fashion possible - what they have is what you're missing.

Crucially, though, one refrain always emerges from the chorus at events like these; one melody that rises, unwavering, as you bend your ear to the industry's pulse.

### Technology.

Whether it's CAD, CAM, PLM, POS, SCM, 3D ERP or any other choice from a roster of buzzy acronyms, technology has made its impact felt at every level of the product lifecycle. Nowhere is that impact more apparent than at a show like TexProcess.

Luckily, technology happens to be our focus - specifically those technologies that fall under the umbrella of extended product lifecycle management. And so it was that I set out to explore the tightly-regimented aisles of TexProcess 2013, with an eye for the new and the exciting, and an ear for our common tune.

Concentrated in two halls - 4 and 5 - were a proliferation of technology suppliers to the fashion and textile industries. Core PLM was present in abundance, with large-scale booths by Lectra, Assyst and Gerber Technology, and smaller presences from CGS, PTC, InSys, W+P International, Kopperman and more. No longer greeted with confused stares, PLM is now bona-fide industry bedrock, and the fierce competition that we see between vendors every day was at its starkest with many of the leaders gathered in one place.

Lectra in particular made a bold showing, occupying a pristine booth with not a single piece of technology on display. No cutters; no Fashion PLM; no CAD. Not even a laptop. This was in extreme contrast to Gerber Technology, whose equally stylish stand was packed to bursting with assistants walking delegates through their hands-on experiences with YuniquePLM, Yunique 360; CAD/CAM and other products.

Neither approach is necessarily the "right" one, but they are each emblematic of a much broader trend: vendors solving problems, rather than selling software. Now more than ever, prospective customers aren't just faced with

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conferences, as well as our exclusive interviews with senior executives from both companies.

It was clear, at any rate, that every vendor sees the European market as a rich opportunity, and conversely, vendors who have previously focused on countries like Germany are now beginning to look further afield for expansion.

And it isn't just new markets that are attracting attention: a number of vendors have begun to build what they call truly integrated systems (comprising PLM, ERP, PIM and other supply chain solutions) on the Microsoft Dynamics AX platform. And, as we have seen at numerous single-vendor shows and elsewhere, a considerable number of suppliers have bet large on 3D working – from the design stage to the prototyping and sampling process, tied together by PLM. These added-value components are the cornerstones of many vendors' research and development efforts, alongside the improvement of their core platforms and the launch of new initiatives such as mobile device integration – something we saw in some unexpected places this year.

All that said, several European and international PLM vendors were notable in their complete absence from the show, in both core and extended PLM form. At least two of these I wholly expected to see present, since they have invested significantly in three-dimensional and mobile working.

Away from PLM itself, technology continued to play a vital role in taking ideas from design to delivery, with fit occupying an especially prominent position. As well as dedicated fit companies like Alvanon, dedicated PLM vendors like Assyst and Lectra are also beginning to place a great deal of emphasis on the importance of accurate and consistent fit. The latter of these had a veritable army of dress forms on show, gleaned from European size surveys conducted using 3D body-scanning techniques – the same methods employed for the production of Alvanon's similarly meticulous dressforms. Beyond shape and size, colour and material were hardly given short shrift, with precision cutters and digital, quick colour matching technologies on display.

Unifying all of these trends, of course, is a continuous thread of product information (what

we routinely call "master data") that includes everything from the grade rules established during fit sessions, to the drape characteristics of the materials chosen through three-dimensional experimentation. Novel uses for that master data abounded at TexProcess, with the most prominent being its application for marketing and point of sale purposes. The MobiMedia group in particular presented an extremely rich customer experience platform, pulling data from a product information system to populate an attractive, multifunctional touchscreen catalogue.

Although TexProcess was not home to quite the kind of bleeding-edge innovation in information technology we see at shows like NRF, in many ways it would be simpler for us to list the things we didn't see – like a several-day rota of presenters speaking about a diverse range of topics on the Forum stage, or the sheer volume of mechanical and mechanistic innovations that crowded the manufacturing halls.

However replete a show is with any kind of content, though, we end up with the inescapable question of whether in-person trade fairs have had their day. After all, the argument goes, isn't much of what we see in convention centres and Messes around the world available to view in some capacity online, or with a pre-arranged demonstration?

There is a kernel of truth to this sort of prodding, but with delegate numbers at an all time high (the organisers quote a 15% increase on 2011's figures, to a total of 40,000) it seems as though the demand is certainly there. With no division between ticket types, however, it would be difficult to quantify just how many visitors were attracted by the promise of the more IT-led TexProcess and how many came instead to see the latest developments in textile hardware hands-on.

What I can say with some degree of certainty, though, is that it's strange for an industry so resolutely focused on delivering tangible goods (right clothes, right time, right price, right market) to make these routine pilgrimages to glitzy meccas that aren't necessarily well-suited to the experience of evaluating software.

Strange, but understandable when we remember just how much goes into a garment. The trims and the trends and the CAD and the colours are all well and good, but I suspect that we continue to flock to events like TexProcess because so much of the remainder of a garment – or a shoe, or an accessory – is governed or given by people. People make products; people consume them. And no single stand at this year's show was staffed by anyone less than the parent company's best – making this and shows like it a valuable opportunity for anybody with even a passing interest in the reverberating power of technology for fashion.

A hot conference hall may not be the best place to find or evaluate a PLM solution, then, but it can be a fine place to discover and understand the twisting topography of the market itself, meeting its influential figures and peering over the horizon and into its future along the way.

**That's worth four halls to me, and maybe more.**

*Visit WhichPLM to read our exclusive TexProcess interviews or to find out more about upcoming industry events.*



**A CONSIDERABLE NUMBER OF SUPPLIERS HAVE BET LARGE ON 3D WORKING – FROM THE DESIGN STAGE TO THE PROTOTYPING AND SAMPLING PROCESS, TIED TOGETHER BY PLM.**

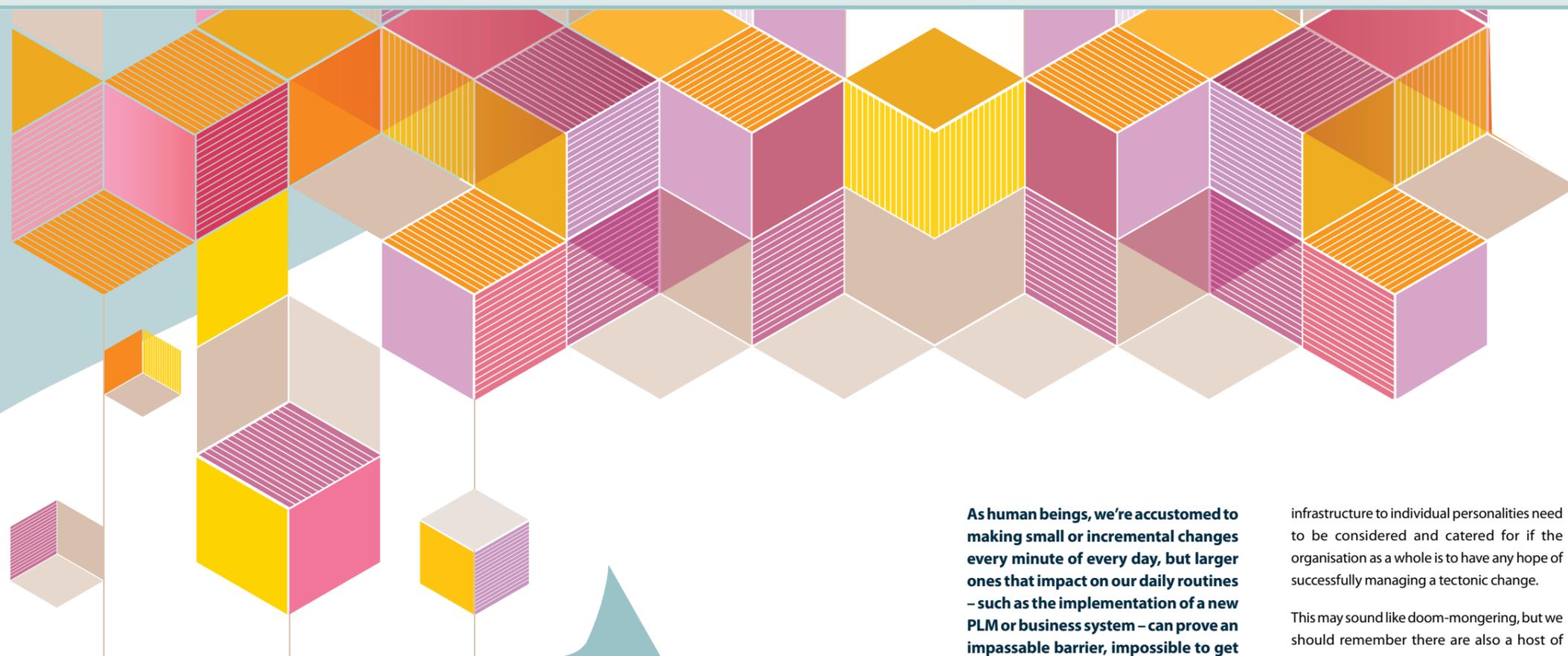
the decision of whether to buy Fashion PLM or YuniquePLM (or FlexPLM, or ENOVIA, or Centric 8, or Assyst, or any other PLM solution for that matter), they're making the choice between ecosystems and solutions as well as between the products themselves.

This is something the most forward-thinking vendors have long recognised – particularly those who deal in hardware as well as software. And this is why shows like TexProcess represent an opportunity that goes beyond simply showing off individual applications - they serve as a chance for delegates to experience each vendor's portfolio in a holistic sense, and to get to know the companies behind the solutions.

**And get to know them we did.**

Over a three-day period we spoke to as many of the extended PLM vendors present as possible, and readers can look forward to in-depth, exclusive interviews with Lectra, Gerber, PTC, InSys, Assyst, W+P and more in the coming days. In a broader sense, though, the trends we had the opportunity to discuss with them ranged further than just a rejuvenation of their communications strategies – something that will be explored in greater depth in our coverage of the Gerber Technology and Lectra press





# Process Metamorphosis:

## Managing Change in Implementation



by  
KILARA LE

Following on from her popular “Extending PLM” series (also included in this publication) business process expert Kilara Le produced another WhichPLM exclusive, examining the human side of PLM implementation – managing people’s intrinsic resistance to change, and learning how best to mitigate the impact of enterprise-level projects.

**As human beings, we’re accustomed to making small or incremental changes every minute of every day, but larger ones that impact on our daily routines – such as the implementation of a new PLM or business system – can prove an impassable barrier, impossible to get our heads around due to their sheer magnitude.**

To add to that intrinsic fear of big change, many of us have personally been involved with or heard horror stories about companies who have had disastrous, sometimes failed, implementations of systems of this magnitude. After all, any change that affects a business in its entirety (as PLM must) will be felt not just by those leading the implementation, but also by everybody who works alongside them, no matter what their role may be in the product lifecycle.

It almost goes without saying that detailed preparation is absolutely vital to minimising the impact of change across all levels of the organisation where these large-scale projects are concerned. The implementation itself will disrupt existing processes even before it begins to transform them, and stress will be felt far beyond the executive level, cascading down to those for whom PLM may not necessarily feel like a business imperative.

That preparation will also take in more and more varied aspects of the business than we might initially think: everything from IT

infrastructure to individual personalities need to be considered and catered for if the organisation as a whole is to have any hope of successfully managing a tectonic change.

This may sound like doom-mongering, but we should remember there are also a host of extremely successful implementation stories to counterbalance these worrying tales of mismanaged change and failed installations. The unfortunate fact is that these successes tend not to be talked about as much as failures, as they seem to blend into the background noise of work life with minimal disruption – becoming part of the furniture despite the considerable work it almost certainly took to get them to run so smoothly. But unless you are filming a dramatic reality TV show (one with an already less-than-exciting premise in software implementation, I’ll admit) you will certainly want to make sure your next implementation succeeds.

**So, with so little attention dedicated to these successes, how should you go about managing change in such a way that your project ends up a quiet success rather than a prominent failure?**

The catalyst for change is always motivation – the desire to get from “what is” to what will be, driven by a knowledge that the future destination is better than the current status quo.

For an executive, with unfettered access to the bottom line, and a real understanding of what makes the business tick at the highest level, it can be difficult to realise that the actual purpose of changing – the value of moving from where you are to where you want to be – may not be clear to those end users who will live the incremental steps day in and day out.

And the importance of documenting change goes beyond transparency. I’ve found in many implementations, even those where companies had a very good idea of what the steps were in their product development, there were still further processes or exceptions that simply were not documented in either their prior or post-change states, making it incredibly difficult to define or quantify the value of change at any stage.

More specifically, it’s only by documenting and understanding every process that an organisation can understand whether these processes need to change in the first place, and how they will fit into the overall vision for the future.

The optimum way to conduct this kind of detailed process audit is to consult with those who are actually responsible for the given processes at the earliest possible stage. When key stakeholders are involved from the beginning, they have more time to get accustomed to the idea of change, as well as more opportunities to voice their concerns and suggestions before the change process begins, rather than afterwards. We mustn’t forget, of course, that in order for any implementation to be successful, the change it brings must be beneficial to individuals as well as to the company as a whole.

At this point in prior implementations (with change fully documented and described) I’ve undertaken a preliminary mapping, looking at which of these business processes can be potentially streamlined by the solutions available in the marketplace at the time. Weighing these specific needs against the core capabilities of a typical solution then helps to identify those points that are important to include in a request for proposals (RFP) document, which will now essentially serve as a personalised map of the change proposed to your business – described, circumscribed, and understood.

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And once you have a map that shows your destination (with a legend everybody can understand), it will be considerably easier to get there.

After consulting with the entire business, you'll no doubt find that you have more change on your hands than you can possibly manage, and the time will come to begin formal discussions on which processes deserve priority, how substantially things will change, and how quickly.

Business leaders, IT and user stakeholders should all be a part of these discussions, and their input should be used to define the scope of change, and to map that against required software functionality.

It's important to approach these discussions with caution, however, as stakeholders who are now invested in change may suddenly find themselves eager to change everything. In reality it's neither practical nor necessary to give everyone everything he or she desires. Several infamous implementations have dragged on for years (and to the tune of millions in their local currency) because of their desire to do everything, for everybody, all at once.

A big dose of pragmatism is called for at this stage – and a concrete list of “must change” processes versus “nice to change” equivalents should be established as soon as possible, otherwise the sheer scope of change may become too cumbersome to manage effectively, despite the best intentions.

Selecting a core, cross-functional group of these interested parties is the best way to keep a project focused, since designated champions can represent the interests of their teams without necessarily being beholden to their every whim, as well as developing a valuable

understanding of the processes that matter outside their own area of expertise.

For example, I was recently involved in a process-mapping project where an IT team leader was asked to sit in on the discussion to provide his own perspective. Whilst this gentleman was an expert in the IT world, he, like many others in comparably large companies, wasn't exposed to the everyday activities of product development.

After a week of participating in interviews and discussions with the product development team, he came to realise that Excel was the most widely used tool in the company, despite ongoing discussions within his own realm that were leading the company towards replacing Excel entirely with Google spreadsheets. We all, he included, had a good chuckle at the upheaval that decision would have caused – all due to a simple misunderstanding of the kind that originate routinely when people get stuck in a “silo” mentality.

This cross-domain expertise and mutual understanding then truly comes to bear, as the project team have the unenviable task of using their new process understanding and priority list to shortlist and select a PLM solution. With more than fifty catering to our industry alone, this is a contentious topic, and one on which volumes have been written elsewhere on WhichPLM. It's a topic I don't intend to cover here, except to say that once this coven of internal stakeholders has chosen the right vendor and nailed down the scope of the change they find themselves managing, the real “fun” can begin.

Thinking ahead, in our terms, means defining an implementation plan since, as we've seen, you can't change everything at once.

A good implementation plan should encompass multiple phases: the first based on immediate needs (the “low-hanging fruit” identified in your process discussions), the second on near-future requirements, and the third (and possibly fourth, fifth, sixth and beyond) on the long-term strategic vision that galvanised the entire change process to begin with.

This is a tall order, to be sure, and is the most likely stage for your internal project team to begin questioning whether they have bitten off more than they can chew. Like it or not, they will now be the “go to” group for questions, for final decisions on configuration, for training requests, and for user support.

In short, your internal project team are going to be busy!

One of the most vital change management responsibilities (and one that, much to their chagrin, will be delegated to the project team) is ensuring adherence to the immediate phases of the implementation plan, all the while building in logical supports for the phases that will follow.

Finding a suitable system administrator to act as a single point of contact for user queries can help to funnel the workload as the implementation moves forward, but the project team itself must remain active in the decision-making process where implementation phases and scope are concerned. While it's clearly important to define a scope early on – and stick to it – to avoid “scope creep” and “budget blowout”, the project team must retain some degree of flexibility. As software capabilities become better known, and the true impacts of changing processes become more apparent, it may be that additional process transformations belong in a particular stage, or that others can be postponed until later.

After all, another important part of managing change lies in knowing when to stop changing things.

Minimising the disruption of change also has a technological as well as a personal aspect, and adequate preparation also means working with the chosen vendor to configure the

software correctly, and making sure internal IT infrastructure can support it.

Much as you wouldn't put a team of your best drivers in a fleet of untested cars, the next important step is to ensure that the configured software is installed in a test environment, where the impact of bugs and fix requested will not be felt on your live production environment. Although PLM in particular is a proven technology, even its best solutions can encounter unexpected hiccups, and no business is in a hurry to halt production because an unforeseeable error took the system offline for a day.

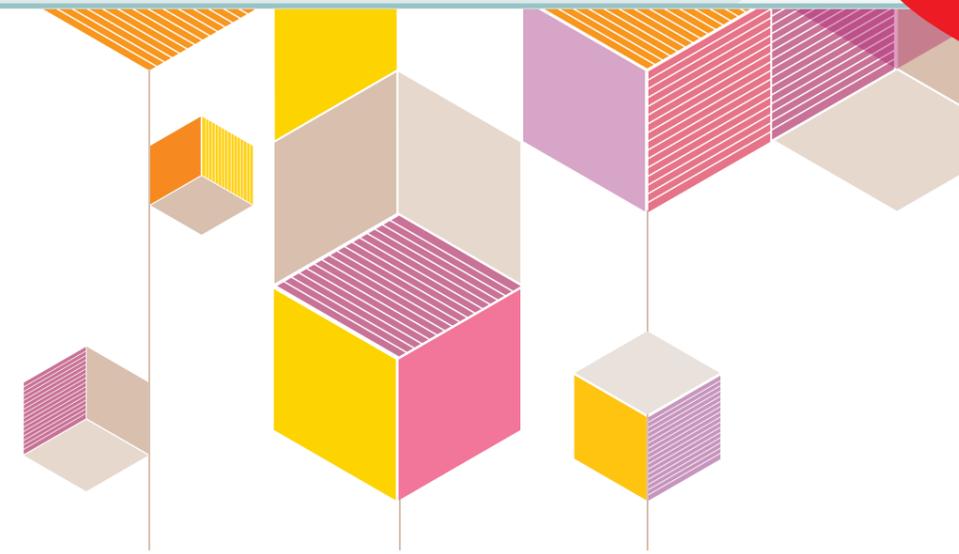
In another implementation example, I know of an IT systems administrator who chose to take his vacation the week the new solution was to go live. Needless to say, he scored no points with the business systems administrator, who was plagued by user requests and bug reports, despite having no access to actually make fixes. Unsurprisingly, people tend to get stressed, angry and deploy office-inappropriate language when they can't get their existing work done, let alone seamlessly change over to new ways of working..

Remember, this is what change management aims to avoid. Disruption needn't be inevitable, and stress headaches and product delays don't necessarily have to follow as a consequence of an implementation.

Changes in daily tasks will be the most significant concern for the vast majority of your end users. They learned to do their jobs, the reasoning goes, so where's their incentive to learn to do them all over again? More importantly, how are they to learn the ropes of a new system without support?

As you might imagine, training is absolutely vital for any successful implementation. In the days (and perhaps weeks) before the “go live” date, users should be trained in the specific areas of the new system that will directly impact their day-to-day work, and shown how other parts of their role will change.

At this point, the system should be thoroughly tested by the project team or pilot users before letting those general users loose. Any bugs



should have been fixed and/or reported to the software provider – who is (hopefully) working to get them fixed as a matter of urgency. There would be little point in sitting an end user down with a list of things not to touch yet, or with promises of added functionality in the near future.

And although these users are trained on the test server (keeping the inevitable mistakes away from the production environment) they should approach the training exercise as they would any other day in their jobs – adhering to the same standards as they would in a live environment, and putting the system through its paces in the way they will once it goes live.

As a cautionary tale, I once worked on an implementation where a group of ladies were training on what they thought was a sandboxed environment, only to find that the profanity they'd filled the comments section with was being entered into a live environment, and stored in perpetuity under their usernames.

Sometimes these wind up being called “legacy” systems for slightly unexpected reasons!

Whatever form it takes, this training should emphasise above all else that the change being brought about by the new system will make lives easier, rather than the opposite. And by all means allow the user to try and break your system; better now than in several weeks' time when everything has gone live.

Throughout any phase of any project, there are things that could be done better or that you might do differently in the phases that follow. Change is by its very nature unpredictable, and so even the best-prepared amongst us can benefit from recording their experiences to learn from, and to help mitigate the impact of comparable change in the future.

Communicating with colleagues and managers, and reaching out to peers who have “been there; done that” is a great way to glean knowledge and anticipate ways to manage similar or even wildly different changes that might come your way in the future. Even though large-scale change can be scary, it's also often the only way to advance – so I wish you the best of luck in managing it gracefully.

*I'll leave you with one of my favourite quotes, by Zen master Thich Nhat Hanh:*

*“Because of change, everything is possible.”*

# Evolution



by  
KATY BOWLES

In her first exclusive article for WhichPLM, renowned Savile Row figure Katy Bowles explained the bespoke tailoring industry's difficult relationship with technology.

**Within every academic or creative field there are classifications, sub-divisions and niches, which help define an apex organisation. In the expert, creative field of pattern cutting within menswear, a classical niche is traditional British bespoke.**

Predominantly based within Mayfair's Savile Row, this institution is widely regarded throughout the world as the epicentre for gentleman's sartorial couture. "The Row", by definition, is a centre of excellence within menswear, steeped in historical construction methods and techniques accessible to the fortunate few who are able to take advantage of this iconic British cultural experience.

A Savile Row suit is intricately constructed from a hand-drafted pattern created through the

deliberate application of anthropometrical measurements and figurations. Fittings are undertaken as plain architectural, skeletal frames and, through this development, progressively re-cut and refined until the suit meticulously displays all the owner's desired elements of comfort, character, cut, style and personality; whilst taking into consideration the owner's lifestyle and the purpose of the tailoring required. All garments are formed, canvassed and completed by hand with a sculptural finish adding definition, shape and support to the surrounding figuration. With the advice of experts and professionals, every area of initial design and component from cloth, buttons, linings, under-collars, lapel and pocket style are selected by the client ensuring that the creative vision can be established and fashioned into reality.

With such a tantalising prospect in mind, it is obvious why bespoke is commonly observed as the pinnacle of tailoring couture. It epitomizes tradition and romanticises the hand-produced drafting and construction systems of a bygone era. However it has recently been acknowledged by industry experts that the consumer desire of suiting is moving far beyond the intricately crafted niche mentality of Savile Row and more towards mass-manufactured garments.

Like science or mathematics, any academic or creative field must adapt and innovate to be truly sustainable and developmental. Currently, as the bespoke trade gradually becomes smaller and seemingly less significant within modern society, it needs to be acknowledged that there is a cultural evolution in progress with regards to its desired target audience. There is a huge element of competitive development in tailoring and selected areas of bespoke have successfully recognised this aggressive opposition and are developing transitionally to adjust to the society in which we live today. However most bespoke houses are seemingly maintaining tradition in the face of adversity from mass production.

Arguably, couture niche markets will always be successful within a selective subset of society; bespoke can offer individuality, limitless possibilities and ultimate perfection. However a large proportion of the current generation of style-conscious males feel intimidated by Savile Row and its haze of mysticism. As an alternative, they constantly expose themselves to fashion magazines, up-to-date consumer trends, celebrity styles and ever-shifting vogues to the point of saturation.

Gentlemen with a high disposable income now tend to spend £3,500 on six suits rather than one. Bespoke sustainability is encountering a transition to being largely financially dependant on a generation of fast-thinking, well-groomed individuals who want suits cut quickly, differently, according to the season and the fashion and with less regard to quality and longevity; all of which contradicts the conventional notion of intricate craftsmanship. The establishment of a wardrobe full of timeless,

classic pieces has generally become an anachronism as gentlemen wish to be seen in a variation of outfits rather than one or two.

This attitude towards clothing is completely contrary to the previous cohort of gentlemen, and their forefathers, who chose to experience bespoke tailoring. This means pattern cutters and companies have to be forward thinking, innovative and adjust from a 1950's "make do and mend mentality" to a "throw away" one. This adds pressure to a Savile Row business to be competitive with designers, made to measure, ready to wear and even high street retailers who can offer well-constructed, crisp suits at less than half the price. Due to the current social perception of bespoke tailoring, the role of the pattern cutter has to slowly become evolutionary. In order to be successful, the role of the pattern cutter but adapt to the financial, technological and economic requirements necessary in order for production and business to remain sustainable and innovative. This adds great pressure to a dynasty aiming at a seemingly contradictory market.

**BESPOKE WILL ALWAYS BE THE HIGHEST LEVEL OF SKILL AS CURRENTLY THE HUMAN MIND IS STILL MORE CREATIVE AND INCLINED TOWARDS A GREATER LEVEL OF PERFECTION THAN A COMPUTERISED CAM MACHINE...**

Of course, bespoke will always be the highest level of skill as currently the human mind is still more creative and inclined towards a greater level of perfection than a computerised CAM machine or a technological pattern-programming device, but the level of computer intelligence created by man has achieved a

greater echelon of accuracy and is slowly becoming more intimidating to the artisans of the past. Suits are being manufactured more efficiently, cost-effectively, with fewer time constraints and to a higher degree of quality. All of which is undoubtedly impressive and has indisputably lead to a consumer surge in made to measure and ready to wear.

Modern consumers desire lifestyle products and branding that usually epitomise what bespoke cannot, bespoke can often be seen as the autonomous, free-thinking individual fashion where as suits "off the peg" can be regarded as conformist and socially comfortable. In the time it takes to make a bespoke suit, the ready to wear garment has already been purchased, worn and deemed "out of fashion" – effectively consumed. It would be logical to assume that bespoke will always have its safe, assured place in menswear because style will always outlive any consumer trend but it is quite evident that the technological bespoke era will soon be upon us.



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# Not Fit Enough:

## Sizing up the Australian Market.



by  
PETER RICHARDSON

**As is the case in most western countries Australians are getting bigger. Since 1995 the average Australian man has added 3.9kg to his total weight, and his female counterpart 4.1kg. And these changes haven't come from muscle mass: the Australian Bureau of Statistics' recent health survey results reveal that an alarming majority (some 63% in total) of Australians are either overweight (35%) or obese (28%).**

The effect this has on the retail and fashion industry is considerable. After all, in a country where 60% of men and 67% of women have a waist circumference that puts them at risk of developing chronic disease, we can't very well keep producing smalls, mediums and larges in the same relative dimensions as have before! A recent report by Kurt Salmon and Associates showed that more than 70% of potential in-store sales in the U.S. were lost because of issues associated with fit.

The question, then, is how do we avoid losing thousands of prospective customers and make garments to fit the unfit?

In the UK and USA, nation-wide sizing surveys have been undertaken with precisely this goal in mind. Sophisticated three-dimensional scanning techniques were used in the "Size UK" and "Size USA" surveys and in the equivalent French Sizing Survey, and their results were compiled in order to create a comprehensive picture of each nation's height, weight and body shape. Needless to say this information was highly sought-after, and it's been used since to create accurate dress forms, inform sizing

gradients, and build three-dimensional avatars of the "typical" man, woman and adolescent for a range of purposes.

In Australia, official sizing is still based roughly on manual measurements submitted by readers of Australian Woman's Weekly magazine in 1969. Hardly a source of scientifically-accurate sizing in comparison to the initiatives undertaken in Europe and the USA, and this is without even taking account of the whispered consensus – that back in 1969, most participants in the readers' survey "cheated" and understated their size.

Unsurprisingly most retail and apparel companies have either dropped these old standards entirely, or adapted their fit to take account of modern trends and size variances. Indeed, several companies have run their own, smaller and more specific surveys to try and fill this significant gap in their knowledge of their target market, as we saw in Rip Curl's "Teens Fit" report.

In 2008, as part of a CAD/CAM promotion, I imported a 3D body-scanner into the country to demonstrate the technology at a trade exhibition I was attending in Sydney's Darling Harbour. The scanner attracted considerable attention, we received national press coverage, and various State ministers were quoted in the newspapers as saying that a national size survey of the kind we've seen elsewhere was a terrific idea.

Three months later we shipped the scanner back to Europe.

At that time the Standards Australia body indicated that whilst they would like to amend



the existing standards, they had no funds to do so. They suggested that the clothing industry as a whole fund the survey, and following months' worth of inaction and indecision, finally the idea of an industry-sponsored fit survey petered out. Although the following year, in 2009, the federal government conducted a review of the Australian textile, clothing and footwear industry and emerged with a recommendation that the government allocate \$5 million to develop a national sizing standard (and despite much industry lobbying) to date no action has been taken.

Finally, in May of this year, one of our larger chain stores (Target) used three-dimensional body-scanners to analyse the size and shape of more than 20,000 adults across the nation, with the specific goal of improving the fit and consistency of the sizing ranges in their apparel division. Far from being the end goal, though, the data gleaned from this survey can then be used in a variety of ways to ensure that the information is disseminated and deployed in the right places to make a real difference to the way we produce our garments.

For example, using this new sizing data Target can produce "blocks" (also known as garment patterns) that are based on the silhouettes of the surveyed sample group and representative of the true sizing requirements of the Australian population as a whole. These blocks can be held within Target's PLM solution as a digital file, and then subsequently shared and used by their suppliers' CAD systems as a standardised DFX (Drawing Exchange Format) block pattern.

Outside of Target's own requirements, these blocks should then be used by all retailers and manufacturers - whether their production model is single-sourced or conducted via multiple sourced suppliers - to ensure that finished garment measurements are consistent with the expectations of not just the designers and garment technicians that produced them, but the customer who might previously have been turned away by a poorly-fitting garment.

Whether it's here in Australia or elsewhere in the world, there is now a host of reliable

anthropometric data that can be subscribed to or purchased and directly imported into the CAD systems used by technical designers, leading to pieces that are designed from the very beginning with the best possible fit in mind. Indeed, those same CAD systems are also becoming 3D-capable, with patternmaking systems playing host to draping and 3D-to-2D flattening capabilities. Coupled with the kind of three-dimensional avatars we are today able to create from that contemporary sizing data, retailers and brands can begin to develop accurate virtual prototypes that allow them to quickly experiment with block styling, trims, and other aesthetic design elements without the costs associated with physical sampling. Many of these capabilities exist today as plugins to popular PLM solutions, and we expect to see an increasing number appear as integral components of those solutions in the near future.

The one overriding conclusion we can draw from years' worth of experience is that fit matters. It can represent the difference between a sale and a lost customer, and between a returned garment and a brand evangelist. And as Australian clothing manufacturing disappears and more and more retailers and brands bypass the traditional wholesaler and source directly from overseas suppliers, it is vital that we not leave fit to the vagaries of international collaboration and sampling and instead base this most vital aspect of our production processes on the best possible data that exists.

You might ask yourselves when the last time was that your basic blocks and grading were checked against your target market, but the simpler question would be: are your garments fit to sell?



# THINK, PLAN, DO, ACT!

## Guidelines for PLM Initiatives



by  
SJORS BOS

In his first article for WhichPLM, Sjors Bos presented a comprehensive guide to preparing for, implementing, and benefitting from a PLM implementation. With decades' worth of experience under his belt (including work for some of the world's best-known brands), Sjors's informative piece advocates a proactive and process-led approach that emphasises the importance of change management and clear methods of measuring return on investment.

### Product Lifecycle Management (PLM)

Product Lifecycle Management covers the end-to-end process of a product lifecycle; it starts at the idea stage, through design and manufacturing, and finishes in consumer consumption or disposal to recycling for re-use.

Product Lifecycle Management is often referred to as a system solution and not as a strategy, which is a one-dimensional view of this complex process. PLM is a process of integration, alignment and optimization of all disciplines within an organisation and business: people, process, data, resources and systems. If we look at the process areas from idea generation through to product realisation we see the following components in the product lifecycle management process.

Post product realisation we see the cycle moving from creation and realisation to operational and commercialisation covering the areas of planning, buying, manufacturing, selling, distribution, consumer purchase and ending with the disposal or recycling of the product.

In this article we are looking at the deployment and implementation of PLM solutions for the

stages: idea generation through to product realisation. This article is a high-level directive and structure to support people and businesses at the start of the process or who have endeavoured down the path of change and need some guidance. For more detailed guidance, direction and/or help please contact the Future Forward Consulting team to start dialoguing.

### Process First!

In the past we have seen many product lifecycle management initiatives being initiated through a systems approach. In many of these cases this resulted in long-winded costly projects, which in the mid to long term did not work out. Product lifecycle management is process led and underpinned by methodology and driven by the business philosophy.

Most of the challenges in a product creation and realisation organisation stem from unclear processes, lack of clarity in roles & responsibilities or unbalanced organisation structure and often amplified by poor or lack of functional systems. A successful PLM initiative starts with describing today's situation or as it is called the "As Is". This is critical in the development of a future roadmap and vision; there is a need to understand the current base in determining the gap to the future desired state.

There are various approaches to the "As Is" definition; you can work it through a step-by-step approach with all the functional areas and create a micro level map of the process. If you have an workforce that is pessimistic or negative about change than you can take the approach of identifying all elements that do not work to allow the participants to work through their current frustrations.

Both of these methodologies can bring you to the "As Is" definition. The level of detail differs case by case; this is depending on the

organisational maturity and the availability of either strategy/project management or business intelligence management/IT resources within an organisation.

The next step is to define the future "To Be" definition. The aim is to identify the gaps between the "As Is" and the future requirements that are needed to deliver the business strategic goals and support the desired and defined business operation models. As a large part of the "To Be" will be future focused one has to ensure that there is enough visionary insight in the process definition. Workforce needs to stay involved, but they are normally very engaged in the here and now and might not be fully exposed to the future roadmap of the business.

The best "To Be" methodology is to identify the future business requirement that differs from today's situation, take the elements that are broken or not working in today's environment and if available some blue sky thinking supporting the vision and mission of the business. Remember you do not want to go through an initiative like this regularly from scratch. Creating a good solid base allows an organisation to focus on refinement from that point onwards, this is "value add" focused and can be a positive enforcement of all the work done in the future.

During both the "As Is" and the "To Be" one has to look beyond the boundaries of the traditional product creation and realisation. The information generated is the base of the total business and will feed all downstream processes within the business. The principle of single process, single data and no duplication should be applied at all times during this stage of the initiative.

IN THE PAST WE HAVE SEEN MANY PRODUCT LIFECYCLE MANAGEMENT INITIATIVES BEING INITIATED THROUGH A SYSTEMS APPROACH. IN MANY OF THESE CASES THIS RESULTED IN LONG-WINDED COSTLY PROJECTS...

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Once the "As Is" and "To Be" are defined than the gap(s) will become clear. Of course the gap is process driven, but often this also will point out the organisational gaps structurally and/or underdeveloped capability sets.

Now it's time to breakdown the initiative into people and systems streams.

The people stream should focus on immediate quick wins within the current status and drive these through the organisation to generate direct impact of the initiative. Another task of the people stream is to prioritise the future requirements and defined gaps in order of importance; this will support the system selection process.

The systems stream should follow the next step and turn the processes into a requirements document. There are pre-defined formats (RFI/RFP) available for many industries on the web. These formats are quite elaborate and lengthy and they do not always add value to the process.

A hybrid solution is to define a high level document with the requirements coming from the process definitions, the business directive and a good definition of what are the must have's, nice to have's and future scoped requirements.

### System Selection

The system stream is responsible for the system selection. As highlighted earlier PLM is the start of a business process and integrally connected to many other downstream processes. This becomes even clearer during the systems selection phase. Next to the process definitions and requirements there is a need for a system definition and requirements to accompany the system(s) tender. This document should describe the current and future system architecture, system integration requirements, data flow requirements and the operating model. This document should also have a clear brief on reporting and information requirements.

The tender should initially be aimed at a list of 5 to 10 vendors, who in their turn will either express an interest in the tender and provide an answer to the requirements highlighted in the tender. If the first round has passed, work the list down to a shortlist of 3 to 5 vendors who you invite for a formal meeting and product demonstration. During this meeting you want them to demonstrate their capabilities based on the requirements set in the tender.

The base position should be that you would like to operate with an out of the box solution with minimal customisation. Utilisation of industry best practices, proven technology in the industry is key and a future roadmap and continuous enhancement of the solution is must have requirement. At this point you also want to get an inside in the cost structures. What is the model: licensed software, one of costs, maintenance, upgrades, training, support, implementation, configuration,

integration, customisation and more importantly what do they expect from your organisation?

During the shortlist review do not hesitate to ask for benchmark client(s) referrals or contacts. Getting input from active users and their organisations can provide valuable insights for your final selection. We strongly advise prospective customers to make use of a scoring matrix during the vendor selection process. This matrix should cover: process coverage, systems platform, service model, implementation, configuration, future roadmap, costs, customisation, speed, benchmarks, documentation & manuals and, last but not least, partner cultural fit.

Please do remember that PLM is a process driven initiative driven by people and the systems are supportive. This is true before, during and after the implementation of any solution and your resources are the key to success. If the partner is the best technically, but if they are not able to connect with your talent then you have a bottleneck.

### People, change management and training

Processes are only as good as the people who are using and executing them. This is definitely true for the product lifecycle management arena. Starting an initiative like this will generate a lot of questions; nervousness and can even lead to uncertainty within the workforce. This is why the workforce needs to have involvement from the start of the initiative.

Of course the involvement is very clear in the "As Is" stage, but less clear in the "To Be" phase. Most likely the workforce is

already occupied by the day-to-day operations and has limited capacity to be involved on a large scale. This creates the requirement of communication on a regular base to inform the workforce and guide them through the initiative and make them feel connected. It's better to have the workforce engaged in more frequent smaller sessions to limit the impact on their workload, than have no involvement and run the initiative through MIS/IT or outsource resources. You will need ambassadors in every element of the organisation before, during and after the implementation to create ownership, acceptance and adaptation of the changes.

One of the models we have been successful with is the creation of walk in sessions during the cycle of the initiative. This gives the workforce the opportunity to be curious, vent their frustrations, provide feedback and engage without being pushed or "volunteered". Integration of the initiative in goal setting documents and appraisals is another great tool for creating focus across the organisation. The goals and deliverables need to be integrated on all levels of the workforce and clearly be underwritten by the business drivers and strategies.

Another key to success is training, this is at go live, but more importantly on-going past go live. Train the core skill set for go live and provide an on-going training cycle that is following the learning curves of the workforce. Also provide regular refreshers for new starters and staff who would like to refresh their knowledge.

### Project / initiative structure and pace

An initiative as this requires a well-defined project structure with an executive sponsor in the senior management/board level of the organisation. The senior management of all departments involved should be part of the steering committee to ensure and provide clear signals to the organisation of the importance of the initiative for the business.

Below the steering committee there is a need for a project team who are in charge of the deliverables. Dependent on the resource pool and organisation capabilities, this team can be supported by external subject matter experts and consultants.

This structure is also responsible to make sure that the pace of the initiative and the organisational capacity for change is balanced with the workload and critical path of the business. We recommend to breakdown the

**THE GOALS AND DELIVERABLES NEED TO BE INTEGRATED ON ALL LEVELS OF THE WORKFORCE AND CLEARLY BE UNDERWRITTEN BY THE BUSINESS DRIVERS AND STRATEGIES.**

initiative into multiple phases and allow the organisation to learn and adopt in stages. This will enable the organisation and workforce to provide refinement and adjustments during and in between each phase. This process creates a continuous improvement environment, which will be beneficiary to the business and get the best out of the processes and systems in the long term.

### What are the benefits?

The benefits of a PLM initiative are both qualitative and quantitative in nature. Of course the measurements and the impact will depend on the starting position of the initiative and the state of the current business processes. Here is a list of the most common benefits found in PLM initiatives:

- Business integration (product creation & realisation)
- Simplification product development
- Support multiple go-to-market models
- Cycle time reduction, faster speed to market
- Increased design to market adoption rates, less wastage

- Sample cost reduction
- Advanced product lifecycle management
- Reduction in quality defects, through better supplier management & communication
- Increased efficiency & effectiveness across the business beyond product creation and realisation
- Supply base integration
- Cost reductions
- Margin enhancements
- Materials and components consolidation
- Workload reduction, more capacity within current workforce

### Finally, do not start without an ROI projection

Not all initiatives and projects are clearly definable into a direct return on investment (ROI). Product lifecycle management initiatives are quantifiable and should always have an ROI attached to the initiative or project.

- Lead time reduction impacts stock holding, cash flow, missed sales and reduces risk within the business
- Materials and components consolidation leads to bigger economies of scale, which in turn should drive down costs and drive margins up
- Cycle time reduction leads to better range management, which in turn results in less wastage in the product creation process and better efficiency of the collection. This results in cost savings and economies of scale in manufacturing leading to better cost prices
- Simplification, integration, workload reduction and advanced process management can lead to overhead reductions or it enables the business to do more with the same workforce base resulting in higher returns based on the same/flat cost base
- Reduction in quality defects will reduce inventory holding costs and eliminate losses through clearance or destruction

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# NRF 2013

The WhichPLM Report



by  
BEN HANSON

If retail is, as National Retail Federation Chairman Terry Lundgren put it in his opening address, “a religion in New York”, then the federation’s annual “big show” is its evangelical cousin. On the one hand a febrile celebration of the singular passion of selling, raucous and rousing; on the other a humble homage to the social, environmental and economic responsibilities that have come to shape the landscape of twenty-first century retailing.

From 13th to 16th January, the NRF mounted the 102nd of these big shows, enticing 27,000 delegates – brand name executives, industry analysts and enterprise system programmers alike – with keynotes and breakouts dedicated to those same shared passions and responsibilities. And whether their expertise lies in branding, strategising, sketching, merchandising or store design, NRF 2013 demonstrated that the results of gathering the international elite in one place, on stage and on the expo floor, can be electric.

Lundgren’s metaphor was never far from my mind as I set out to cover this year’s massive, four-day show. With its stories-high glass panes keeping out the frigid Midtown air and reflecting the commotion from the show floor, the Jacob K. Javits Convention Centre felt like a crystalline Pentecostal church perched in the left ventricle of the Big Apple. Five football (the American kind) fields’ worth of floor space was given over to the expo itself, with more than five hundred vendors of everything from fully-fledged ERP and PLM solutions to waterproof point of sale devices clamouring for attention.

Needless to say, there was too much here for any one delegate to take in. Helpfully each day had particular presentations flagged as keynotes, meaning that I was able to distil the essence of the on-stage show whilst still having time to get out, meet with PLM vendors (each of whom volunteered for an exclusive interview, to be aired on WhichPLM) and walk the carpets of the expo itself to learn about the trends and technologies that will shape the year to come.

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Nowhere was that on-stage essence more succinctly captured than in the opening day's keynotes, which saw Lundgren take to the stage alongside NRF CEO Matthew Shay, and a host of executives from Coca Cola, Walgreens, SAP and the Home Shopping Network (HSN) after a breathless performance from an America's Got Talent dance troupe.

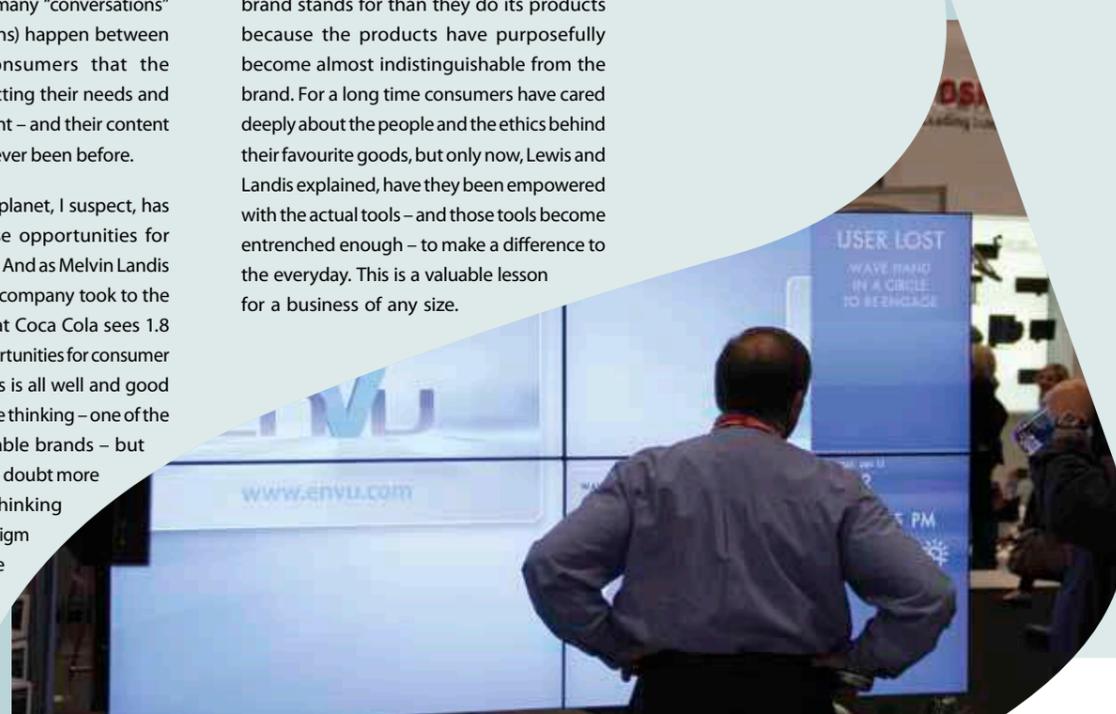
First amongst these was Lori Mitchell-Keller of SAP, who in a single sentence set the scene for all that would follow. "There's a new nexus of forces", Mitchell-Keller said, the likes of which we've never seen before. And social, mobile, cloud, and the fickle consumer are at the heart of it." More specifically, she explained that, with today's technology, so many "conversations" (I'll call them interactions) happen between brands and their consumers that the opportunities for predicting their needs and desires are more frequent – and their content richer – than they have ever been before.

No other brand on the planet, I suspect, has quite as many of these opportunities for interaction as Coca Cola. And as Melvin Landis and Alison Lewis of the company took to the stage they revealed that Coca Cola sees 1.8 billion servings and opportunities for consumer connection per day. This is all well and good for Coca Cola, you may be thinking – one of the world's most recognisable brands – but while your figures are no doubt more modest, this style of thinking really does signify a paradigm shift in the way that the

most forward-thinking (and yes, richest) brands are approaching the market today. Coca Cola's mission, to "create hope and bring friends and family together", might seem like a lofty one for a soft drink, but it's effective precisely because it draws so heavily on the product experience. A little pleasure goes a long way, whether it's obtaining the perfect-fitting pair of jeans or twisting open a cold beverage when you're thirsty, and every interaction with the product is an interaction with the brand.

As Alison Lewis put it, "marketers no longer own the brand; the market does". It's a stark message, but not a surprising one: modern consumers often care more about what the brand stands for than they do its products because the products have purposefully become almost indistinguishable from the brand. For a long time consumers have cared deeply about the people and the ethics behind their favourite goods, but only now, Lewis and Landis explained, have they been empowered with the actual tools – and those tools become entrenched enough – to make a difference to the everyday. This is a valuable lesson for a business of any size.

**"THERE'S A NEW NEXUS OF FORCES, THE LIKES OF WHICH WE'VE NEVER SEEN BEFORE. AND SOCIAL, MOBILE, CLOUD, AND THE FICKLE CONSUMER ARE AT THE HEART OF IT".**



And more and more businesses are catching on, as keynote speaker Eric Qualman explained. With some plain statistics, Qualman showed that Facebook is both the number one activity on the web and, terrifyingly (at least for me, a man who uses it begrudgingly in his personal life) the "third largest country in the world" by volume. In fact, Ford launched a new Explorer model last year, on Facebook, and was able to achieve more exposure than it would have done with an advertisement placed during the Super Bowl – the high water mark of worldwide commercial expenditure.

"With technology", Qualman explained, "the consumer can sell for or against your brand". In many ways this principle isn't any newer than Coca Cola's assertion that the brand counts for more than the product: the mantra "the customer is always right" has dogged retailers for hundreds of years, after all. But what has happened, as Lori Mitchell-Keller hinted, is that a sheer confluence of factors has combined to extend that old adage to its ultimate conclusion.

Not only is the customer always right, but he or she is always there, ready and able to produce and disseminate a great deal of qualitative data about their last interaction with your brand to you, your competitors, and their peers.

So, while you may not have Coca Cola's 56 million Facebook fans or staggering worldwide market penetration (only two countries remain untouched), or Eric Qualman's social media savvy, the key lies in engaging consumers with stories and experiences in whatever opportunities you have, letting them spread organically, and allow your brand to be culturally led. After all, that collective culture, empowered by the same technology that drives your trend analysis and marketing teams, is going to determine your success in today's market whether you like it or not.

Closer to home but no less indicative of the connected future were the host of mobile applications on display on the expo floor. PLM vendors like TXT (now incorporating Maple Lake) and ecVision were demonstrating situation-focused applications that were designed to bring the benefits of touch interfaces and mobility to specific areas of product development (quality assurance, approval, collection management, sales) rather



than attempting to shoe-horn the entire PLM experience onto a device to which it is perhaps not best-suited. And, away from PLM itself, much was being made of location and context-aware incentive systems like Google's Zavers, which I predict will be incorporated into NFC payment solutions to create a compelling mobile ecosystem where consumer loyalty is rewarded instantly.

Less ephemeral and far weightier, though, were the second day's keynote presentations, beginning with an introduction by NRF CEO Matthew Shay. That morning, Shay reiterated the organisation's recommendations for growth over the coming year (lower corporation tax, the opening of new markets, and a reform to the country's visa system) and segued nicely into Kofi Annan's sobering keynote by explaining that retail, on the world stage, means more than just profits and loss and products and lines; it means careers and communities.

Every inch the statesman, Annan began by taking stock of the geopolitical realities he had faced in his role as UN Secretary General (which he abdicated in 2006 and is currently held by Ban Ki-Moon), and how international businessmen and women – and there were certainly no shortage of either in the packed hall that morning, with a rumoured 3,000-strong Brazilian delegation alone – can help to prepare the communities in which they and their supply chain partners work for what he called "a strong transformational wind... one that cannot be easily stopped or controlled".

As Annan spoke, I couldn't escape the feeling that it was, well, awkward to be comparing something as evidently tragic as the Syrian conflict to quarterly earnings and footfall, but the spine that runs deep through both became more and more evident as the structure of his presentation developed. Infrastructure. Only infrastructure can build strong and stable communities, he said, and business can play an absolutely vital role in building the infrastructures of the areas in which it operates. This, as some of the more forward-thinking retailers have long known, is a moral and ethical imperative in modern business, as all too many retailers and brands have shouldered the social and economic consequences of inaction.

Asked by Terry Lundgren to look to the future, Annan predicted considerable growth in Africa, where six of the ten fastest-growing economies



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of the next decade make their homes. Similarly, he praised the continued growth of Brazil, China, South Korea and Japan. More importantly though, he argued through steepled fingers and in his trademark sincere baritone, retail can create jobs – something that we, a jumbled world, predicted to soon hit a population high of 9 billion, desperately need millions more of. By creating these, Annan explained, and building the incentives, communities and logistics that encourage export and supply chain partnerships in the developing world, the current technological and social revolution can have as large a positive impact at home and abroad as the industrial revolution ever did.

Almost absent from Annan's farther-reaching overview, the US recession and fiscal cliff did not go unmentioned in addresses by Shay, Lundgren or incoming NRF Chairman (and CEO of Saks Fifth Avenue) Steve Sadove. Encouragingly, though, each spoke about them as a crisis mostly averted.

Almost untouched by this, in fact, was Lundgren's Macy's, a symbol of resilience and a beacon to retail fanatics, flashing in the cold of Herald Square amongst skyscrapers and fairy lights. It was with the knowledge that Macy's had seen 4.1% year-on-year growth for December 2012 that I embarked on a tour of their luxuriant upper levels. Walking these timeless, Versailles-worthy boardrooms, champagne in hand, it was strange to even think of the recession, so prominently on show back home in the collapse of HMV. Can New York be so different to my home city of Manchester, I wondered? Obviously the city is notoriously resilient, but with crowds milling about on every floor of the famous department store, and an explosion of brands at every turn of the head, it almost seemed as though austerity was old news here.

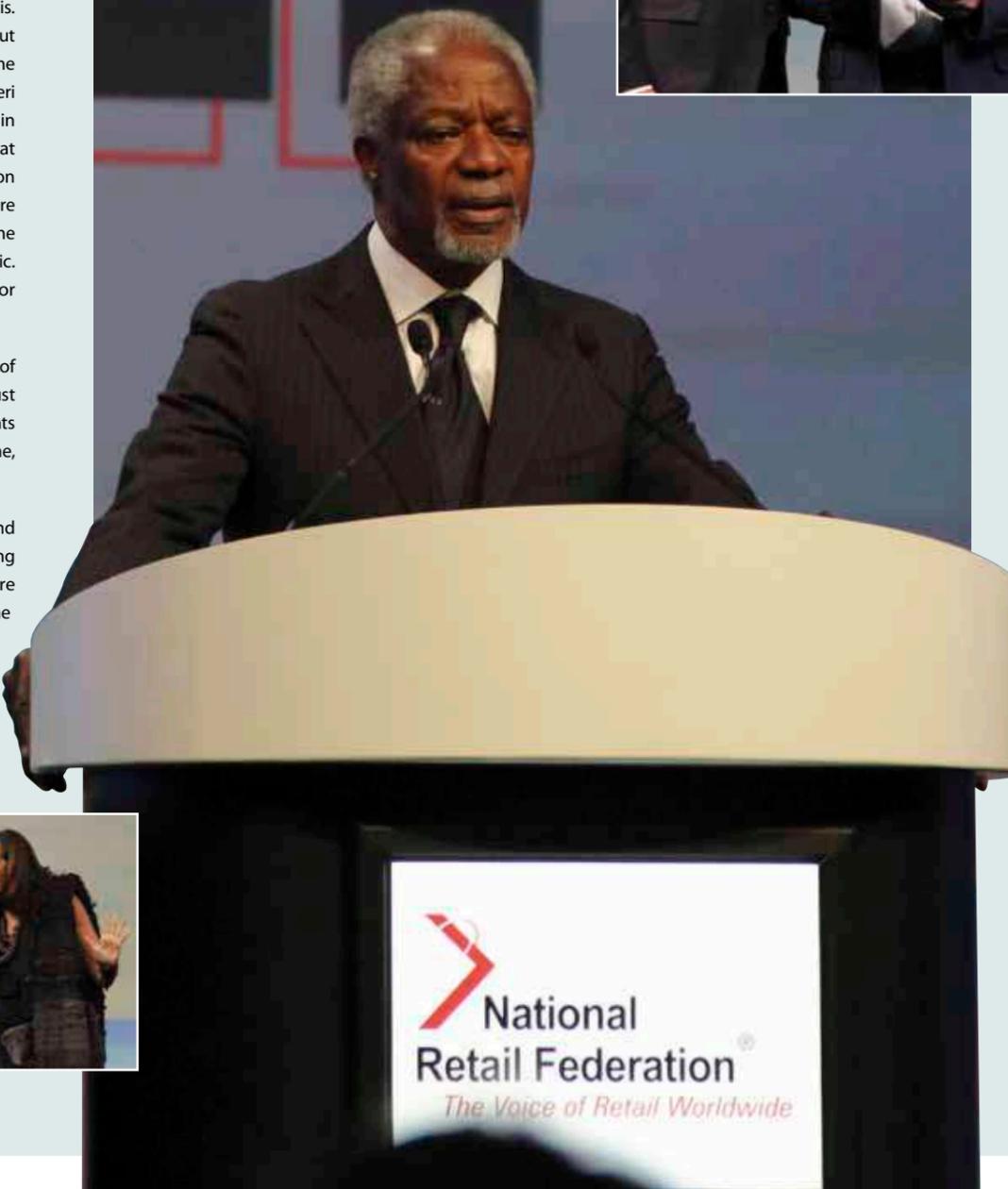
This wasn't the case, of course. What I saw was not indifference, but the result of the fact that Macy's, like much of New York's retail, has already responded to the economic crisis – it's battened down the hatches and sailed on. Like social media or e-commerce, today's economic realities aren't news to the savviest retailers – they just "are". And the most forward-thinking amongst them have already incorporated their effects into their roadmaps and consumer engagement strategies, much as many up-and-coming brands have on our shores.

Indeed, Jill Puleri of IBM revealed in her earlier introduction to Eric Qualman's keynote that they saw holiday sales across the US grow 12% year on year, and that in-store shopping still accounted for a majority (some \$490bn) of this. These figures will differ around the world, but generally speaking it appears as though the incentive to shop is as strong as ever. But, Puleri added, of the majority that made purchases in stores, just over half intended to make that same bricks-and-mortar venue the destination for their next purchase. And of those who were choosing instead to shop online next time, the majority were in the vital 18-34 demographic. They were abandoning the high street for e-commerce.

Despite what I saw in the fairytale streets of Manhattan, the future, it seemed, then, must be walking away from the brightly-lit haunts of Fifth and Seventh Avenues, stalking home, and loading up Amazon.

But, as I saw from cruising purposefully up and down the aisles of the expo, this is something else that the best retailers and brands are already preparing for. Much was made on the expo floor of differentiating in-store experiences that were built upon the reams of consumer data and demand that exist online – what Puleri called the "digital

**LOOKING TO THE FUTURE, ANNAN PREDICTED CONSIDERABLE GROWTH IN AFRICA, WHERE SIX OF THE TEN FASTEST-GROWING ECONOMIES OF THE NEXT DECADE MAKE THEIR HOMES.**



exhaust of commerce – a more intimate, nuanced picture of your consumers". And indeed, several large booths were given over to turning this ephemera into tailored experiences designed would attract consumers into stores by making the most of what exists online.

**I'm dodging, of course, around the hot topic of omni-channel commerce.**

"Omni-channel is the future", as Joseph C. Magnacca of Walgreens put it. "Accessibility of information shapes our lives, so [omni-channel] is not about protecting yourselves from that, but leveraging it through immediacy in the consumer experience."

Omni-channel, as Magnacca rightly said, represents the future of retailing, and the expo floor reflected the exhibitors' and attendees collective desire to be ready for that future, sooner rather than later. From simple expediences like moving the traditional point of sale to mobile devices that are able to access online catalogues, to more in-depth and tailored solutions like Adidas's pioneering virtual footwear locker, omni-channel retailing is about using centralised information to deliver a seamless shopping experience, online and off.

And this was by no means all that the expo floor had to offer. PLM was out in force, as you might expect from a show that placed so much

emphasis on information. I met with representatives of PTC, Dassault Systemes, Lectra, Centric Software, TXT, Computer Generated Solutions, Gerber Technology, NGC, ecVision, DeSL, TradeStone, SAP and more – all of whom were either exhibiting for or meeting with retailers and brands who appear to be, now more than ever, coming to understand that a rich, omni-channel future simply cannot take place without PLM.

All of this is without my even mentioning the retail industry awards that saw a presentation on branding and responsibility from Donna Karan, and Jeff Bezos of industry wild child Amazon being presented with the NRF's gold award for the year. Or the third day keynote from WalMart CEO Bill Simon, which had the oratory power to bring a lot of the audience to its feet as he talked about retail being "the greatest engine of opportunity in the US today", and felt for all the world like being present at the filming of Citizen Kane. Or the presentations by Story's Rachel Shechtman, Warby Parker's Neil Blumenthal, Square's Sarah Frier and Zaarly's Bo Fishback. Together, these four represented a real insight into the new face of commerce – from Warby Parker's focus on product, to Story's extrapolation of the "magazine concept" into a multi-storey building in Chelsea, and from Square's revitalisation of the payment industry for retailers and consumers, to Zaarly's innovative approach to allowing service providers to speak for themselves, directly to the people who need them.



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I CAME HOME WITH A DEEPER UNDERSTANDING OF WHAT IT TAKES TO BE "NEXT" – A WORD THAT FEATURED PROMINENTLY ON THIS YEAR'S NRF BRANDING.

In this sense – the meeting of the best and the brightest, their recognition, and their own opportunity to give back to the industry that has elevated them so - good retail is even more potent a religion than Lundgren perhaps realises. It's a celebration of the best in the human spirit - not selling through duplicity and cutthroat practices as some might think, but focused in a meaningful way on giving people what they want and need.

As Fishback put it, the technological revolution prompted an offline revolution, and its impacts are being felt on street corners and shop floors all over the world. Online services got people talking, sharing, working, living and loving together, and the humble high street store stands poised to be one of the most potent physical manifestations of the way in which each of these is cascading back into our physical lives.

So how does retail ensure its place in this offline / online future?

Do right, in a nutshell, and success will follow. It's a principle that has built cities, felled banks and despots, and allowed some of the world's most prolific retailers and brands – like Macy's, like Coca Cola, like Burberry, Amazon, Faccnoble, Coach, ASOS, Zara, DKNY, Louis

Vuitton and countless others – to thrive by taking stock of what people want, and providing it to them without compromising the core aesthetic, ethical and economic values that attracted those consumers in the first place.

I may well have returned from New York and been almost immediately cut down by its flu epidemic (hence the slight delay in publishing this report), but more importantly than that I came home with a deeper understanding of what it takes to be "next" – a word that featured prominently on this year's NRF branding.

More than just leapfrogging the competition or fighting the hardest for real estate, NRF 2013 explaining to its gathered, multinational crowds that retail today is about being next to celebrate how far we've come; next to recognise that in order to go further, we have to examine not just what we're selling and what we're doing, but the how and why of both, online and off. Do that, the Javits Centre and the city at large seemed to be whispering in concert, like a myriad monks cloistered all about the five boroughs, and we can all – retailers, suppliers, consumers and press alike - be next in line to inherit the future.



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# Extending PLM

## Everything is Designed



by  
KILARA LE

**In last year's Annual Review, we featured the first column from new writer Kilara Le, looking at planning from the financial and merchandising points of view, and examining how the two can be gracefully combined using PLM as the meeting point. This was a continuation of a well-established trend – that of extending the role of PLM throughout the product development lifecycle. In the second in a five-part series, Kilara then delved deeper into the idea that PLM, if insightfully chosen and implemented, can support critical business processes at every stage of product development, from design to delivery.**

In order to show how the reach of PLM continues to extend, I have in my previous articles broken down the activities typical of product development into phases. In my first column

we looked at the role PLM can play in prudent planning by examining how starting a seasonal or collection plan with a financial framework to create designs around is essential, assuming your intention is to make money. The essence of planning is determining what products your target market will actually purchase, and then taking a logical approach to delivering those products at the right price point for them, and the right margin for you. In most cases this will prove to be an ongoing activity, but all seasons and collections, however well-planned, have to start somewhere. As the old adage goes, "the journey of a thousand miles, begins with a single step".

**I**n our case, that first step is design.

At the start of the product development process, financial and merchandise planning

are often working in parallel with the trend and design teams, but it is vital to realise that before any entirely new seasons or collections can be planned, their constituent products must first be designed.

In the beginning, like a hazy new celestial star, there are concepts and there are trends, but neither has yet coalesced into a physical garment or even prototype design. The latter may sound like a fuzzy term for "keeping an eye on the catwalks", but trend forecasting is a true science, and the analysis that results from it is considered to be an absolutely vital component in modern product development. The world of trend prediction is an analytic yet intuitive meshing of popular culture, international events and clairvoyance that utilises a keen eye for global visual and behavioural patterns. Keeping your finger on the pulse, so to speak, of who your customer is and will be, a season or year from today, is the

key to predicting what they will want, before they know they do. Already we can begin to see how closely intertwined trend analysis and planning have become, with one science feeding the other in order to deliver products that are both competitively priced and artfully chosen for a specific target market.

There are quite a few trend forecasting groups and websites out there, many of whom do an amazing job of predicting the future of silhouettes, design details, fabrics and colors. Many companies subscribe to these types of services, but also rely on their own design and merchandising teams to scan the local streets, travel and trend spot, and monitor social media sites to hit on the right mix for their market. This generally leads to the wonderful act of creating trend boards. These may consist of magazine tear sheets, digital images, printouts from websites, bits of paper and cloth, objects with interesting finishes, vintage items, or competitor's comparative products in an effort to make sense of all the possibilities. Encompassing all of the art and the science of trend and style analysis, it is easy to see why designers so value these boards, and I believe that the relatively staid design of much fashion software has been one of the reasons that the industry has been slow to adopt so many promising product development technologies.

Despite the perceived limitations of software, visual communication of a concept is a must to get the desired product results faster. A trend board may be a terrific piece of inspiration, but it exists in a single location and represents the ideas and flights of fancy of only a small team of people. The ability of today's PLM solutions to act as central repositories for images and inspiration has made them valuable tools for trend and design processes. Photos and scans of trend boards and the items on them are an essential first step to making the products envisioned from their influence a reality, and provided these are properly catalogued within a PLM solution, they neatly avoid the difficulties inherent with communicating a complicated, singular vision using more traditional tools.

**D**igital representation allows everyone to have his or her own window into the grand vision.

As well as acting as centrally-accessible storage for these images, PLM allows them to be

associated, or linked, to related styles or collections with additional comments, to better communicate the desired look or feel of the products. They can also be referenced or updated as the responsibility for further development is passed onto other teams. I have heard so many times that concepts get "lost in translation" either between design, technical design and sourcing or with agents or manufacturers overseas. Even when painstakingly put together, internal trend books are still not distributed to all concerned parties, or each person keeps their own notes on updates in their own book and these are not communicated. By moving a trend board into PLM, its functionality is not just replicated, but actually enhanced. End users at every stage of the product lifecycle can attach comments, notes and other qualitative data to what would otherwise have remained a quite inaccessible (in more ways than one) medium.

There are, though, companies who are concerned about adopting this approach. Many organisations distribute information internally on a 'need to know' basis, and a common concern is whether or not these inspirational designs and sketches can be kept in a section

**TREND FORECASTING IS A TRUE SCIENCE, AND THE ANALYSIS THAT RESULTS FROM IT IS CONSIDERED TO BE AN ABSOLUTELY VITAL COMPONENT IN MODERN PRODUCT DEVELOPMENT.**

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of the PLM database that is not accessible to others in the company. This is a simple issue to overcome, as using the user and user group level permissions available in most PLM systems will allow for the teams to control access to images and messages.

Fabric swatches are another important item that can benefit from organization within a PLM system. They often get misplaced, and tend to get smaller and smaller as they are cut up and distributed to more people. Having a high-resolution scan of the original fabric swatch will help with initial sourcing. Then the scan can quickly be linked to a more detailed PLM material record once a fabric has been accepted into the line. Later in the process, having a scan of the original inspiration linked to the final approved material record will aid internally with samples and even through to QC when the product is actually delivered. Similarly, trend boards and other inspiration that were considered at one point in time and subsequently shelved can be easily revisited providing they are properly catalogued. As the saying goes: everything gets recycled in the fashion industry, so what is not quite right this season may be the bestseller in a year's time.

As we can see, digitising and communicating within PLM from the get-go about design decisions and direction makes things more accessible for all involved, but does require some discipline.

Depending on company standards and designers' preferences, sketches are often done initially by hand and then refined digitally in sketching software such as the industry standard, Adobe Illustrator. Some designers prefer to sketch digitally from the start, but either way, or a mix of the two, is a very viable option. For sketches that will be shared or referenced as technical sketches, it makes sense to eventually draw them digitally in vector format, both for the sake of clarity and so the sketches can more easily be updated or tweaked. Various PLM systems can automatically upload native Adobe file formats, but scripts can also be written to automatically convert these into more common formats such as jpeg.

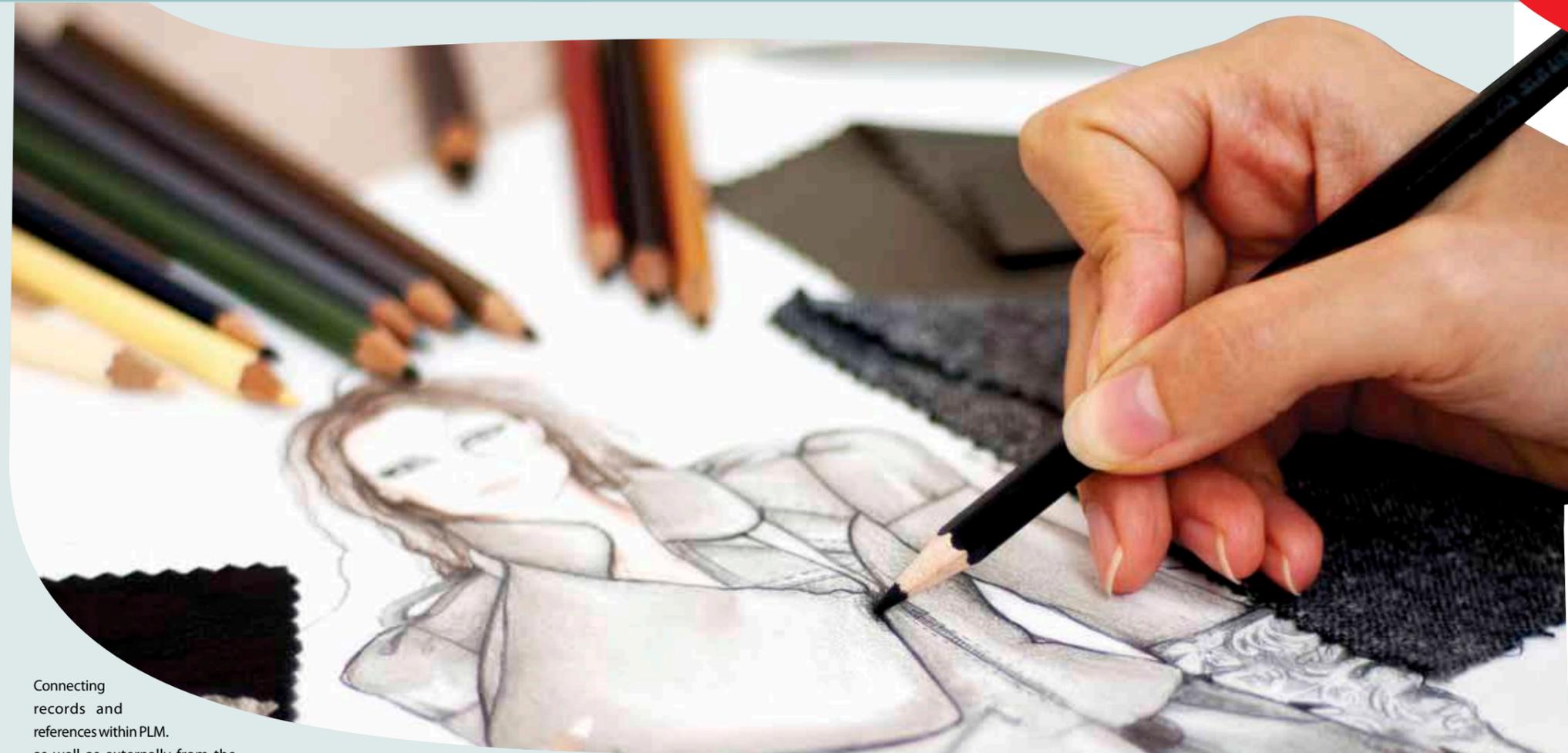
Another example of a script that automates a process is one that updates images linked to specific styles when a designer updates a sketch in a specific folder. This not only negates the issue of people forgetting to upload the latest version of a sketch, but very often updating images into PLM systems is a multi-step process and perceived as an inefficient use of time by creative talent.

Since color palettes and standards are typically determined during the concept and planning processes, these are yet a further example of the kind of information that should be retained in PLM, and the importance of doing so in an organized fashion. Unless everyone in a given company calibrates their computer screens, they will not show a consistent or an accurate representation of the actual physical color, so obviously an exact visual point of reference is unreliable, though close enough to distinguish color family. Your PLM system should be capable of referencing each color on a cyan, magenta, yellow, and black (CMYK) color level as well as red, green, blue (RGB), and it is vital that this – and other qualitative data – is properly stored at the time it is entered into the system.

Also essential these days is that your system be able to hold the spectrophotometric .qtx or equivalent file information, or at least allow concerned parties to download it as an attachment. If your company and suppliers have a digital exchange of color standards and reference these to lab dip approvals, the link between color standards, and approvals of lab dips may also be linked with material and supplier records. These cross-referenced links become a major asset later in the process, and represent another aspect of trend and design that is possible within PLM. Most PLM systems also have the ability to ascribe a reference or a link to the color standard provider so that suppliers can order their own physical color standards. Some color standard providers also keep a database of previous client colors available online. If this database could be cross referenced with desired new colors entered into PLM, a lot of money could be saved by choosing very similar colors that have already been developed versus 'reinventing the color wheel' each season for a few custom colors.

Connecting records and references within PLM, as well as externally from the beginning of the process, typically brings greater visibility and time savings for the duration of product development – provided the right standards are adhered to at the time these records and references are brought into the system.

Tangentially speaking of trends, on the manufacturing technology side, the recent introduction of an affordable 3D desktop printer with an open source library of existing designs combined with the gradual acceptance of 3D design and modeling by the apparel industry means we could be on the cusp of a very interesting new consumer model. Don't bet the farm yet, though, as 3D printing of fibers and fabric still has a long way to go, but for solid items, such as buttons, and some embellishments and trims, there is a huge potential for designers in the industry to play with many ideas while limiting sample costs.



**3D PRINTING OF FIBERS AND FABRIC STILL HAS A LONG WAY TO GO, BUT FOR SOLID ITEMS, SUCH AS BUTTONS, AND SOME EMBELLISHMENTS AND TRIMS, THERE IS A HUGE POTENTIAL FOR DESIGNERS IN THE INDUSTRY TO PLAY WITH MANY IDEAS WHILE LIMITING SAMPLE COSTS**

Assuming these technologies do come into common use, adding the resulting 3D scans and files to the materials library in PLM would allow for instant digital transmission to any supplier around the world, treating three-dimensional imagery the same way as the humble trend board. The beauty in this is that it combines digital accessibility with the ability to create a physical representation in a matter of minutes. Although it is still solely within the digital realm, 3D patternmaking for sewn products is getting closer and closer to a true virtual reality.

So many companies create wonderful, comprehensive design and trend information, only to discard it the next season, or to leave it languishing in a single design room, rather than sharing it with the people responsible for transforming that inspiration into a physical garment. By properly adopting PLM and the

stringent data standards required, a huge range of trend and design data can be collected, shared, and updated, helping to ensure that the final garment arrives not just closer to trend, but closer to its designer's original intention.

Next month we'll continue the process of product development through to patternmaking and technical design, and look at how, as with trend and design, PLM is allowing companies to enhance their traditional ways of working, from design to delivery.

# Extending PLM

## Getting Technical



by  
KILARA LE

**In the fourth instalment of her exclusive series, business process expert Kilara Le continued to examine the increasingly diverse role that PLM (in both its core and E-PLM forms) plays in the product lifecycle. In this article, Kilara looks at the critical transition between design and manufacture, and makes an argument that extending PLM to the technical design, patternmaking and sampling phases can ensure more accurate interpretations between each.**

In this, my fourth column in my "Extending PLM" series, we'll continue to explore the lengthening reach of PLM throughout the product development cycle – this time focusing on patternmaking, technical design and sampling. To recap, thus far we've examined the basic principles underlying the trend of extending PLM, and then explored case studies in the form of planning and design processes. The next logical step in any product development cycle – after those products have been initially agreed on and designed – is to use an iterative sampling process to refine those designs into market-ready garments.

In many companies creative design and technical design are separate departments, though they work closely with one another to reach a consensus. However, in some companies, creative and technical design departments are one and the same, meaning that the same team is responsible for both the right "look" and the practicality of each garment. Whichever philosophy your company subscribes to, though, patternmaking is likely to remain a specialised discipline.

Both technical and creative sketches, however, are useful to the patternmaker, and as a consequence they are today frequently imported into a PLM solution and attached to the product record from an early stage to provide guidance to the individual(s) responsible for transforming designs into patterns ready for manufacture. As I mentioned in my previous column, including inspirational and creative direction images in the PLM library (alongside the actual design drawings themselves) can help to bridge the gap between people's interpretations of a loose sketch, and can help to ensure that the finished product is executed in the way it was intended.

These sketches, along with basic product details, are the beginning of what is widely known as a tech pack (also called a technical package, specifications, spec pack, and more), which becomes the product "bible", so to speak. As it is further developed internally, the data associated with it is refined and enriched, and the design proceeds to factories. Interestingly, today's feature-rich and extendable PLM systems evolved from Product Data Management (PDM) systems whose main purpose was the creation and retention of these tech packs.

Generally speaking an initial tech pack – whether it's a sparse single page or a detailed, thirty-page document – is the first step along the road to a product prototype, by way of the iterative sampling process I mentioned earlier. It's worth noting, though, that reducing the number of samples between design and delivery has become one of the central tenets of product development efficiency, catered for by several different solutions.

So, beyond collecting design sketches and patternmaking information, a modern tech pack is also designed to help turn sketches into skirts with the fewest possible revisions, something it does by including style measurements, bill of material information, annotations and a clear sense of purpose and direction from the start.

Even with a close relationship between the design, technical team(s) and the patternmaker, agent or factory (as well as consistent block or

base patterns) there is still a degree of uncertainty and artistic license in place. By creating a tech pack that includes the most specific measurements and points of measure possible, a company can begin to see better samples in fewer submits. Getting a good prototype sample on the first submission can be extremely effective in cutting development time, since (and we begin to see why this is such a popular trend) each sample can take weeks to turn around.

When it is properly implemented and extended to the technical design stages of product development, PLM can be the perfect vehicle to achieve this goal. By serving as a centralized repository for product data, PLM can collect and make available across the entire product lifecycle measurement-specific data tables like points of measure per product type, grading, and standard measurements for a product in a size range (also referred to as a size run). As each sample iteration not only increases cycle time but can cost anywhere from 2-10 times the cost of the final garment – plus shipping – this kind of best practice through PLM can help cut costs as well as save time.

Patternmaking is often, and rightly, referred to as an art form. And while we are seeing a return to domestic and internal patternmaking, external agents and factories continue to dominate this role. Where they are producing patterns, internal patternmakers are typically creating the first, before handing off to partners who are responsible for developing and tweaking subsequent patterns based on direction from the internal technical design or patternmaking departments. This helps to ensure that pattern accuracy is maintained across revisions, but it can be an arduous process when done manually. Even if no patterns are created internally, very often members of the development team will request that updated pattern files are sent to them by external partners and will spot check them for accuracy. As you can imagine, having these available in a centralized, collaborative location helps immeasurably with both the workload and quality assurance process.

This may not be the case everywhere, but for the bulk of brands reading this article, this will be the way they handle their technical design and patternmaking today. As 3D and 2D to 3D patternmaking software becomes more advanced and widely adopted, final pattern

creation may yet shift back to internal teams, and there is little question that this technology will revolutionise the sampling process.

However your company works today or in the future, though, PLM is essentially uncontested as the best method for retaining, sharing and collaborating on the development of pattern files. No matter which pattern design system is used, a pattern file – or multiple files – can be easily attached to a PLM style record (the fabled "one version of the truth") giving visibility to both internal and external teams as well as saving space in email, and eliminating data confusion and redundancy.



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Unfortunately, due to proprietary file types, the patterns themselves can often not be displayed within PLM systems – unless the creator of your patternmaking software also happens to be the creator of your PLM system. This is something that data standardisation advocates are seeking to eliminate, and something that I hope will become less and less prevalent with time. Today the majority of 3D pattern and design files require external software to view, and so their data tends to be in one of several widely-accepted formats. As the ubiquity of digital communication becomes the “new normal” and technical design and patternmaking teams grow accustomed to viewing their samples virtually, PLM is well-poised to emerge as the de facto method for bridging the gap between virtual design and the physical cutting table.

In the more distant future, though, 3D displays may become advanced and realistic enough to negate the need for physical samples entirely – or certainly the current, iterative sampling process.

Showrooms and salespeople may be able to just as easily show potential buyers a virtual garment and quickly change it to meet their needs, without ever having to cut a piece of fabric. However, with this scenario, consistent fit and grading that is mutually understandable between your patternmaking system and PLM is essential to success – not an easy task given the differences in how the two types of systems “think” of grading.

Until that time, though, extending PLM to the technical design and patternmaking process offers some well-established and concrete benefits. Many PLM systems have the ability to request samples as well as track when they are received. And in addition to organising those physical sample submissions by color-coded tags, some companies have already implemented barcode scanning as a way to integrate their samples with their virtual equivalents in a PLM system. This not only makes recording received samples a breeze, but as people in various departments scan them out to work with, it makes finding exactly who has them in the office much easier. Compare this with the common problem of missing samples and the common practice of

sample tracking through a standalone Excel spreadsheet and the benefits should be immediately obvious.

And PLM’s role in sampling by no means ends there. As product samples are evaluated and move to approval, having not only consistent points of measure but accurate grading of these points in your PLM data tables can save significant time in technical design and ensure that you are able to reliably achieve consistent fit across entire ranges of garments. Commonly fit adjustment comments are typed up from hand written notes that result from a fit session, taking additional time and increasing the potential for mistakes or omissions. The potential for miscommunication is even greater if design or merchandising participants are adding different comments than the technical designers – particularly when there is no single “accepted” version of the fit information. With a universally-accessible PLM solution, comments and changes can be entered immediately and permeate across all users’ views of the product record. As with the kind of qualitative data I mentioned in my previous columns, photos of the fit session can also be added to the PLM record to visually explain the desired changes to both fit and pattern. These (unlike the notes themselves) may need to be added after the session, but with clear notes already in the system it is far simpler to interpret the results of the fit sessions with

**WHETHER IT’S DESIGN SKETCHES, TECHNICAL INFORMATION, FIT REQUESTS OR THE LOCATION OF PHYSICAL SAMPLES, THE RIGHT PLM SOLUTION CAN COLLECT AND MAKE READILY AVAILABLE THE INFORMATION THAT IS REQUIRED...**

both visual and alphanumeric information appearing in tandem. When all of these requested changes are kept closely associated to the style record in a PLM database (rather than in confusing email chains or on desktops) verifying the accuracy of subsequent samples in terms of quality and fit is considerably easier, quicker and more reliable.

After or during fit sessions as measurements are changed for a sample in the sample size,



these changes should automatically be reflected in the graded measurements for the whole size range by your PLM system. And as more and more brands are giving their overseas offices and agents the responsibility for final fit approval, having the grading standardised and/or correct with your PLM style information is an essential component of avoiding product returns and inspiring consumer confidence.

Using even the most basic sample tracking (and this is something the right PLM solution can perform in considerably more detail), suppliers can be notified of sample requests, reports can be generated to measure sample turn around time, and supplier performance can be easily monitored as the system displays the number of submits each vendor takes to get the sample right. This kind of supply chain and auditing information data is useful not only to the people evaluating the samples, but for the sourcing and other teams who follow them and are required to monitor many different metrics of vendor performance extremely closely.

Whether it’s design sketches, technical information, fit requests or the location of physical samples, the right PLM solution can collect and make readily available the information that is required by all teams – right through from design to delivery – in order to make better informed and more efficient decisions. And as you’ll have guessed by now, its utility doesn’t end there, and my next article will analyse just how far PLM can reach into the product development process.

# Extending PLM

## Sourcing with Software



by  
 KILARA LE

**In my previous column, I looked at how the scope of PLM can be extended to bring technical design and patternmaking into what is traditionally thought of as a “closed system” and, in doing so, allow even more stakeholders access to the benefits that extended PLM can bring. Those benefits are myriad, but foremost amongst them is the way that, as more information and commentary is added to the centralised repository that is PLM, the entire product development team gains greater visibility into one another’s decisions. This makes it easier to actually function like a team, irrespective of each individual’s skillset, timezone, location, or native tongue.**

In the section of the product lifecycle I want to examine in this article, it’s the addition of construction and materials information in particular that is pertinent – further extending the already-growing reach of PLM to sourcing.

Sourcing is a broad term, but one that means some specific things within the apparel industry. After an initial tech pack has been created by designers and garment technicians, it’s then time for the sourcing team to work on finding the ideal – yet most cost effective – materials, and at least one factory to construct the product. It is worthwhile to note that some companies work with dedicated suppliers and know what approved fabrics and materials



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they'll be using from the "get-go", but this is not the case for everybody, and the role of the sourcing team can be a complex one as a result. Additionally, if the company is working with agents, you may never actually get to know who your suppliers are, unless you specify from whom you'd like them to get your materials. In short: sourcing is the art of turning designs into commercially-viable reality, as quickly and cost-effectively as possible.

So, when you are dealing with any of these scenarios (but especially with directly sourced goods, such as fabrics, labels or branded items) creating a detailed Bill of Materials (BOM) within PLM is essential. A well-populated BOM gives garment manufacturers a whole host of information: approved suppliers, related specifications, and which materials they are able to acquire from their own sources.

The best way to build a solid BOM is – as with most of the disciplines I've discussed in my columns – to base it on the most accurate, timely, and consistent sources of information possible. In the same way that we've seen designers work with shared moodboards, sourcing teams can be at their most efficient by populating PLM with detailed material records for each material, whether it finds a place in their final BOM or not.

Some might consider this to be a waste of time in the beginning of the product development process when many potential materials are floating around the design room, but, as the product designs are ratcheted down, good material documentation saves a great deal more time in the long run. Rather than later spending a week hunting through piles of samples for that one button or fabric swatch that the

designer "just has to have", it's far more effective to create photographs and material records during those initial stages, so that sourcing can get on with finding the fabric in question, costing it, and avoiding lost time. In fact some forward-thinking companies have now made their sourcing teams the owners of all material samples that come in, so that they can document and catalogue them in the centralised repository that is PLM.

As well as serving as that centrally-accessible data source for materials information, PLM also allows for the association of materials test results, lab dips, and final garment tests to the related material or product records. And the ability to link this kind of information directly also opens up the possibility for sourcing teams to associate supplier records to their certifications and audit results, ensuring that the most compliant and best-performing suppliers are ranked accordingly. As with most aspects of PLM, data and software functions can be blocked from view to those users who don't need access, meaning that potentially sensitive data of this ilk can be restricted to sourcing, design and executive departments.

Providing greater visibility to this kind of information through the extension of PLM is much easier than digging through filing cabinets or calling up an array of spreadsheets to figure out if a problematic product or material was approved. Quite simply the information is accessible with fewer man-hours or fewer keystrokes. Moreover, tailored reports can be written that pull this information from PLM, giving visibility into vendor related statistics like pass/fail rates per supplier for material testing, lab dip submissions and number of sample submits until approval.

As is always the case with these articles, when I speak about extending PLM I'm not just talking about what we call "core PLM" solutions. There are also some great standalone material systems in the market that will integrate to your PLM solution, if your PLM solution is not quite right to capture the type of material information needed in your organisation. In addition to creating a detailed record of the material, these dedicated solutions typically track materials, their testing and lab dip results and may even link with mills to track when fabrics are in production. With the aforementioned integration, these kinds of systems can easily be bridged and become natural extensions of PLM, linking with the detailed material records. Some information in this type of materials database could also be pushed to an ERP system when goods are approved and both testing and price is signed off on. And, as a source of master data, PLM is a natural fit for feeding integrated systems at both ends of the product lifecycle.

So, for example, if some of your base materials suppliers were approved for last season, and only new lab dips need to be done for the new colors, this information can be pulled from your ERP, materials or purchasing system into PLM. A more robust, bi-directional link can then pull and push this information back and forth as current prices and colors are finalized. Indeed, most PLM systems are smart enough to associate seasons with material prices and colors, in order to facilitate this kind of rich integration. Where you're dealing with the same product across different deliveries in different colors, this kind of deep systems integration can replace a lot of spreadsheet wrangling.

Adding another layer to the extension of PLM is the use of color matching equipment and its related software – both vital components of the sourcing and sampling process. Together these record the scientific reflection data for a specific color - using a spectrophotometer - and can then be used to compare it with lab dips that are submitted against the standard. Unlike materials information, though, this is such a specialised process that it makes sense to leave the software component of it to the companies who really understand the science underpinning the art. Some of them are also associated with specific dye companies and can give suppliers

an easy way to achieve their targeted colors by providing the exact dye formulas for color standards. The results that they record, though - especially pass/fail information and comments on how to correct the color - are precisely the kind of rich information that's so crucial to providing extended visibility in PLM.

However materials are first documented, when they are finally approved for production - either by design to be sourced, or by quality or sourcing to go into production - a status on the material record in PLM is by far the best way to indicate this. Some systems can at this stage block visual access to non-approved materials, or prevent them being added to a BOM unless approved. Still others block approval or progression of a product to an overall "approved for production" status unless all materials on a BOM are approved. Both ways of working are valid and depend on the relative complexity of and need for compliance in your products and process. As materials make up the largest part of the cost of a product, keeping track of their costs, quantities, and a whole host of rich data about their colour, characteristics and composition can represent a considerable saving, - even if you're not purchasing them directly.

Speaking of purchasing, if you are actually committing to and / or buying materials, extending PLM will allow you to calculate just how much of a material is needed, including estimated waste. This information can help to prevent over or under buying. Having this ability does require BOM's in your products to contain accurate yields and accurate material records, though, and further underlines the importance of populating your central data source with accurate and consistent information. With the increased knowledge from implementing this process discipline, you can then negotiate a better price with suppliers or avoid having excess inventory at the end of a season. The benefits of each are obvious.

Another interesting extension of PLM comes when warehousing software returns information on material that is currently in inventory. If you have visibility to the 100,000 yards of last season's hot blue colour of jersey, or extra buttons you've paid for that are gathering dust, your design team can then

**USING THE TOOLS AND FEATURES IN YOUR EXISTING PLM SYSTEM IS A GREAT WAY TO START TO BRING YOUR PRODUCT DEVELOPMENT TEAM TOGETHER...**

create a product using it for the outlet, or incorporate it into a current design that is yet to enter production.

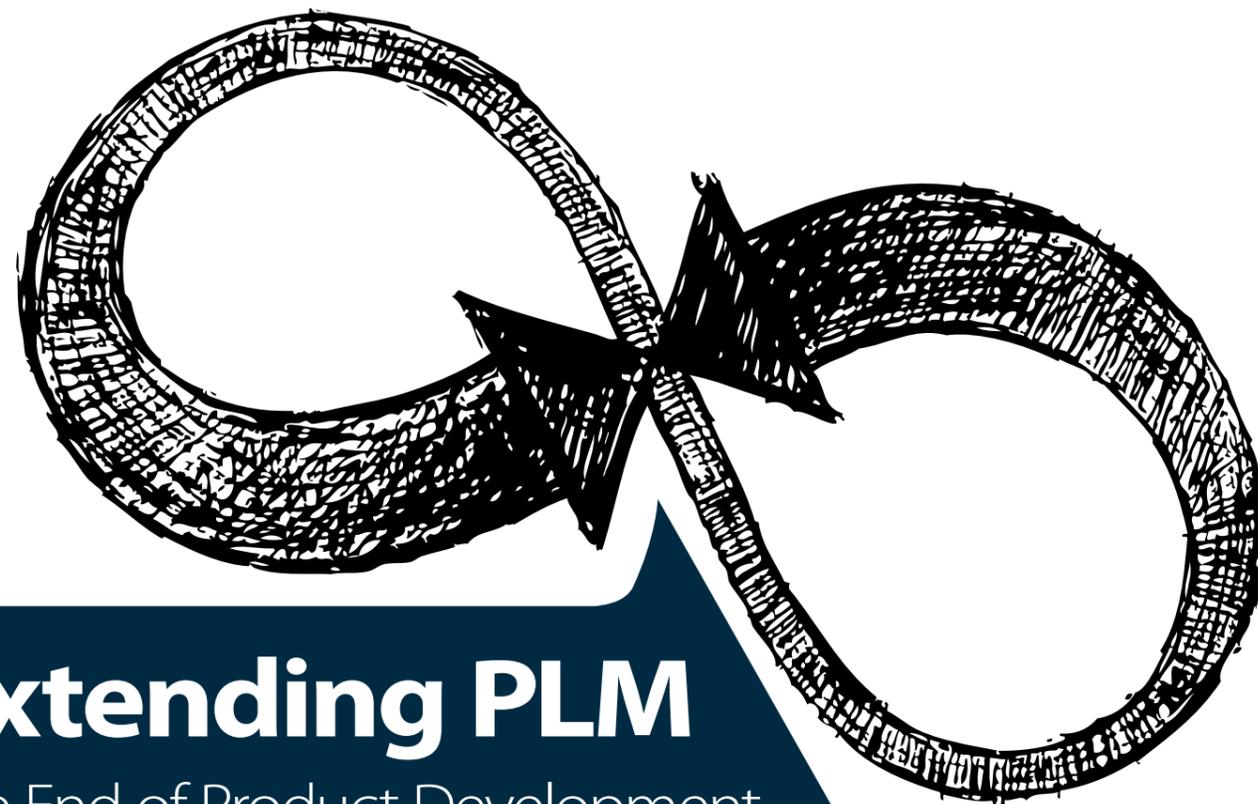
Using the tools and features in your existing PLM system is a great way to start to bring your product development team together, by extending access to the rich and varied information it contains to all of them. With visibility comes the ability to make better-informed decisions and solve problems before they become major roadblocks - especially when the sourcing team is working toward a hard and fast deadline, ie. delivery. Additional systems related to product development may capture more in-depth information than is needed in PLM, but when linked, select pieces of this data help to complete the picture for the whole development team and allow them to make the best possible decisions for the organization as a whole.

Traditionally, PLM stops then when products are "approved for production", but in my next column we'll look at some of the benefits of extending PLM through production and right on to the end consumer.

**AS MATERIALS MAKE UP THE LARGEST PART OF THE COST OF A PRODUCT, KEEPING TRACK OF THEIR COSTS, QUANTITIES, AND A WHOLE HOST OF RICH DATA ABOUT THEIR COLOUR, CHARACTERISTICS AND COMPOSITION CAN REPRESENT A CONSIDERABLE SAVING...**

**PLM IS MUCH EASIER THAN DIGGING THROUGH FILING CABINETS OR CALLING UP AN ARRAY OF SPREADSHEETS TO FIGURE OUT IF A PROBLEMATIC PRODUCT OR MATERIAL WAS APPROVED.**

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# Extending PLM

## The End of Product Development



by  
KILARA LE

**When we reach the “end” of product development, does it follow that we must also be reaching the “end of PLM”?**

We tend to talk about “the season” or “the delivery” as though it’s the end of the story – as if the product or products being developed at that time represent the full extent of the work being done day in and day out. The reality is that there is always product development taking place, even after the immediate season has ended. Indeed, many organisations work on multiple seasons at the same time, with each one at a different point in the process, so that the end of one season can fall in the middle of the development for another, and so on. As we’ve seen throughout my series, extending PLM through integration to other business systems enables the creation of better product at several distinct stages, from design to technical. What we haven’t seen yet is how these benefits can be brought to bear on product development that has no typical end-point, and how the data and process improvement realised in one season can be fed into the melting pot of ideas for the seasons that follow it.

Like any technology, PLM is only as good as the hands that wield it: it can be a perpetuator of linear thinking (the traditional start-to-finish product lifecycle) as well as an enabler of cyclical flexibility, where compounded benefits begin to be realised through data and process pollination between seasons. With a little creativity these two facets can be merged to create a well-oiled machine that adds value well beyond what is typically thought of as the “end” of product development.

The end of product development is not like jumping off into the abyss of production. To the contrary, the product, even when it has been “put into production” lives on in its physical form as well as in data that was created and curated during its development, with touch points in quality assurance and control, unpacking and repacking at the warehouse; a client’s comment to the retail salesperson or customer service representative, a tweet or Instagram photo that could trigger further sales, and even a donation for the trend-needy at a charity shop. This data never truly is “out of sight, out of mind”, and it continues to be linked to the products and people that need it once

the circumscribed limits of “product development” are passed – just as it in turn was linked to the products that came before it. As such, giving employees who need this information access to it through PLM or linkage to another system can help to ensure better product consistency and accountability in the ongoing product lifecycle.

An example of PLM’s continued role in the life of a product: if a QC or warehouse team needs to see a tech pack in order to compare it to the actual product, they become an extension of PLM either directly or through linkage to one of the systems that they access. Another example of the durability of PLM-housed data lies in ticking/checking off that factories have the required compliance documents and when they passed inspections. In each case, data created during product development is needed and accessed with certainty that the information in question is accurate and consistent, since it comes from the one repository of information that was created during the product’s gestation.

As potent as both of these examples are, though, there are many other returns on extending PLM beyond the “end” of product development that are potentially more difficult to quantify. For example, what is the ROI on ensuring the consistent quality and fit that keeps customers coming back? What is the ROI on avoiding bad PR by knowing which approved factory is making your product, and when they’ve last been audited? These are just two examples of how product data, centrally accessible within PLM, can allow an entire organisation to work towards the greater good.

By far the greatest potential value add, in my opinion, is using Point of Sale (POS) data to enable faster identification of trends and potential for replenishment. This potential is even higher for traditional brick and mortar stores (versus online) that operate in different demographic areas. There is huge potential to forecast faster and more accurately and gain better sell through with fewer markdowns. Doing this with a spreadsheet will quickly have your head spinning – but extending this data to compare it with upcoming plans and replenishment options in PLM is a smart modern solution to an age-old quandary – particularly when it takes account of data from previous seasons.

Further to this point, retail sales people should have the ability to add in comments from customers so that they flow back to products in PLM. This could be through a Customer Relationship Management (CRM) route or directly in PLM. A more esoteric view of this is using social media and audience/follower participation to either identify trends or have people vote on what they like the most. The uber-connected world of consumers can provide almost instant, and free, feedback on what they like or dislike about a product – why not look at capitalizing on this for forecasting? In today’s lightning fast speed to market world, design and merchandising teams have to be really in tune anyway to make sure they are creating what their customers want, why not add the critical factor – the final consumer – into that mix from the start? A brand or retailer’s online community management team could

**THE UBER-CONNECTED WORLD OF CONSUMERS CAN PROVIDE ALMOST INSTANT, AND FREE, FEEDBACK ON WHAT THEY LIKE OR DISLIKE ABOUT A PRODUCT – WHY NOT LOOK AT CAPITALIZING ON THIS FOR FORECASTING?**

use PLM to add comments on existing styles and help generate ideas for new ones based on what they are gleaming from Big Data.

There is also the value add of extending PLM to the systems that “come after” product development, such as ERP and Sales Orders, Sourcing, Planning and Logistics – all of which have played their part in extending PLM over the months since I began these columns. In recognition of the cyclical nature of product development, the data held in these systems can be intelligently linked back to PLM, during and after a single development phase, to aid in analysing past and present decisions in order to make better ones in the future.

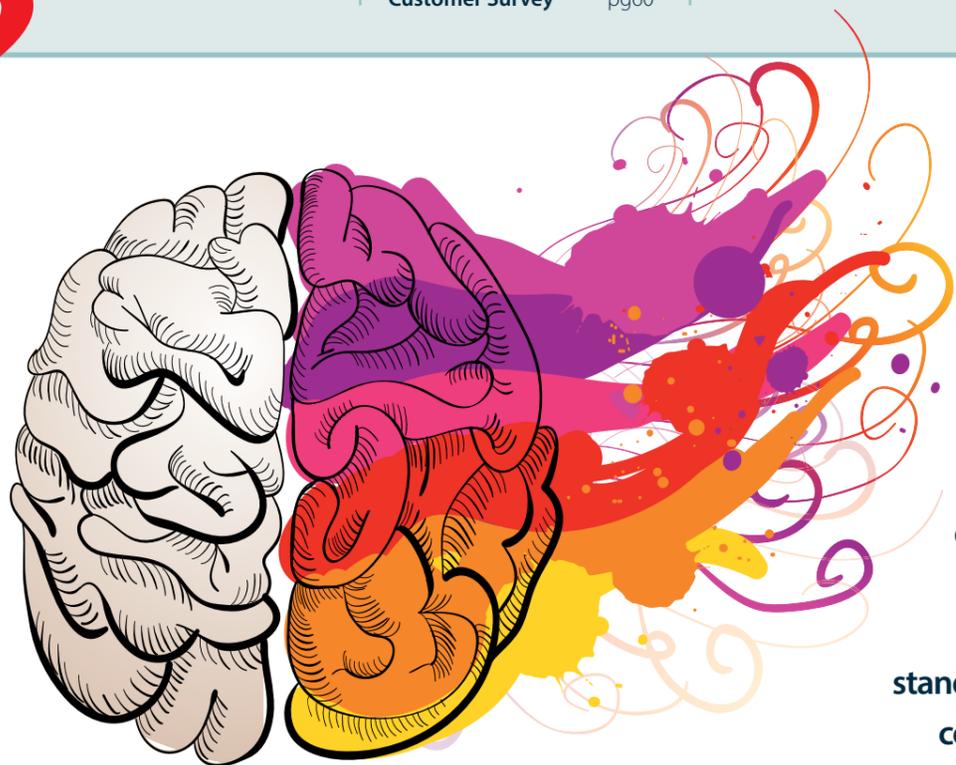
**But first it must be determined what data is truly useful and how it can best be used.**

Today’s plethora of options for technological input and throughput help to both manage and impede the process of decision-making. It takes time to enter data and it’s great when it provides quick and accurate visibility to those who need it. But it also takes time to run a report on it and even more time to cut and paste report data from disparate systems together to make sense of the data side by side. Part of the issue is getting the valuable data front and center, because who has time these days to sort through reports and number crunch into next week to figure out where things went wrong or right? Some companies have solved this issue by using a data warehouse or Business Intelligence system as the “data broker” that hooks up all of their vital systems data and allows analysis of it, and this is an area that requires serious consideration when we consider just how much use product development data sees, and how its complexity can become compounded by the seasons.

In this industry we tend to be cautious adopters (and where complex and enduring data is concerned, we are perhaps right to be), but we are faced with a stark choice today: model our systems and data to align with the times, and use them to make better decisions, or continue to develop products in isolation.

As I hope I have articulated in this series, in today’s crowded and competitive market, those companies who are able to extend PLM and use its centralised nature to link other data systems and functions both during and “after” product development will have true visibility from concept to consumer. Moving toward this ideal will enable the creation of better product and an organization better tuned to the needs of its employees and customers.

In short, by extending PLM we can do real justice to the realities of modern product development.



In this article, fashion design veteran Andrew Dyer sets out to dispel the irrational fear that standardisation leads to the constriction of creativity.

# STANDARDISATION: THE THIEF OF CREATIVITY?



by  
ANDREW DYER

**Look these two terms up in a dictionary, or use a thesaurus to find a synonym for one or the other, and you will likely never find them adjacent to one another. Talk to designers (our industry's most vocal creatives) and many will react as though the very idea of any sort of standardisation is anathema to their spirit. There is nothing surprising in that, given the status that we place on creativity and the role that it plays in differentiating one brand from another, and what most people see as the tempering or homogenising power of standardisation.**

There is an innate suspicion, then, that standardisation – whatever form it takes – leads to conformity, and that this in turn stifles creativity. The ability to originate and innovate is the very essence of a company's design capability; good design is the reason that consumers buy garments, after all, and every

brand wants to encourage flair and individual thought amongst their design teams. No one is arguing with that. But what many designers and creative teams fail to realise is that standardisation is all around them – it just isn't recognised as such.

So what is conformity? Formally defined, it is working or complying with rules or general custom – working within established practice. Taken like this, we can explain to a designer that they already conform: they already work to a given set of rules. Every season they conform to a given set of colours in colour charts and seasonal palettes. They conform to a brief; a given set of design parameters, and the dictates of trend, of buyer's demands, of manufacturer's capabilities and perhaps most tellingly in today's climate, price points.

Explain all this and the designer would steadily realise and accept that, yes, they create within defined parameters and established patterns of working. But the same can't be said for

standardisation. The word provokes cries of outrage. No one wants to work to a standard, the designers might argue, as this invariably means that all designs will wind up the same. In an industry as reliant on differentiation as fashion, standardisation must be fought, they might say.

I have encountered this reticence and these misunderstandings many times, in design rooms all over the world. This fear of standardisation is almost universal, but, like many fears, it stems from a fundamental misconception rather than any real threat. And so, at this point, I like to tell a story that I hope illustrates the role of standardisation in modern design and helps to dispel any notions of it constraining or crushing creativity.

"A man was called into a well-known fashion company with the brief to inform the designers and the creative team about the latest updates to an equally well-known drawing application. He also planned to take the opportunity to introduce them to methods of best practice to keep file sizes down, amongst other things.

The crowd he spoke to included garment designers from various disciplines, including woven and knitted products for both sexes, childrenswear and accessory designers, and also graphic designers. All had different needs and different questions. All were looking for different solutions to their own problems.

There was, however, common ground: the drawing application used by all, or so the man thought. It soon became apparent, though, that this common ground was a bumpy road with many levels. Some students were not as accustomed to aspects of the application as others. That was normal, the man reasoned: there are many reasons why students from different disciplines would not be overly familiar with all aspects of the application. But these differences persisted at virtually every level.

Could it be a lack of ability, the man wondered? That would certainly be the first and easiest

conclusion to come to – that some designers are simply better at using their tools than others. The answer, however, turned out to be that while all of these designers (all working within the same company) used the same drawing application, not only did different departments use different versions, there were often different iterations in use within a single department.

He pressed them as to why this was. When asked why, the designers spoke of the cost of upgrading. Not so much a reason as a cynical observation, an indictment on management within the garment trade. They told of more senior designers being the ones to benefit from any upgrades that were implemented. Juniors or newcomers would just have to make do. Resentment was rife. Not within the creative teams, but directed, again, at management.

**THERE IS AN INNATE SUSPICION, THEN, THAT STANDARDISATION – WHATEVER FORM IT TAKES – LEADS TO CONFORMITY, AND THAT THIS IN TURN STIFLES CREATIVITY.**

Furthermore, sharing ideas was challenging, the designers said. Sending work to one other was fraught with difficulty. Designs created using the latest version of the drawing application would, obviously, include use of the latest tools and techniques. When these documents were sent to colleagues using an earlier version substitution occurred, or, even worse, an inability to load the document at all.

With the inter-departmental differences in application versions, though, these problems were not limited to individuals. When documents were sent to a central server for publication to a stylebook, for example, or forwarded to a PLM solution, these different versions would create difficulties and incompatibilities. Rather than wonder whether there was a better way, though, the designers shrugged their collective shoulders and carried on, assuming that this was just the way things had to be. Wasn't that how it was in the fashion game? Weren't all companies the same?

The discussion session now over, the man then took the designers into the room they were going to use for training. There, on the table, were identical top-of-the-range computers, each loaded with the latest version of the application they would be using during the rest of the day. For many, this was the first time they had worked with the most recent revision of the software, despite using it day in and day out.

The designers, without waiting for instruction, dived in and wanted to create and experiment. Now they all existed on a true common ground – something they had not done for some time.

No one was separated by inferior technology – only by the scope of his or her own abilities, which were in actuality far more closely aligned than the morning's session had led people to believe. The man continued to instruct them on the advances in the application and ways to incorporate these changes into their working practice to facilitate easier working patterns, and the designers came to understand how standardisation could benefit them all.

The moral of this tale is simple: sharing a common set of tools, at the same level, does not inhibit creativity, but rather stimulates and encourages it – between departments and between individuals working more closely together. Creativity exists at the individual and collective level, and rather than being constrained by standardisation, can actually be set free providing the platform for standardisation is the most up-to-date and that each end user is properly educated on its benefits.

In short, standardisation is far from the thief of creativity, and is not something to be feared. We all live in a world of upgrades (to our phones, tablets, televisions and computers) in our private lives, and we all want the latest and fastest, particularly when others can see it and when it allows us to interact with our peers on the best and most-commonly-accepted platform. It follows that we shouldn't fear the same in our business lives, and should instead embrace standardisation intelligently and in the interests of being as creative and productive as we can be.

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*“Those who dream by night in the dusty recesses of their minds wake up in the day to find it was vanity, but the dreamers of the day are dangerous men, for they may act their dreams with open eyes, to make it possible.”*

T. E. Lawrence

## The Architects of Fashion



by  
KATY BOWLES

**When I first heard the T. E. Lawrence quote aged ten, three words always stayed with me “Make it Possible” but I always wondered...“How?”**

Unfortunately no one ever tells you how successful individuals have carved out their careers? You simply admire the pinnacle of their achievements and hope that one day you will follow in similar footsteps until you achieve your own success. At 16 I threw this notion in the bin and made a ten-year plan, quite ambitious for a kid, but I realised that if I never set myself goals I might never accomplish anything. I sat down and drew up a plan: what I wanted to be, where I wanted to work, what I wanted to earn and, most importantly, what I wanted to learn.

Initially I started my professional journey as a pattern cutter and assistant designer at the factories in Yorkshire then moved on to work at several Savile Row houses, completing my bespoke apprenticeships with Norton & Sons, Huntsman

and Davies & Sons as well as simultaneously completing my academic qualification as a Bachelor of Arts at The University of Leeds. I knew early on that I wanted to be a master cutter on the Row but I knew achieving this could be nigh on impossible. Unlike today, where there are an abundance, back then there were no distinguished female cutters and only a small handful of us in training.

Always longing for additional experience I intentionally applied to work in tailoring at the world’s finest department store and I took it upon myself to fit every cut, style, block and designer suit I could expose myself to. I fitted dozens of suits a week, whereas in the West End it may be dozens a year. I managed to see the endless results of my labour in a matter of hours rather than months, fitting every anthropometric figuration and body shape humanly possible. It became the most edifying experience and the greatest learning curve I had ever been exposed to. American, Italian, Russian and Chinese drafting soon became second nature and I could see a suit in Vogue and tell you

every direct measure off the top of my head. I then applied all this knowledge to my cutting in Savile Row and my wonderfully diverse customers. I never disregarded additional experience as fruitless, even working within sales during University taught me how consumers think, interact, their opinions on cuts and fits, what they expect from a label and most importantly what sells.

It was during this period I realised I didn’t want to be constrained to classic, systematic house styles and that rapid progression and global exposure rather than being restricted to one company, one ethos and one board for a decade would be more fulfilling. I wanted to know everything.

It was this thirst for knowledge that led me to complete a bespoke tailoring apprenticeship alongside my ongoing studies in the cutting room in order to enhance my knowledge and skills within couture. Being able to correlate 2 and 3 dimensional forms systematically seemed to deliver more clarity within my work.

Just under a decade passed before the vision was finally achieved and I worked at various houses up the ranks as cutter, senior cutter to finally become a head cutter, completely responsible for a bespoke house, dozens of my own customers and a seemingly endless workload. The responsibility and independence, as well as the immense pressures, are totally “make or break” and define your apex ability to survive within the industry but if you truly hone your skills and expertise the demands of the role just become challenging and exciting.

**So why did I decide to become a technologist? Why the slight career adjustment?**

Sometimes in life we set goals and dreams but neglect to plan for the eventuality of actually realising them. It was only when I established my own business in the West End that I felt I was becoming a little intellectually stagnant completing repetitive linear work. I realised I wanted to keep achieving more and more consistently and I was tired of the narrow career spectrum. For a decade I’d exhausted the historical bespoke approach to pattern cutting and

desperately did not want to be pigeonholed as a bespoke cutter restricted to one street. I wanted to know both sides of the coin; the hand crafted individual tailoring and the luxury designer ready-to-wear, ultimately becoming an expert in my field as a whole rather than an expert of a niche.

I went back to University Postgraduate and trained in Gerber technology and electronic pattern cutting. I educated myself in non-woven and fusible interlinings, industrial machinery, mechanical construction and processes, AQL control and ISO 9001 procedures, PLM systems, international factory management & establishment, international & global communication skills, database control & development, incremental grades, TQM, and technical QC. It is my firm belief that my background in traditional tailoring provided such a deep and solid foundation that these new concepts were easy to absorb and adapt to.

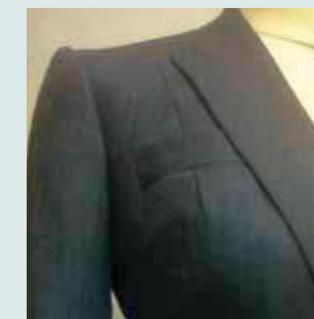
A technologist has a demanding role working closely with product development, the buyers and designers contributing the technical, realistic and engineering approach to the development process. When a designer creates a two-dimensional representation of what their vision should be in reality, it is the technologist who makes it happen three dimensionally. We “Make it Possible”.

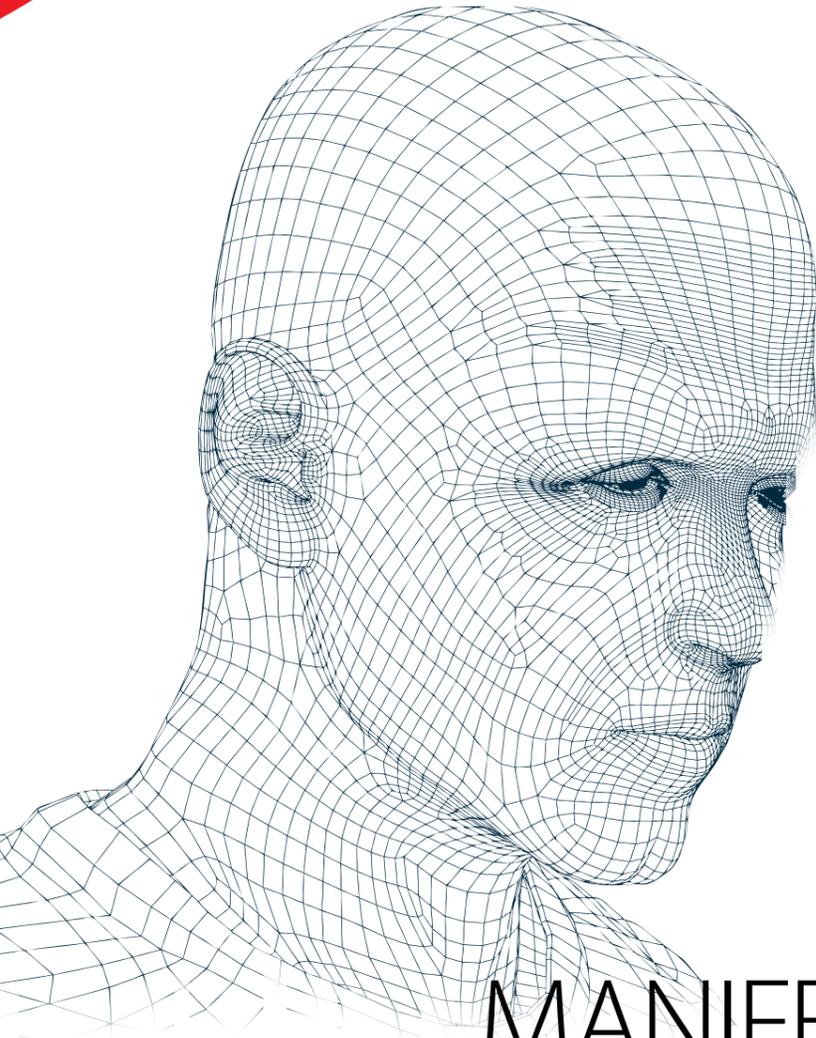
To be a successful technologist pattern cutting is a must, and separates the strong from the weak. Being able to alter and manipulate blocks whilst maintaining consistency throughout seasonal collections is a huge responsibility and the tech works directly with the factory sample rooms to try and ensure that uniformity is always present within a brand. Expert understanding of the mechanics of garment construction whilst being competent enough to be diverse and understanding to the desires

**I KNEW EARLY ON THAT I WANTED TO BE A MASTER CUTTER ON THE ROW BUT I KNEW ACHIEVING THIS COULD BE NIGH ON IMPOSSIBLE.**

and needs of the modern designer is crucial. The role requires daily communication with factories and global production units whilst being responsible for the manufacture of thousands, sometimes millions, of garments each year. Should something go wrong during manufacture it is our responsibility to fly out, get into the factory and put it right. Whether it is in Europe, America or the Far East, we are on hand with expert advice to ensure that no compromise is made to production times and industrial deadlines. Unlike a bespoke career where I could fit a garment twice sometimes three times, within designer manufacture the skill is to hit perfection first time. There are no re-bastes or re fits, no second attempts, this can be daunting or challenging depending on your perspective but the experience and confidence to execute a decision is crucial.

International travelling, catwalk shows, PR events are one of the huge advantages of the position. In the past ten months alone I have visited twelve different countries including Sweden, Italy and Bulgaria, encountering different cultures, fashions and creating life-long industry friendships. The career continuum is vast and limitless; a profession within technology is continually innovative. For any individual with a passion for fashion, mathematics and intellectual challenges, a technical vocation should be explored.





In this exclusive article, fashion design veteran Andrew Dyer looks at the role of “avatars” in the design process and, in a broader sense, the importance of allowing creativity to take place within consistent, standardised parameters.



by  
ANDREW DYER

# MANIFESTING THE SPIRIT OF DESIGN

Type the word ‘avatar’ into a search engine and it should come as no surprise that the list of over three and a half billion results is headed by James Cameron’s movie of that name. A few pages further down you may come across a reference to avatars as being ‘deliberate manifestations of a deity on earth’ within the Hindu faith – where the word originated.

Both results share a common thread: the incarnation of a spirit into another bodily form. But it’s the body rather than the spirit we’re

concerned with when we talk about another, less widely-used interpretation of the word “avatar” – the kind appearing in forward-thinking design rooms around the world.

At its most basic, an avatar is a representation of a human form (man, woman, child, or adolescent) that allows a designer to develop individual garments within his or her collections that adhere to a consistent set of measurements. The avatar matters little where 1 single garment is concerned, but without a common reference point, two dresses within the same line could conceivably be drawn in entirely different

dimensions – both in absolute and relative terms. So, by starting with a predefined avatar for both, the designer can eliminate any uncertainty and build consistent interpretations of their style.

Unlike Pandora’s iridescent blue host bodies, a designer’s avatar needn’t be sophisticated, three-dimensional or lifelike. Nor does it have to be animated. A simple graphic representation of a shop mannequin – as seen in solutions like Verve Sketch – will suffice. Indeed, a series of lines indicating well known measuring points like shoulder, bust, chest, waist, hip, knee and

ankle would still allow the designer to work on a consistent framework without the extraneous detail we might typically associate with a human model.

The importance of an avatar (something its ranking in our search results fails to reflect) is not judged, then, on the degree to which it resembles an actual human being. It lies instead in the way that – in whatever form it takes – an avatar can be used as a ‘building block’ on which to construct a series of scaled drawings. Even if we were developing clothing for animals, the same principle would apply: one dog coat could be wildly different in scale to another unless points of reference for the size of both were established beforehand.

Imagine if you will a typical design room in a high-profile brand, where creativity is paramount but where each designer is working to a well-defined deadline. These designers are working without avatars, starting each individual design as a blank canvas and creating their sketched models freehand each and every time they begin a new garment.

It goes without saying that each individual designer is going to be drawing to their own scale – one that is not necessarily consistent from one design to the next. Some will create whimsical, over-exaggerated fashion illustrations, some will have their heads close to the screen, creating tight, intricately-detailed plans, while still others will be producing large freehand sketches next to colleagues who have been taught to create rigid, uniform line drawings. Their eventual creations will be in varying sizes, each one different in terms of absolute and relative scale, and none of them are therefore interchangeable.

This scenario is true to what most people think of as design – creative, interpretational, spontaneous – but is, in fact, quite removed from what I think of as being the “spirit” of design – the essential goal of creating a clear, realistic style that is ready to undergo treatment by garment technicians and become a collection.

Compare this hypothetical scenario to one where the same design team, working to the same pressures (required to produce a consistent collection) instead uses the same set of avatars as a basis for their line drawings. Not only can we be sure that all will be drawn to the same scale and all interchangeable, but

AT ITS MOST BASIC, AN AVATAR IS A REPRESENTATION OF A HUMAN FORM (MAN, WOMAN, CHILD, OR ADOLESCENT) THAT ALLOWS A DESIGNER TO DEVELOP INDIVIDUAL GARMENTS WITHIN HIS OR HER COLLECTIONS

the impact on other, unexpected areas is also significant. File sizes will be reduced, access to PLM enhanced, and the ability to build a season-by-season library of styles and consistently-sized components that could be used months or years into the future made possible.

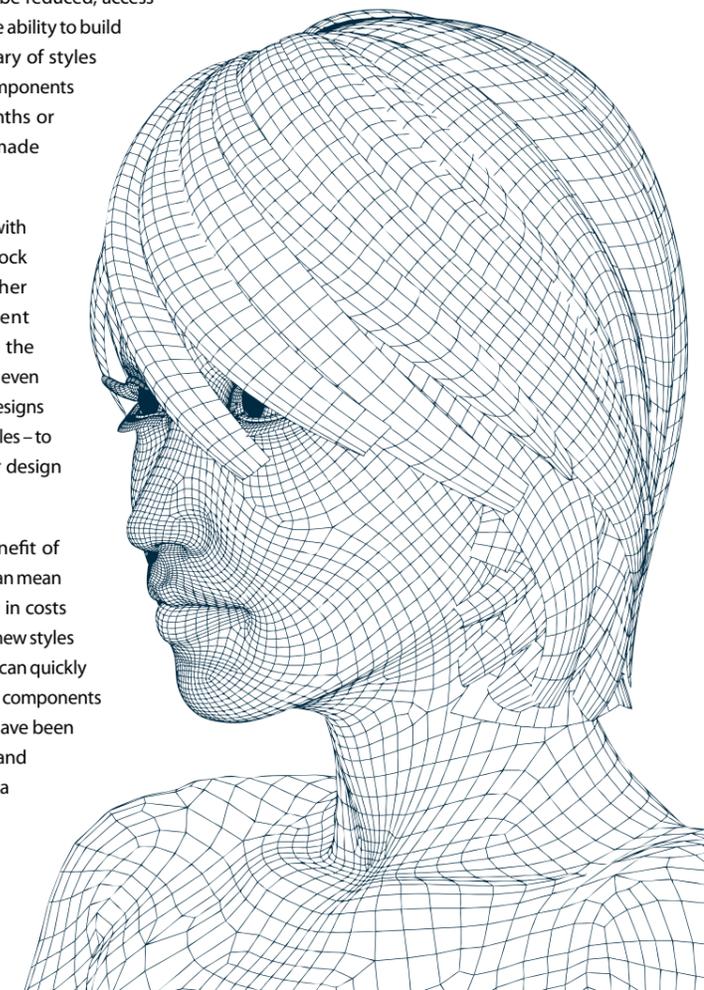
All designers are familiar with cataloguing and using block patterns to create further patterns, but consistent avatars present us with the opportunity to take things even further and to use block designs – created to consistent scales – to create further designs or design components.

This is an important benefit of consistent sizing, since it can mean a considerable reduction in costs when the introduction of new styles is required, and designers can quickly and easily revisit individual components of designs that may not have been suitable for past seasons and adapt them to fit in with a future collection.

And the benefits of avatars don’t end there. Scaled drawings allow not only an interchangeability of styles but also an interchangeability of personnel.

By this I mean that virtually any designer would be able to step in at a moment’s notice and take over from a colleague who is absent or unwell, and know exactly how their colleague’s design is built and be safe in the knowledge that, crucially, the scales to which the two designers have been working are the same.

So, whether your avatars are little more than a series of spaced and dashed lines or a true photorealistic three-dimensional likeness of Jake Sully or Neytiri, the chances are they will have a huge impact on your design capability.



# WWW.PLMM

## Why, When and Which PLM



by  
BRION CARROLL

**The title of this article plays on a few different elements. First, the motivating technology of Product Lifecycle Management (PLM), and its ushering in of a new age in product development – moving us from behind restrictive firewalls to a cloud-based, mobile, external share point accessible by designers and vendors alike and underpinning the work of many of the world’s leading brands. Secondly, my title plays on the unfinished Uniform Resource Locator (URL), which the technologically-minded amongst you will notice is missing an appendix to specify the host location. This is because, as of 2013 and despite its proven use across the globe, we really do not yet have a firm understanding of just where PLM’s capabilities end. Finally, my title follows on from both of the preceding points and reinforces the intention of this article, to look at ‘Why, When, and Which PLM’ – helping newcomers and old hands alike to better understand the history of our industry.**

Before we begin, it’s important to realise that when I speak of PLM for the purposes of this article, I’m referring to PLM solutions specifically designed to cater for the retail, footwear and apparel markets – a fast-growing industry worth an estimated \$400 million in 2013. PLM has its roots in the automotive and aerospace industries, but made the transition to fashion around the turn of the century.

So, first of all, ‘what’ is PLM, in the sense that we refer to it within the fashion industry? PLM, at its core, is an ideology (and supporting software solution) that manages the transitional states of a product through from its conception to its release, or sometimes even its rebirth. This is a simplistic view, since the product lifecycle encompasses a great deal of product information and people-centric tasks that collaborate together to achieve the end result – a product fit for market, designed, manufactured and priced accordingly. These processes are agnostic to applications or tools, but generally speaking most modern retailers and brands deploy technology to a greater or lesser degree to achieve their shared goals. This is where product lifecycle management (PLM) technology comes into play, helping those same retailers and brands to achieve inter-departmental harmony and coexistence, and ensuring so far as it is possible that products are created efficiently.

It’s that trademark efficiency that continues to lead retailers, brand and manufacturers in their droves to ask the questions that headline this article: why, when, and which PLM? Many of the companies I have interacted with in my role as a PLM consultant have very strategic and effective ways of developing and maintaining their product lines, but, from their own investigations and from whispers passed down the industry grapevine, many of them also recognise that there is a better way.

This is usually where the topic of PLM enters the discussion, although despite having heard the stories of cost savings, and heard rumours of potential gains and process improvements, many of these brands are still unsure what, precisely, PLM is. This is often complicated by the fact that they may already have a Product Data Management (PDM) solution in place, and confusion abounds about how the two compare. Although PDM birthed PLM, it does not necessarily follow that every organisation understands the order of succession, and so

the next logical question – once the topic of PLM has been raised – is usually “why should we adopt PLM?”.

Unfortunately for the peace of mind of those asking the question, “why PLM?” doesn’t have a clear cut, universal answer. The reasons for turning to PLM are as unique as the businesses who give rise to them, beyond the desire to take advantage of some of the core capabilities that PLM boasts above and beyond those offered by PDM.

There are several metrics (including WhichPLM) by which PLM solutions themselves are evaluated, and businesses in the situation we’re considering (with a desire to adopt PLM, but a limited understanding of why) can be forgiven for often simply choosing the highest-rated amongst them. Or, if times are hard, the most competitively-priced.

And yet, a given company’s reasons for adopting PLM may render either the most capable or the cheapest solution a poor choice, and it’s vital to remember that “not yet” can be a valid answer to the question of “why PLM?”.

My goal with this article is not to prove to anyone the effective return on a PLM investment, since this is often subjective. In fact, despite my status as a PLM evangelist, I do not always recommend PLM to companies, especially if they aren’t able to adequately answer the question of why they might seek to adopt it in the first place. Indeed, getting a business to conduct this sort of introspection can be a worthwhile end goal in and of itself, since due diligence and personal inventory are never wasted efforts.

Even though each of the businesses I’ve worked with – as I mentioned earlier – has had a detailed understanding of their own product development processes, it often takes the prompting of an outside party to get them to take a step back and begin to analyse their reasons for turning to PLM. By way of example of just some of the previously hidden aspects of product development that have come to light in previous projects: redundant efforts throughout departments; missing revision or iteration histories; an inability to reference past information; a lack of standardised processes for design or development, with each person working at their own pace and performing an external task that is time dependent, and that ultimately hinges on no single set of master

PLM, AT ITS CORE, IS AN IDEOLOGY (AND SUPPORTING SOFTWARE SOLUTION) THAT MANAGES THE TRANSITIONAL STATES OF A PRODUCT THROUGH FROM ITS CONCEPTION TO ITS RELEASE, OR SOMETIMES EVEN ITS REBIRTH.

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data – no accepted version of the truth. These are just a few examples and are by no means typical of every potential PLM project, but an idea of the kind of introspection required in these scenarios can at least spark discussion, and galvanise the process of examining activities like material management, merchandising, design, technical design and sourcing to discover whether or not one or more of these areas presents a worthwhile business case for adopting PLM.

In one of my experiences, I had approached a company that wanted to investigate PLM because of the sunseting of a legacy application. This was a very good reason to investigate (although it did not exempt the business in question from the kind of introspection I mentioned above), but logic suggested that the existing application was being retired since it failed to fulfil at least some needs within the business. After some careful analysis, we were able to determine why the other application fell short in terms of functionality, and this gave us an effective checklist for the future.

Only once the “why?” is addressed does it make sense to begin contemplating the “when” – specifically how soon is it desirable and feasible to actually implement a PLM solution?

The general answer – and not always delivered tongue-in-cheek – is “yesterday”, since the challenges that galvanized the business to turn

to PLM in the first place will only have become more pressing in the intervening period. This is obviously unrealistic, but nevertheless I have seen companies take the ‘Big Bang’ approach and try to do everything all at once, when the best approach lies in setting obtainable milestones that will take you from the initial stages of development onwards - through seasonal release efforts based on materials, styles or brands.

Another key consideration is the impact a project of this scope will have on your work force; a technical designer facing a learning curve (or worse, duplication of their efforts) will be less productive during the transitional phase, for example, and the impact of this and similar effects to the workforce will be felt at all levels of the business. To try and mitigate these difficulties, a standard process should be agreed with each department, with tasks and dependencies governed by a rigorously-maintained calendar.

I was once tasked with overseeing a PLM implementation where we were asked to, in no uncertain terms, “hit the ground running”. To try and meet that goal, I suggested that I be allowed to meet with each internal division to

coordinate development and user acceptance testing, only to find that virtually everybody was tied up in production release efforts. And, since user acceptance, training and change management are so vital to success, we found ourselves swapping running shoes for walking boots.

By slowing down, we found ourselves able to give better consideration to functional requirements, tying these more closely into the needs of the individual departments and creating a better PLM experience for all.

Any assessment of when to implement PLM must also take account of master data. Without a thorough analysis of how data is stored, changed, modified, consolidated and reported upon, it can be all too easy to lose sight of the fuel that actually permits any PLM project to run at all – let alone to hit the ground running. By conducting a thorough introspection along these lines, a company can start to “live” PLM before they even purchase a solution – at the same time preparing themselves as thoroughly as possible for their implementation.

And, needless to say, a better understanding of core data principles enables far more accurate estimations of the timeframe for delivery. Case in point: I was involved in the technical design of a PLM to ERP integration, and by better understanding the scope, role, and the ebb and flow of business-critical data, we were able to develop seasonal reporting triggers that eventually became the cornerstones of Business Intelligence (BI) throughout the organisation.

So, with the “why” and the “when” of PLM addressed, we come to the question that’s also

the namesake of this very website: which PLM? You may be surprised to learn – considering my role as a PLM project manager – that sometimes the answer is “none”. It is possible for some retailers and brands to improve their data management and collaboration with customers, suppliers, and across the enterprise with sound investments in CRM, SCM, SDLC and ERP systems, without necessarily incorporating PLM until these other pieces of the puzzle are in place. This can be achieved by interfacing, business processing modelling laws, and role-based tasks, which may collectively serve as a short to mid-term solution for businesses that may believe they need PLM (and need it now) but would in fact be better served by taking strong preliminary steps rather than jumping into PLM unprepared.

Assuming that the retailer or brand in question can confidently demonstrate that PLM is the solution for them, the question of which system to adopt (a choice between more than fifty different vendors) is usually driven by the specific challenges the business is facing.

Chief amongst these will usually be the disconnected nature of their existing product development processes: system capabilities and data may be handled in multi-version spreadsheets or disconnected data warehouses, and seasonal deadlines may be getting missed – all while designers, technicians and sourcing managers are working around the clock to keep things going. This is a difficult scenario to see, but one I encounter all too frequently, and the one that most often sends the retailer or brand scrambling for PLM in the first place.

But although one of the core competencies of PLM is the ability to aid collaboration between previously disconnected teams, geographies and systems, there is still no magic PLM bullet that can solve all of a business’s common and unique challenges in one fell swoop. As a result, making a PLM selection on

the basis of just your most immediate challenges (particularly where those challenges are common to other business in our industry) can sometimes be counter-productive, since it fails to take account of longer-term realities and does little justice to the broader business perspective.

In the initial stages of PLM selection, I generally recommend that customers identify what they can already achieve – process wise – with what they currently have, and then identify what is unattainable without adopting a new solution. This approach can be very humbling, as it helps to shake businesses out of a mindset where they believe that simply choosing the right software will solve all of their most pressing problems, but struggle to think any further ahead.

In doing this it becomes possible to highlight the truly business-critical areas for improvement over a several-year term, rather than adhering to a scribbled list of things that simply must be fixed right away. Those highlights then become the building blocks of your shopping list when the time comes to meet your potential vendors head on!

To help round out your highlights into a more complete set of shortlisting criteria, there are many selection criteria documents available – some freely distributed and some proprietary. These can help in the requirement-analysis activities undertaken by potential end users in various roles within your company. Regardless of the capability of modern PLM solutions, even the best still require proper administration and modular thinking in order to deliver on their potential results.

More often than not, I work with customers to assemble a set of questions that will help to ascertain two crucial things about any PLM vendors: their understanding of the software itself, and their experience of the retail,

apparel, footwear and consumer goods industries. The same questionnaire can be supplemented by further questions that examine the financial stability and long-term roadmap of the vendor, as well as the finer points of differentiation between their solution and others.

Lastly, I encourage customers to assemble an initial costing model (incorporating number of users, solution cost, server location, remote storage, maintenance cost etc.) which allows them to better understand the implications of answering in the affirmative to why, when, and which PLM! I place cost last to reflect my belief that it should not be the primary deciding factor. I do not believe that any company should “check out” a low-cost PLM solution, or that they should compromise in order to deliver a cheaper and less competent version of what they need.

The only real way to answer the important questions with which this article concerns itself (as well as any others that arise from the consideration of PLM) are to think, think some more, and think again. In my work I approach each PLM project as though it will set new standards for capability, delivery, execution and return, since I know that each and every business – whether they feel pressured to fix things right away, or have the luxury of approaching things slowly – feels the same way about their products.

Answering the questions of why, when, and which PLM can (and in all likelihood will) be difficult, but any business truly committed to surmounting their long-term challenges will find it more than worthwhile.

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## About our Customer Survey

**Here at WhichPLM, we're accustomed to the industry coming to us. Once a year, though, we do things differently and conduct a wide-reaching effort to contact retailers, brands and manufacturers around the world who we know have shortlisted, selected and implemented PLM and whose employees are working with a solution day in and day out and at every stage of the product lifecycle.**

We contacted these companies - numbering in their hundreds - because each of them is in what, to many of our readers, is a privileged position. They have passed the finish line on a journey that growing numbers of other retailers, brands and manufacturers are only just embarking upon. And from their experience, they have gained the ability to provide us - and you - with a truly unvarnished idea of what it might be like to buy and to use PLM.

So, over the course of two months this summer, our team sent a comprehensive questionnaire to these specially-selected companies (as well as making it available to others) that was designed to gauge not just their satisfaction with their chosen vendor, although this is reflected in abstract in the results that follow, but also to gain their insight and hindsight into

the difficult task of actually quantifying their need for PLM and then selecting that vendor in the first place.

Although not all of the companies we contacted were able to complete the questionnaire, those that did were safe in the knowledge that we would treat their responses within the same ethical framework as everything else that WhichPLM does. As such, their answers and their additional insight will be presented anonymously and without any manipulation on our part.

Although we know which solution each respondent is using, and how long they've had it in place, the aim of this end user survey was not to create an arms race between suppliers or to single out any particular vendor for criticism or praise, but rather to build as complete and comprehensive a picture as possible of the entire PLM market for retail, footwear and apparel.

Why, you might wonder, would that kind of retrospective picture be helpful? Is there a tangible benefit to looking backwards in an industry that, if anything, started off running before it could walk and hasn't slowed down since?

The short answer is that the heady pace of the PLM industry for fashion makes introspection and clarity even more vital than it might be

otherwise. In rushing ahead, it's all too easy to lose sight of where we've been, and since the future towards which everybody appears to be running is so nebulous and fragmented, the only real tool the industry as a whole - and those retailers, brands and manufacturers who turn to it for help - has to learn from is the past.

So, by collecting, collating, crystallising and presenting the most honest picture we possibly can of that past - in financial-year increments - our goal is to further what has always been the driving force behind WhichPLM, to bring clarity and the benefit of experience to a crowded, confusing and complex market.

This isn't to condemn the suppliers themselves; crowding breeds competition, and we understand that vendors must by necessity move forward, differentiating themselves through progress unless they wish to be left behind. The difficulty for the consumer stems from the fact that PLM, to the uninitiated, has never remained static long enough for them to get a grip on what it is and what it does before the definition shifts again, leaving them floundering.

And it's here that the crux of this customer survey lies. Despite some strong efforts to circumscribe and delimit PLM in marketing and branding, the general market's sense of what Product Lifecycle Management means today can only be based with any degree of certainty on what it meant yesterday - what it was to their counterparts who took the plunge, swam, and lived to tell the tale.

As you will have seen in this year's Editor's Introduction, despite our name, WhichPLM has always had something of a dual purpose. For five years we have helped companies in the retail, footwear and apparel industries to do two things: understand what PLM is, and make an informed choice empowered by our tools, news, insight, interviews, and direct consultation.

That dual purpose was behind the creation of our first independent Customer Survey, which was conducted through very similar avenues to this one in the winter of 2010. We packaged and sold the resulting information as a management report, before arriving at the realisation that the sort of information we were

collecting - the picture we were able to paint - deserved a much wider audience. More importantly, we realised that our wider audience deserved unfettered access to that information.

So, in 2012, we published the first WhichPLM Annual Review. The odds are good that you read it, since it reached thousands of influential industry figures, brought our servers to their knees with traffic, and is still being downloaded today. The 2012 Review was detailed, comprehensive and freely available - all of which conspired to make it a success. That success in turn enabled us to cast our nets even further this year, and inspired more vendors than ever before to encourage their own customer bases to participate, demonstrating unparalleled confidence in their software and support.

Certainly we added a great deal to the "customer survey" formula in 2012, bringing in market analysis, exclusive articles and more - something we're building on again this

**WE HAVE HELPED COMPANIES IN THE RETAIL, FOOTWEAR AND APPAREL INDUSTRIES TO DO TWO THINGS: UNDERSTAND WHAT PLM IS, AND MAKE AN INFORMED CHOICE EMPOWERED BY OUR TOOLS, NEWS, INSIGHT AND INTERVIEWS.**

year. But the survey itself remained the centrepiece of last year's Review, and occupies a similar position in this year's publication, as you will see from the carefully-analysed results that occupy pride of place in the following pages.

Following the cut-off date, which saw some incredibly high-profile brands scurrying to submit their answers in time, the WhichPLM team began to collate and analyse the results, comparing them where applicable to the equivalents that we saw in the 2012 Annual Review. Certain questions that were new to this year's survey do not benefit from comparison to previous results, but those new additions were considered necessary in order to accurately depict the changes that the industry has undergone in the past twelve months.

Where possible, then, you will find the results of this year's survey (which was completed by a comprehensive cross-section of the industry, taking in everything from luxury brands to bulk retailers and fast fashion) contrasted with their 2012 equivalents in the analysis that accompanies each infographic on the following pages. The graphics themselves display the raw results (calculated as percentages), while the accompanying text provides analysis, context, insight and advice, relative to each question.

The questions themselves are reproduced in their entirety, except where space constraints have mandated that they appear condensed from the form in which they were presented to the respondents.

Readers will note that these questions focus, for the majority, on the capabilities of, what the industry deems today to be 'core' PLM solutions. While we have seen considerable uptake and integration of E-PLM (extended PLM) solutions, by their very nature - comprising such a wide range of different pieces of software, hardware and processes - it would have been extremely difficult for us to effectively compare such a diverse range of solutions.

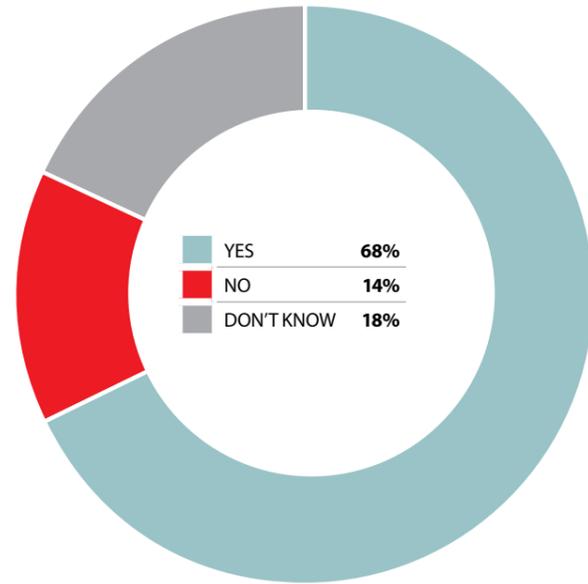
For that reason, we chose instead to retain this survey's focus on the core competencies of traditional PLM. This focus allows us to present results that, we believe, will act as a more effective guide for companies looking to replicate the successes of (and avoid the difficulties encountered by) this year's respondents, and to draw comparisons between these and their counterparts from 2012.

Drawing those comparisons is something the WhichPLM Analysis accompanying each survey question will do, but we also hope that, should you find yourself beginning to investigate PLM, you'll turn to its equivalent in last year's publication and to the tools and insight on the WhichPLM website for guidance. As with everything we do here at WhichPLM, the insight in both the 2013 and 2012 surveys (and the respective pictures they paint of the industry at that time) is intended to make the processes of selection, implementation, day-to-day use, and future expansion as clear as possible.

**OUR GOAL IS TO FURTHER WHAT HAS ALWAYS BEEN THE DRIVING FORCE BEHIND WHICHPLM, TO BRING CLARITY AND THE BENEFIT OF EXPERIENCE TO A CROWDED, CONFUSING AND COMPLEX MARKET.**

PRE-SALES

PRE-SALES



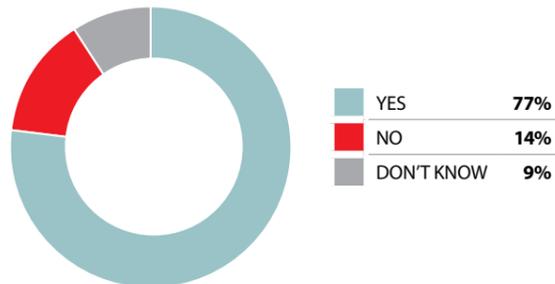
**1 Did your business tailor its Refer For Information (RFI/RFP) questionnaire to your unique/specific challenges?**

**Analysis:** Comprising carefully-chosen questions, process weighting and customer-specific evaluation metrics, an RFI questionnaire is one of the most valuable tools in any customer's evaluation and shortlisting arsenal. Rather than rely on boilerplate RFI documentation provided by the suppliers themselves, customers should develop and tailor their own document in order to achieve the best results. Similar to last year, the majority of customers did develop their own bespoke RFI document. We did see an overall reduction in the quantity of customers creating their own RFI, though, suggesting that growing numbers of prospective users of PLM are trusting their supplier to understand their unique challenges.

*"We did not give the potential suppliers a written list of requirements, we just walked through each detail during the initial demonstration."*

*"A document was prepared by [our supplier] but it was very basic."*

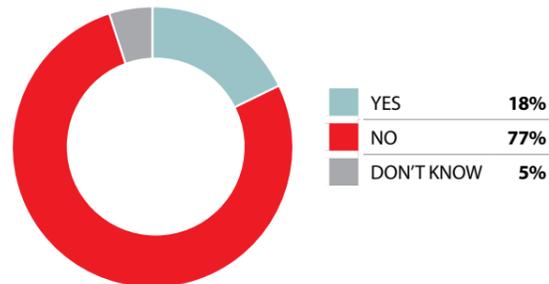
**2 Did you conduct an in-depth process examination, looking at your existing processes and ways of working, then defining how you would like them to look after the completion of your PLM project?**



**Analysis:** Of equal importance to the shortlisting and selection process is thorough introspection on the part of the customer. Businesses that complete a detailed examination of their existing processes and ways of working, then analyse how they would like them to mature during and after the implementation are typically able to achieve a quicker and more comprehensive return on their investment. This year has seen a small reduction in the number of retailers, brands and manufacturers who took the time to properly quantify their existing processes and qualify how they would like to see them improve during implementation. Overall, the results are still encouraging, but any reduction in this area is a concerning trend.

*"We have been using the opportunity of the investment of a PLM system to really evaluate and improve all of our processes to understand and to know what we didn't know prior to starting our PLM deployment."*

**3 Did you employ a third party consultant or adviser to help with this initial process improvement and re-engineering phase?**

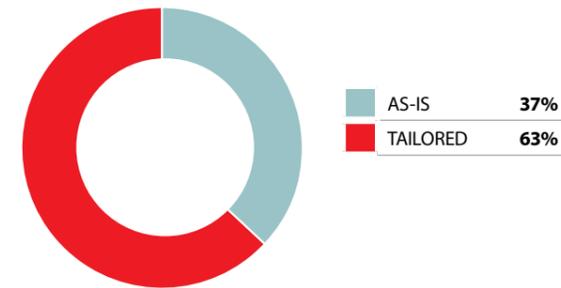


**Analysis:** In an ideal world, every business would prefer to keep any enterprise-level change management in-house. In practice, though, it can prove difficult for an internal team (especially when that team is balancing a PLM project against their day-to-day responsibilities) to achieve the same degree of objectivity and conduct the process in the exacting detail it requires. Slightly fewer customers this year chose to undertake the process alone (a difference of 4%) which is encouraging because, although retaining this work in-house allows the customer absolute control, we would always recommend expert, impartial consultation to any business that is at all unsure of its requirements.

*"An outside consultant was initially hired to assist with the vendor selection process but was not retained to complete the implementation."*

*"Internal and Project Business Analysts were used to process map the existing and to-be business processes."*

**4 Once you had conducted your initial shortlisting exercise, did those vendors you invited to demonstrate their solution do so on an "as-is" basis, or did they tailor their presentation to give you an idea of how a "day in the life" of your business might look?**



**Analysis:** As is the case with the RFI questionnaire, by far the optimum scenario is for prospective customers to have their shortlisted suppliers demonstrate their solutions in a way that is directly relevant to the day-to-day activities of the customer in question. Although a majority of this year's respondents ensured that their shortlisted suppliers walked through a "day in the life" demonstration, an additional 10% did not when we compare these figures against their equivalents from 2011/12.

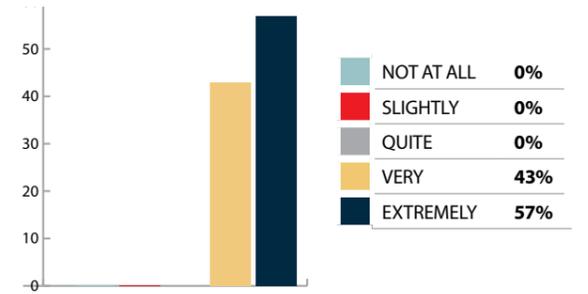
**6 Did the pre-sales presentation team for the supplier you eventually selected demonstrate that kind of expertise?**

**Analysis:** Reflecting the emphasis that today's customers are placing on apparel industry expertise, this year saw absolute satisfaction with the expertise demonstrated in that area by each customer's eventually-chosen supplier. Up 18% from last year's already encouraging figures, these statistics demonstrate unambiguously that the PLM suppliers who have dedicated, expert-level resources in the fashion sector are those who are winning deals.

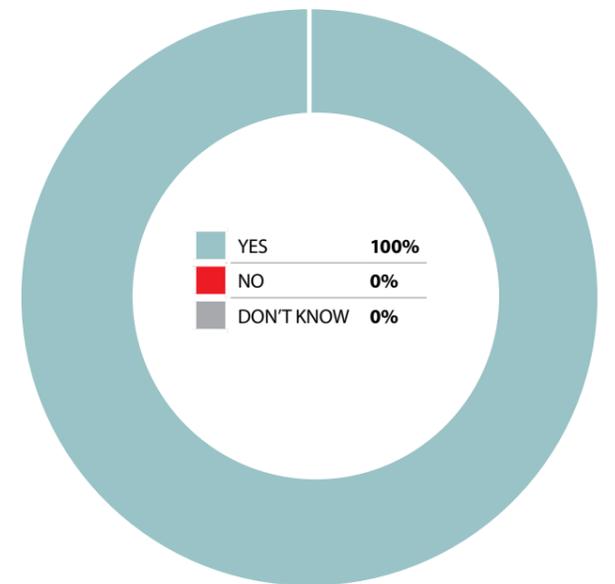
*"It was very important for us to have the pre-sales presentation team's industry knowledge to expose us to industry best practice and how it could be applied within their system."*

*"Our PLM is only used for fashion, so apparel and accessories is their core competency."*

**5 How important to you and your business was it that vendors had demonstrable deep fashion / apparel industry expertise, and qualified resources native to your region?**

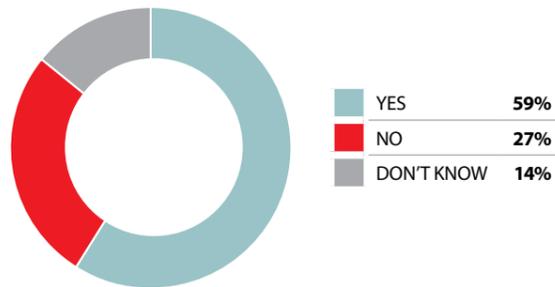


**Analysis:** Since every respondent in this year's survey was a representative of a retailer, brand or manufacturer in the footwear and apparel industry, it should come as no surprise that domain expertise sat high on their list of criteria when it came to selecting a PLM vendor. In last year's responses (where 20% of companies surveyed did not rate fashion industry expertise particularly highly) we predicted that this kind of experience would become an even more prominent factor in whether a supplier reaches the shortlisting stage, and since 100% of respondents this year ranked it as "very" or "extremely" important, that definitely appears to have become the case in the intervening year.



PRE-SALES

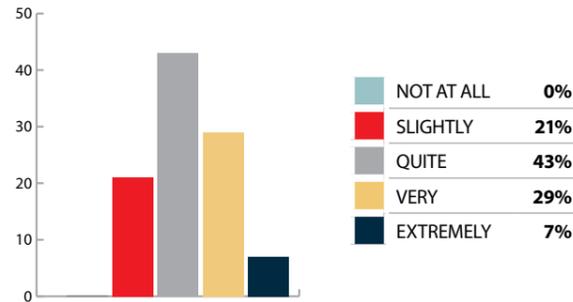
7 Did you conduct any customer reference site visits before making your final decision?



**Analysis:** Customer reference site visits (where a prospective customer is invited to attend the premises of an existing customer) present an opportunity for new customers to ascertain how the functionality and user experience they have seen in pre-sales demonstrations transfers to a real production environment, and to gauge end user satisfaction and realised value. Significantly more customers (23%) undertook these visits this year than did so in 2011/12, but still a combined 41% either did not or did not know, suggesting that these customers failed to benefit from the hindsight of their peers.

*"...the problem is that the vendor selects which customer sites to visit, so the results are skewed towards clients that had a positive experience. One of the best things to ask is "what went particularly well and what didn't go particularly well?"*

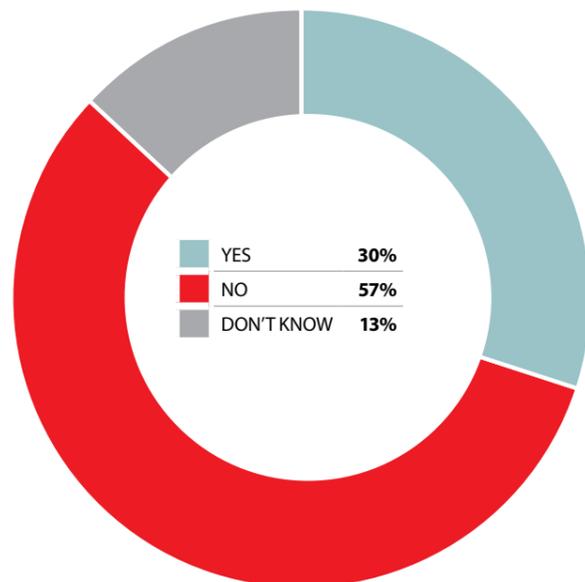
8 How influential were those customer reference site visits when it came time to make your final decision?



**Analysis:** Of those customers who did conduct site reference visits, however, an increasing number found them to be only "quite" important to their eventual choice of software vendor, as opposed to "very" or "extremely" - both of which were ranked much more highly in last year's survey. As we can see in the quotes accompanying question 7, however, this may be a result of the fact that many (if not all) of these visits were pre-arranged by the suppliers themselves, and by necessity represented a carefully curated view. We would always suggest that a minimum of 10-15 customer references be obtained from the vendor, and that visits (or phone calls, where the cost of international travel may be prohibitive) be chosen by the customer from that pool, preventing them from being excessively micromanaged by the vendor.

PRE-IMPLEMENTATION

9 Did you complete a detailed Return On Investment (ROI) analysis in advance of the implementation?



**Analysis:** As with the process examination covered by question 2, deriving the maximum possible return on your investment in PLM (or any other enterprise-level technology) requires significant planning. Many companies approach PLM to achieve value in the form of either process or efficiency savings but, as this year's statistics show, they fail to take the additional step of enabling themselves to actually measure that value. Although last year's results suggested that more customers were beginning to see the benefit of completing a detailed ROI ahead of their implementation, the 30% of respondents who did so this year represent a 20% drop on last year's figures - to the same level seen in our original customer survey, in 2010.

*"Individual Cost/Benefit Analysis' were completed for any additional spend after the initial implementation."*

*"We started but this was not finished."*

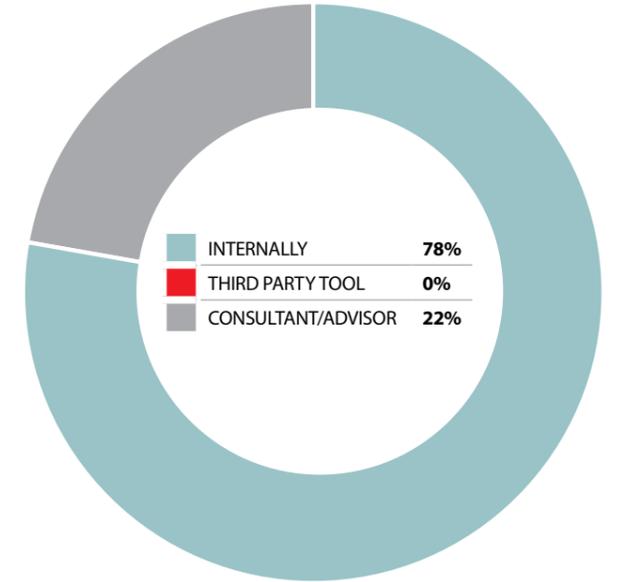
PRE-IMPLEMENTATION

10 If so, did you conduct this internally or using a third-party tool and / or consultant / adviser?

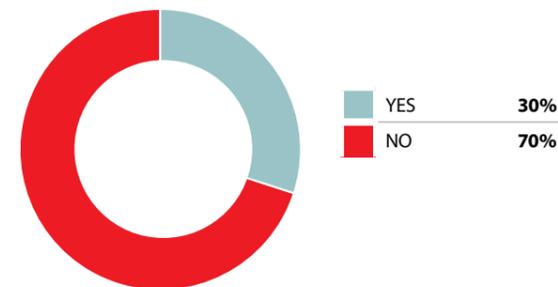
**Analysis:** Consistent between this year's results and those of our 2012 survey, none of our respondents used a third party tool to assemble their ROI documentation, although a slightly increased (an additional 8%) number did employ the services of a third party consultant to do so. Overwhelmingly, customers are choosing to conduct this kind of analysis in-house. This approach has both benefits and drawbacks: in the first case an internal team will typically have a far greater understanding of the business's unique processes and ways of working than would a third party, and will be better able to prioritise those that will deliver the greatest return on investment. But an independent consultancy will have many implementations' worth of experience to draw upon, and a better understanding of modern best practices and economic realities.

*"I would love help with this assessment, but more than likely it will end up being an internal exercise."*

*"Referencing prior experiences in previous companies, and vendor's suggested framework."*

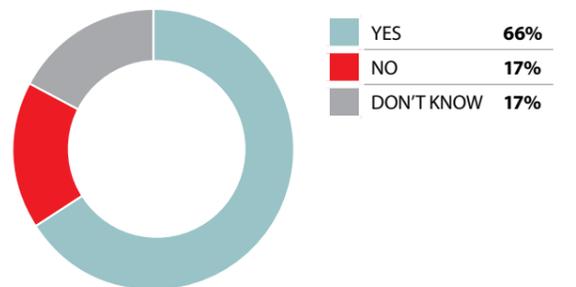


11 If so, did you use that ROI analysis to define your implementation strategy?



**Analysis:** This year's results represent a significant drop from the 57% of customers who used their ROI analysis to help inform their implementation strategy last year. A considerable majority of respondents appear to have chosen to produce a detailed ROI document - setting out the processes that they felt would deliver the best or most rapid return possible on their initial investment - but then neglected the additional step of prioritising those processes during their actual implementation. The benefits of a properly-conducted ROI analysis go far beyond simply predicting a timescale within which the solution will become profitable, and it is a cause for concern that customers are limiting its use to that purpose alone.

12 Did you conduct a process workshop in that time?



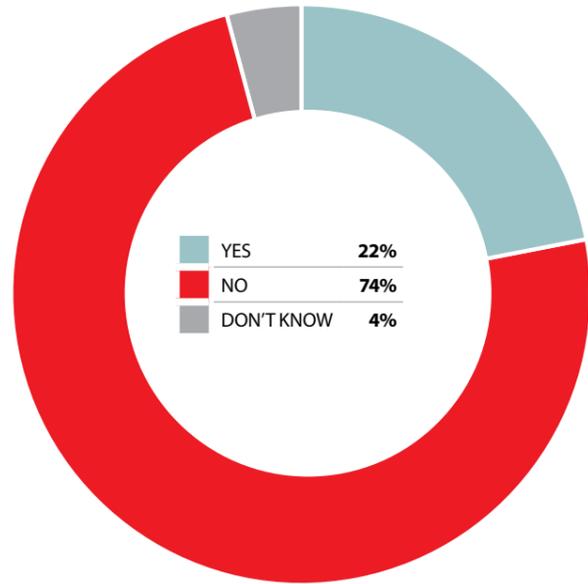
**Analysis:** Internal process workshops are designed to help identify how processes will be prioritised and targeted as the new system is implemented, and establish clear goals for their improvement. It is important that they also take account of the unique challenges facing the business, since this enables more accurate prioritisation at every stage of the extended supply chain - from concept to delivery. An additional 16% of respondents conducted these workshops this year, suggesting that their importance is perhaps beginning to be recognised across the industry.

*"We conducted in depth process workshops to align processes for all of our brands."*

*"As part of Proof of Concept."*

PRE-IMPLEMENTATION

IMPLEMENTATION



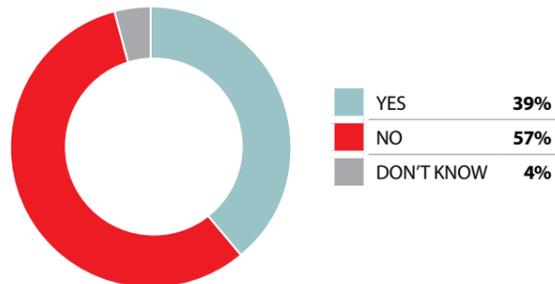
**13** Did you use any consultants or advisers to help you plan your implementation?

**Analysis:** As is the case with the number of PLM vendors catering to the retail, footwear and apparel industry, the quantity of third party consultants offering to assist retailers and brands with their shortlisting, selection and implementation has increased considerably since the industry was founded. Last year 40% of respondents used such a consultant to help plan their implementation, whereas this year a considerable majority (74%) did not. Those that did will have been faced with a difficult situation, since only a small number of consultants are truly independent, whereas many of them work for a limited selection of suppliers and may lack expert-level domain experience.

*"The planning was done by internal IT and Project Manager resources in conjunction with the software vendor."*

*"We only worked with the software consultants [at an earlier stage]."*

**14** Did you choose to integrate any third-party tools or expansions into the core PLM solution you selected?

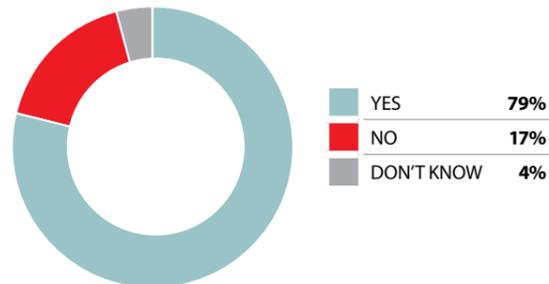


**Analysis:** In recent research undertaken on behalf of multinational clients, WhichPLM has found that the number of third-party solutions in use within large businesses can exceed 50. These are often disconnected from other applications, existing in isolation as data siloes. Although the functionality of a great many of these can often be replaced by PLM and the original solution dispensed with, most organisations will find that they eventually need to integrate a number of business-critical systems to PLM. Tracking the rise in popularity of key integration points like Adobe Illustrator, almost twice as many respondents chose to integrate a third party solution to their PLM at the point of implementation.

*"We will eventually want to look for design software, pattern/CAD software and in-house ERP integration solutions."*

*"We anticipate several linkages (CAD, reporting, virtual merchandising, catalogue management, digital asset management)."*

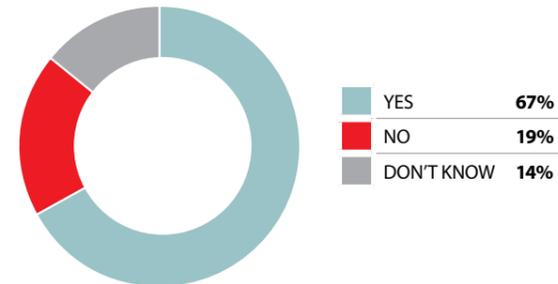
**15** Did the supplier you chose demonstrate a comprehensive and clear implementation methodology, explaining how it would apply to your unique implementation?



**Analysis:** In addition to the documentation and contracts that accompany a PLM solution, it is critical that a supplier has a clear, transparent methodology for conducting the implementation itself. While no one implementation will be identical to another, there are processes, milestones, and best practice techniques that are common to all. On this basis, the logical approach is for each implementation to inherit the broadly-applicable best practices that have been established in previous projects, as well as a clear map of how those apply to the task at hand. An additional 9% of the projects covered this year did so, suggesting that this remains a clear and encouraging trend.

*"Yes, via a generic project plan."*

**16** Did your supplier work with your nominated internal project team to run process maturity workshops?



**Analysis:** Process maturity workshops are an important tool for qualifying the progress of an implementation, and scrutinising the transition from the processes identified in the initial implementation-planning stages to the newer, leaner processes identified in the ROI analysis and implementation strategy. Slightly fewer respondents this year ran maturity workshops than their 2012 counterparts, depriving themselves of the opportunity to analyse the ongoing implementation, share milestones and concerns, and, in some cases, learn about possible difficulties before they arose.

*"Our sister company worked very closely with its supplier in the development of the system requirements against their working processes."*

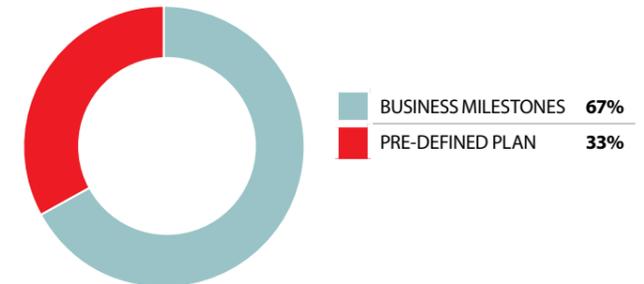
**18** If you required any customisation to the solution you chose, was that customisation conducted on time and to budget?

**Analysis:** The same introspection and process analysis that underpin a successful implementation have the added benefit of helping to avoid unforeseen changes later in the project. Customisation refers to such changes, made to the solution to accommodate a customer's unique requirements - something that even the most capable Out Of The Box solution will at some stage require. In our 2012 survey, a majority of that necessary customisation was conducted on time and to budget - a figure that has dropped to 45% this year, suggesting that either customisation requirements were identified at a late stage, or that the solution in question was perhaps not flexible enough to accommodate them.

*"Our PLM is based in the cloud and all the customers are using the same platform, so there are continuous improvements being made to it."*

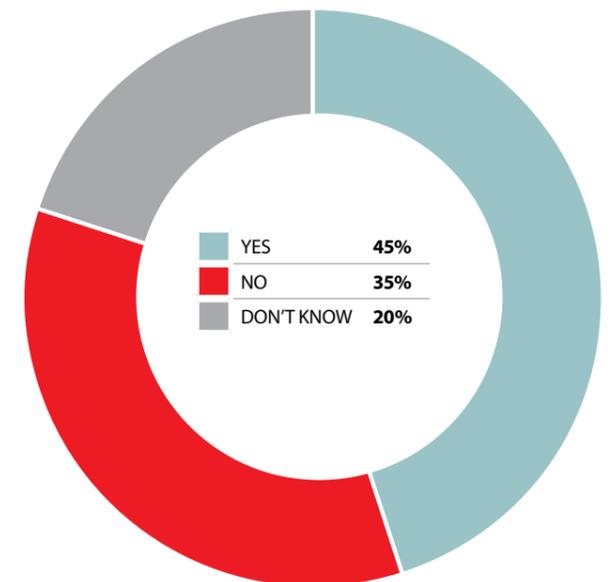
*"The customisation was on budget but was not on time due to various integration issues that needed to be developed to link fully with the ERP system."*

**17** Did your implementation project milestones link to the processes that offered the greater improvements and return on investment for the business, rather than simply following the supplier's pre-designed implementation plan?



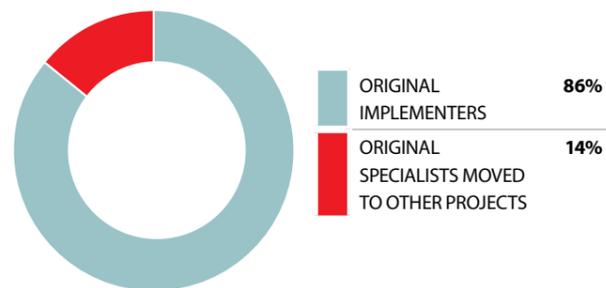
**Analysis:** As we saw in question 15, it is important that any implementation rest on two distinct tines: proven best practices, inherited from the supplier's previous experience, and flexibility, allowing those best practices to be adapted and refined to better suit the requirements of this particular project. Setting out project milestones is an effective way to achieve this balance, and 90% of customers in 2012 built a bespoke project plan that allowed them the best of both worlds. This year, however, just over a third of customers chose instead to follow their supplier's rigid, predefined plan, either through choice or at the behest of their supplier.

*"The flexibility of our chosen PLM was the biggest contribution to the eventual success of the implementation"*



IMPLEMENTATION

**19** Did your supplier maintain their own original implementation team throughout the PLM project, or were specialists you expected to assist you assigned to other projects?

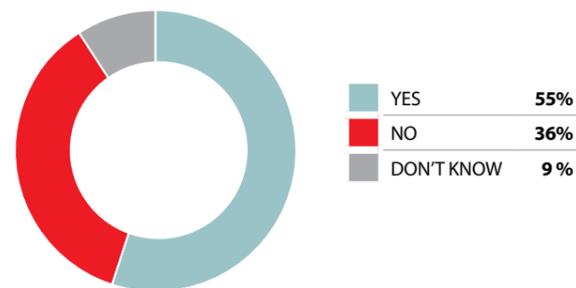


**Analysis:** Given the weight that customers today place on fashion industry expertise, we know that sales are often won or lost on the strength of the industry knowledge shown by the demonstration teams. Often, customers make the assumption that the individuals present during the demonstrations and the initial stages of the implementation will remain constant throughout the project, but this is not always the case, with expert resources instead being allocated to help secure new projects. Luckily, almost all of this year's respondents enjoyed a consistent project team throughout their implementation - an improvement of 16% on last year.

"So far so good."

"Often shared projects."

**20** Did the initial installation of your PLM solution go to plan?



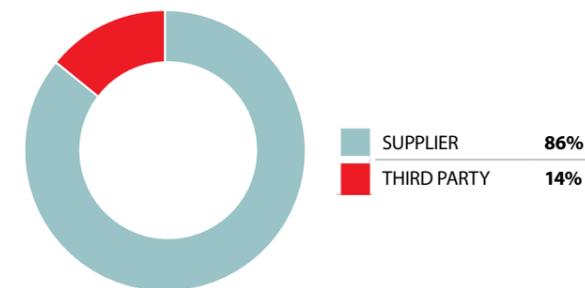
**Analysis:** The assumption many customers make is that, since the core capabilities of PLM are so well-established, all PLM installations run smoothly. This is not always the case, and our previous surveys (in 2010 and 2012) suggested that between 13% and 18% of all implementations suffer one setback or another. Worryingly, this figure has increased twofold this year, with 36% of customers finding that their PLM project hit one or more roadblocks on its way to completion. This may be the result of the reduction we have seen this year in the development of bespoke RFIs and initial process analysis.

"It went very smoothly, much better than expected."

"We had about a month delay in launch due to system modifications."

"Both the business and vendor were at fault."

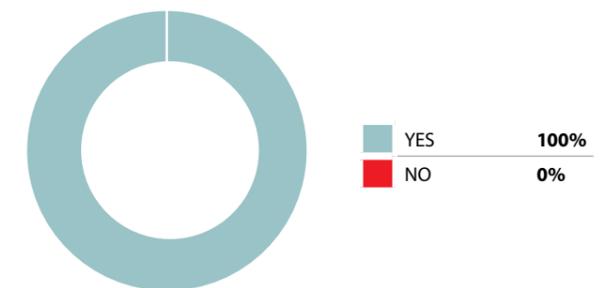
**22** Did your supplier conduct the implementation themselves or contract it out to a third party? If so, to whom?



**Analysis:** Another common assumption is that all PLM suppliers have sufficient regional resources to allow them to assign each of their implementation projects (often with several running concurrently) to an in-house team, when in fact the supplier may instead choose to hand the implementation project over to a third-party consultancy. This is a choice that should be made by the customer, ideally, but is often driven by suppliers' needs to allocate their best resources elsewhere. The vast majority of customers this year reported that their supplier conducted their implementation themselves, however, suggesting that this scenario is becoming increasingly rare.

"Both."

**23** If you answered yes to the previous question, were you made aware of the fact that a third party would be conducting your implementation during the negotiation stage?



**Analysis:** A concern arises (as it does when suppliers divert expert resources to other projects mid-implementation) when the customer is harbouring the misconception that the supplier's internal team will handle their implementation, when in fact the supplier has already appointed a third-party to do so. Fortunately this year's results (and those of our 2012 survey, which mirror these) suggest that this is an extremely rare case, since all of our respondents were notified prior to signing any contracts that a third party would be carrying out their implementation.

IMPLEMENTATION

**21** Did you maintain the technical environment and hardware / network infrastructure that was identified at the pre-sales stage, or were upgrades necessary during implementation?

**Analysis:** In addition to the people conducting the implementation, and the software itself, the technical infrastructure is the third vital component of any PLM implementation. Generally speaking, this environment is agreed before implementation begins, but all too often the customer finds themselves obligated to make ad-hoc changes to their infrastructure during the implementation project. In our 2010 survey, almost half of all respondents had had to alter their technological environment on the fly. Last year only 10% of customers had done so, and that trend has continued into this year's results, with an encouraging 64% of respondents reporting that their technological infrastructure remained intact throughout their implementation.

"In today's world I really don't see why any apparel companies want to be involved in the complexities of managing IT infrastructure when there are so many cloud solutions available."

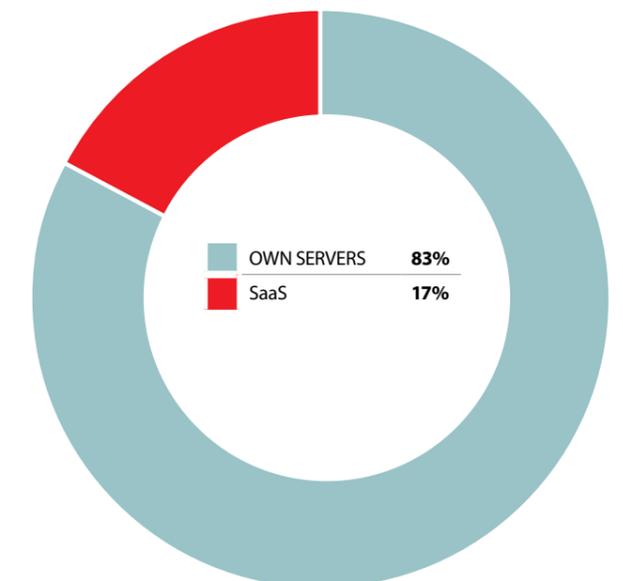
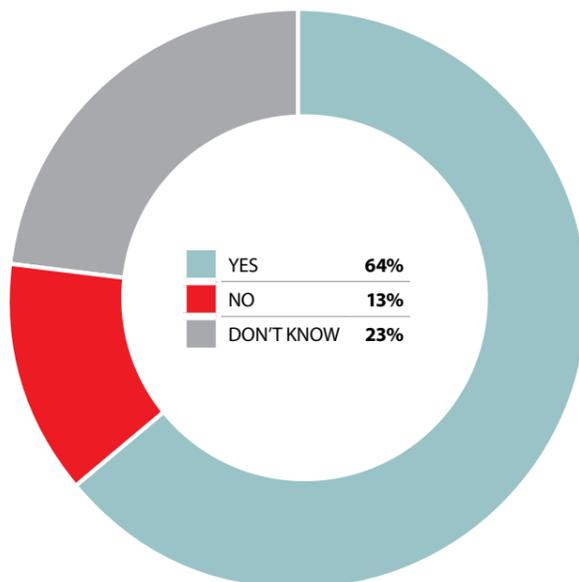
"We're still defining this, but initial requirements have changed, which is not so good."

**24** Did you install your PLM solution on your own servers or via a SaaS model?

**Analysis:** Software As A Service (SaaS) or "cloud" deployments refer to solutions for which the infrastructure and physical substrate of the system resides off-site, rather than being installed on servers belonging to the customers. In last year's results, none of the customers surveyed had opted for a cloud-based solution, suggesting that IT departments still approached that potential loss of control tentatively. This year's statistics show a much more balanced picture, with almost 20% of customers opting for a SaaS model, perhaps reflecting the increased maturity of cloud-based solutions. The qualitative data provided by one end user certainly suggests that "going cloud" is now a more popular prospect.

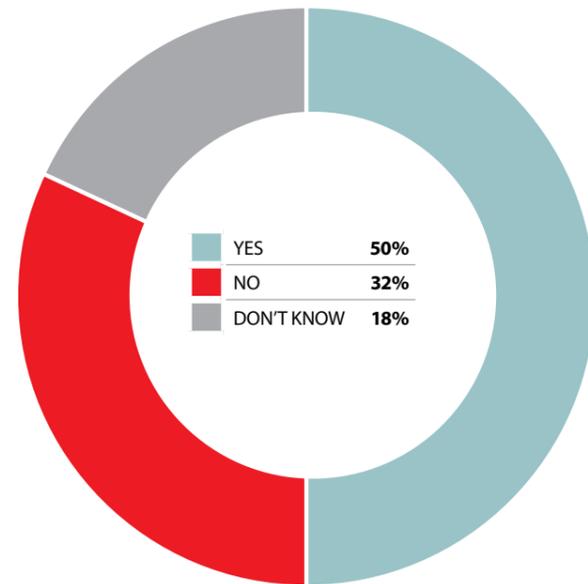
"I find it shocking that 100% of users [in 2012] opted for their own servers if there is a SaaS model available...The truth is if you buy a real SaaS there should be no option to self host the system."

"We plan to host on our own servers."



POST IMPLEMENTATION

POST IMPLEMENTATION



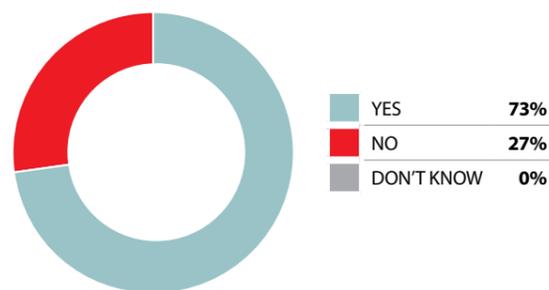
**25 Did your supplier complete the implementation on time and to budget?**

**Analysis:** In our 2012 survey we were pleased to see that more PLM implementations (an additional 21%) were being completed on time and to budget than had been the case two years earlier. This year's results - with a worrying half of all implementations running over either their allotted time or cost - buck that trend and deliver our lowest result yet in a vital area of customer satisfaction. This can be ascribed to a mixture of suppliers perhaps struggling to cope with increased sales and the sheer number of concurrent implementations, or the concerning downward trends we are seeing in the preparatory steps customers should take in order to ensure the smoothest possible implementation. As important as those preparatory steps can be, it is vital that customers seek assurance that their chosen vendor has the resources and capacity necessary to deliver their project within the allotted timeframe and budgetary constraints, and is not spreading themselves too thin.

*"Not on time, but within budget."*

*"On budget but not on time."*

**26 Did you require any additional process enhancements beyond those identified during the initial pre-implementation stages?**



**Analysis:** In our first-hand experience of PLM implementations, additional process enhancements tend to be par for the course (at least where customers choose to implement alone, rather than with the help of an independent consultant) rather than the exception, although their extent and impact can be mitigated to a point through meticulous forward-planning and process definition at the earliest possible stages. The results we saw in 2012 did not reflect that, whereas this year's statistics (with more than 70% of customers requiring unforeseen enhancements) appear to tally more closely with the fact that an overwhelming majority of customers opted to conduct their implementation alone, and in many cases to work from rigid implementation plans without rigorous process analysis beforehand.

*"We implemented a very rudimentary system [several] years ago, just the basics. We have added on and upgraded since."*

**27 If so, which specific process enhancements applied to your PLM implementation?**

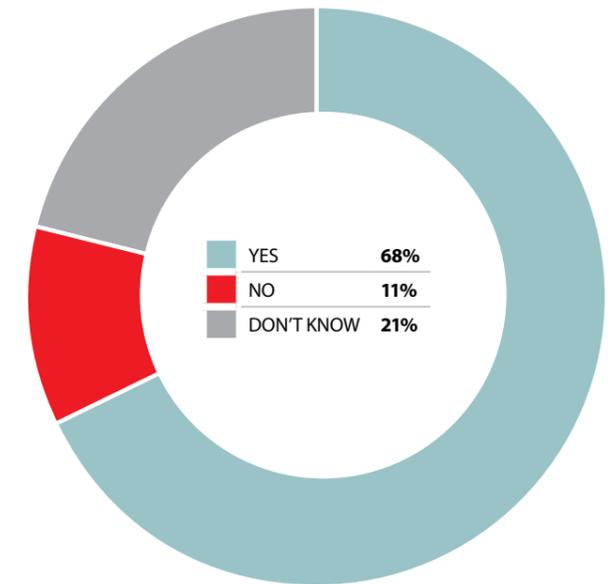
MATERIAL COLOUR MANAGEMENT	INTERFACE TO ERP	BUSINESS PLANNING ENHANCEMENTS
ADVANCED PLANNING	MOBILE DEVELOPMENT	INTEGRATION TO ADOBE SUITE
ADVANCED INTEGRATION TO AI	COLOUR MANAGEMENT	SAMPLE MANAGEMENT
MATERIAL MANAGEMENT	SUPPLIER INFORMATION MANAGEMENT	
SAMPLE MANAGEMENT	SOURCING	

**28 If your PLM solution has been in place long enough to draw conclusions, has the solution you chose realised a return on investment within the expected timeframe?**

**Analysis:** As with any enterprise investment of the same or comparable size, PLM lives and dies on its ability to deliver quantifiable value to the company that adopted it. Woolly promises of efficiency and collaboration must always be transferrable to real world applications, and a successful implementation is almost invariably measured by the cold, hard financial yardstick. In 2012, the majority of customers reported that they had been unable to qualify whether their solution had delivered an acceptable return on investment, whereas this year's statistics show that an almost 70% of respondents had realised a return within their expected timeframe. Interestingly, very few customers in this year's survey replied "No" - just over 10% - suggesting that PLM as a whole performed better in 2012/13 than in the twelve months prior.

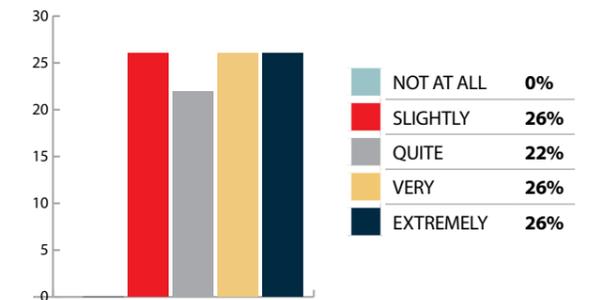
*"AI Integration [...] eliminated the perceived burden of 'Single Version of the Truth' data entry from the highly skilled and creative Design Team, resulting in a 10+ day reduction off the product development calendar per season."*

*"No, because it wasn't clearly established."*



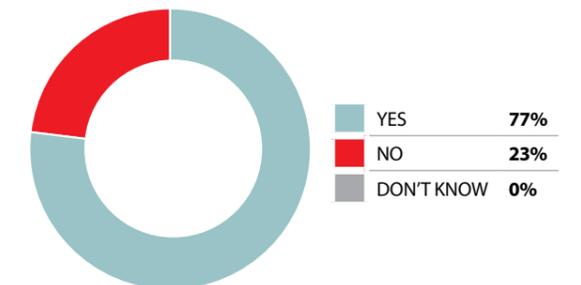
**29 Overall, how satisfied are you with the PLM solution you chose?**

**Analysis:** Beyond concrete financial benefits, end user satisfaction from the executive level to the designer is the gauge against which PLM implementations are measured. A solution can only be considered effective if it is not just financially viable, but also sees high adoption and satisfaction rates amongst end users. Although it is encouraging to see that none of the customers who took part in this year's survey answered "not at all", our statistics demonstrate a wide spread of outcomes where this key metric is concerned. Fewer respondents this year were "extremely" satisfied with their solution, and an additional 4% and 12% respectively reported being either "slightly" or "quite" happy with their choice of PLM.



**30 Are your teams using the solution as originally envisaged? If not, why not?**

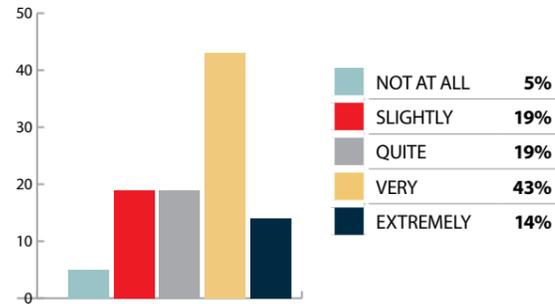
**Analysis:** As the quotations accompanying these results demonstrate, end user adoption can effectively negate many benefits of an otherwise-successful PLM implementation. Where those end users are not consulted during the initial stages of a project, their expected use of the chosen solution may not necessarily be practical or conform to best practice, resulting in a scenario where a well-intentioned choice of PLM is scuppered by the fact that designers, garment technicians, sourcing managers, or any number of other possible job roles simply do not use the solution as expected - or at all. As we might expect given the comparatively-low preparation undertaken by this year's respondents versus their 2012 counterparts, usage has dropped by 13%.



*"The uptake from our Buyers was poor and the practice of reverting to excel, email etc still continues to this day."*

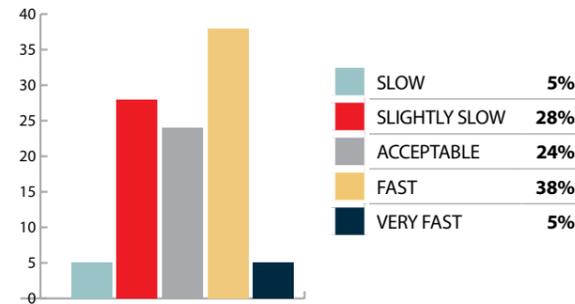
POST IMPLEMENTATION

**31** Please rate the PLM solution you chose on the basis of how easy or intuitive it is to use.



**Analysis:** User interface paradigms tend to shift extremely rapidly while software development and implementation schedules tend to operate over much longer spans of time. It is important, therefore, to select a PLM solution that is both straightforward and intuitive to use for those job roles and functions in which you expect the system to see the greatest usage. Last year we reported that a majority of customers were satisfied with this aspect of their solution, and while our 2013 respondents are, on balance, slightly less happy with their chosen solutions, far fewer reported being "not at all" or only "slightly" satisfied, suggesting that UI and process development is continuing to meet expectations.

**32** Please rate the PLM solution you chose on the basis of its speed.



**Analysis:** Speed of use plays an important role in usability – particularly where large volumes of data (both visual and alphanumeric) are concerned. Stumbling blocks can typically occur where data leaves and re-enters the system, but the increasing number of integration points shown in this year's results suggests that many customers have begun to emphasise interoperability in order to reduce the manual burden of cumbersome data import and export. Although considerably fewer (25%) customers this year reported that their solution was "very fast", the majority of responses fell on the positive end of the spectrum. We remain concerned, however, with the growth in customers who felt their solution was "slightly slow".

**33** Has your PLM solution delivered the value you expected in terms of delivering process efficiencies, eliminating data redundancy and streamlining everyday tasks? If so, approximately what percentage of efficiency savings have you realised on a quarterly and yearly basis?

**Analysis:** In addition to the pure return on investment, it is at this stage of a PLM project that the initial preparatory steps (assembling a bespoke RFI, conducting process introspection) become equally vital to quantifying the success of an implementation. Where those expected process efficiencies and desired ROI metrics have been recorded, it then becomes possible to accurately ascertain the real value delivered by PLM, both in terms of monetary savings and the optimisation of standard business processes. Considering the shortfall in preparation we have seen this year, it is perhaps not surprising that an additional 14% of customers did not know whether their solution had delivered in these three critical areas, let alone to what extent. Fortunately, close to 70% of respondents did see the expected benefits from their chosen solution in the areas of efficiency, data redundancy and task optimisation.

*"In the last year of the overall implementation we have realized somewhere between a 20-30% improvement in calendar execution speed and a 30-50% improvement of overall product/process quality."*

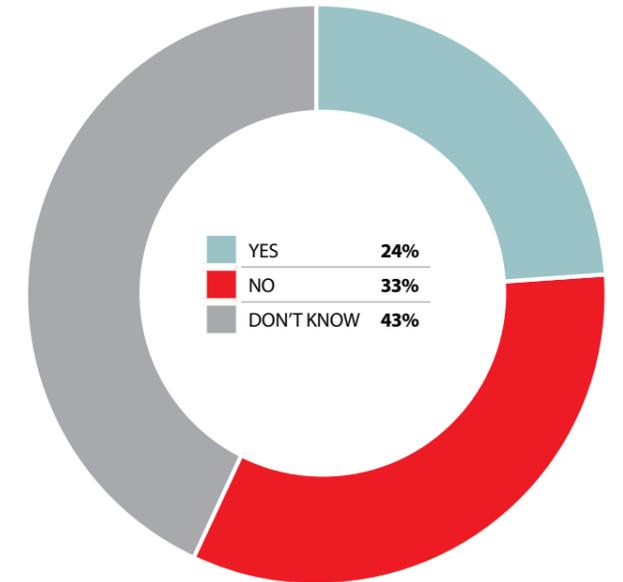
*"It's hard to say a specific percentage, but it has changed everything for us; we could never work without PLM again."*

POST IMPLEMENTATION

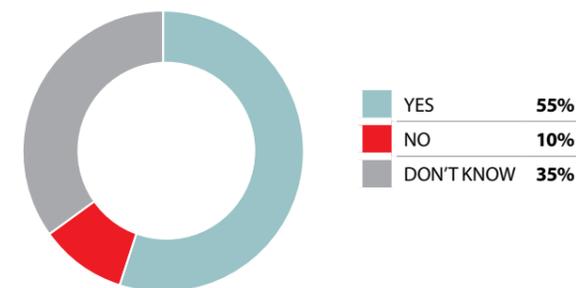
**34** Has your PLM solution delivered the direct cost savings you expected by reducing the expenses incurred in, for example, creating samples or sourcing materials?

**Analysis:** PLM can also deliver significant savings in areas that many customers do not expect. By providing a centralised repository for master data, for example, and enabling customers to better track the visual development of their products - from design through sampling - PLM can help to reduce the costs associated with typically separate, time-consuming processes like international sourcing and sampling. Although almost half as many customers this year reported that they had seen savings in sampling and sourcing, a good percentage revealed that their solution had not yet been in place long enough for the business to quantify its value in this respect.

*"When the solution was implemented, sourcing was done locally. Sourcing then moved off-shore, which resulted in new import trade processes that were not catered for in the solution and [this] therefore reduced its value to the business."*



**35** Has your PLM solution helped you to realise savings by eliminating or reducing the cost associated with handling anomalies or unexpected developments in the product development process?

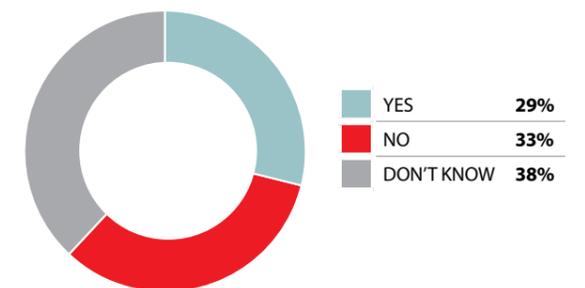


**Analysis:** With end users and partners often distributed around the globe, the data visibility and intelligence that PLM (properly planned and implemented) provides can enable organisations to identify and mitigate the impact of errors, unexpected setbacks or socio-economic circumstances on their product development processes far earlier than might have been possible using more traditional methods. A similar quantity of this year's respondents reported that their solution had provided this often-unforeseen benefit, and half as many customers reported that it had not. Overall, PLM continues to deliver added value for customers who approach its adoption sensibly and with foresight.

*"Some are managed better and some are not. It depends on the capability of the software."*

*"No - although this should be the case once we have reached phase 2 of the implementation."*

**36** Has your PLM solution enabled you to achieve increased sales and revenue by allowing you to position your product launches more effectively and cutting product development times?



**Analysis:** For some, the ability to deliver garments to market "closer to trend" than ever before is an ancillary benefit of adopting a PLM solution; for others it is the driving force behind their decision to implement. Today's consumers have been well-versed in the benefits of fast fashion, and expect that catwalk designs will filter down into high street products more rapidly than ever before. Although not all of this year's respondents deal in seasonal products, it appears as though considerably more of them than their 2012 counterparts were able to say with some certainty whether their chosen solution had allowed them to position their products more effectively.

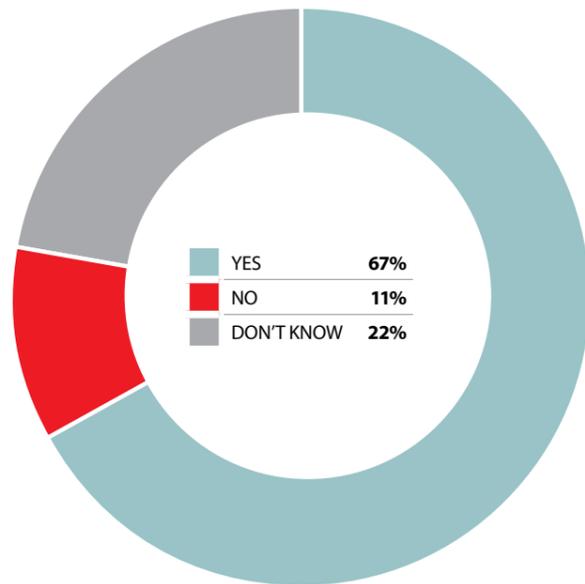
*"The solution implemented focused on product data management and tech packs rather than on speed to market and trend accuracy."*

*"For a time we could say this was true but now our systems are weighing us down and are blocking productivity and efficiency."*

POST IMPLEMENTATION

**37** Where they form part of your PLM solution, please prioritise the following process areas in terms of how far they have enabled you to realise the promised value of your solution – 1 being the highest, and 5 being the lowest.

1	MERCHANDISING AND DESIGN (CONCEPT PLANNING, LINE PLANNING AND CREATIVE DESIGN)	
2	MATERIALS MANAGEMENT (MATERIAL DEVELOPMENT AND TESTING, COLOR DEVELOPMENT, ARTWORK DEVELOPMENT OR PACKAGING AND LABELING)	TECHNICAL DEVELOPMENT AND ENGINEERING (SPECIFICATION DEVELOPMENT, DETAILED DESIGN, AND SAMPLE MANAGEMENT)
3	SOURCING (SUPPLIER MANAGEMENT, EARLY SOURCING, COSTING AND COMMITMENT MANAGEMENT)	
4	QUALITY MANAGEMENT (QUALITY AND COMPLIANCE MANAGEMENT)	
5	SUPPLY CHAIN (SUPPLY CHAIN COLLABORATION AND MANUFACTURING PROCESS)	



**38** Where your PLM solution has been integrated with another suite (whether ERP or an alternative) have you been able to achieve savings through the interoperability of existing data rather than having to re-enter information?

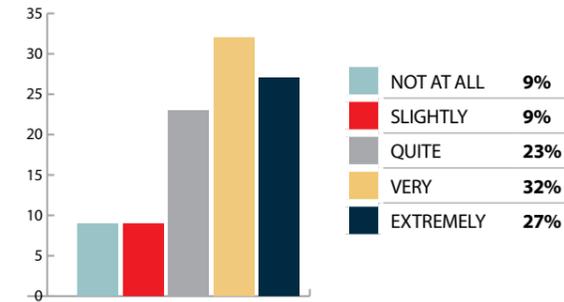
**Analysis:** Whatever the size of their business, most customers will seek (either at the point of implementation or afterwards) to integrate their PLM solution with one or more other enterprise systems. Typically, these other systems will have otherwise required data from PLM to be re-entered into another suite – often with conflicting fields and non-compatible standards - and the benefits of eliminating re-keying and redundancy can be significant and far-reaching. Increasingly, PLM is being paired at the point of implementation with its more financially-oriented brother, Enterprise Resource Planning (ERP). More than any other point in our history, this year has seen WhichPLM asked about the merits of running ERP and PLM implementations either concurrently or in sequence, and we predict a huge rise in integration and interoperability in the coming year.

*“The modules implemented and integrated have been done very well.” “When it works it is very good, but again lack of detail at the planning stage affects delivery later.”*

*“We have been able to integrate, but am not confident we are realizing a saving through this integration.”*

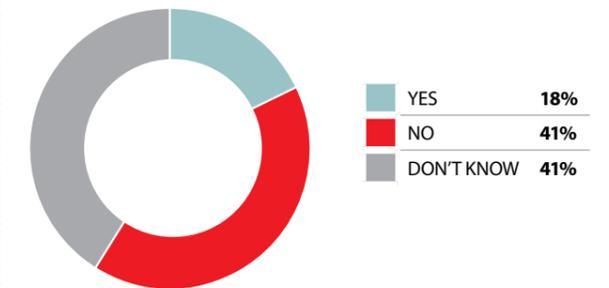
CUSTOMER RELATIONS

**39** How satisfied were you with the technical support provided by your PLM supplier when you last contacted them?



**Analysis:** As total costs of ownership have decreased and baseline functionality, conversely, has increased to a point approaching feature parity, customers have begun to select their PLM vendor as more than just a means to an end - a way to acquire software. Instead, today's prospective customers are seeking a long-term partner to support both their current needs and their plans for the future. A crucial component of this partnership is the technical support offered by the supplier once an implementation is complete - something that can either foster a sense of enduring community or, in some instances, become a bone of contention between the parties. This year's results are broadly similar to those we saw in 2012, with the vast majority of customers either "quite", "very" or "extremely" satisfied with this segment of their relationship with their supplier.

**40** Does your PLM supplier operate a Customer Advisory Board (CAB) or user group within your region?



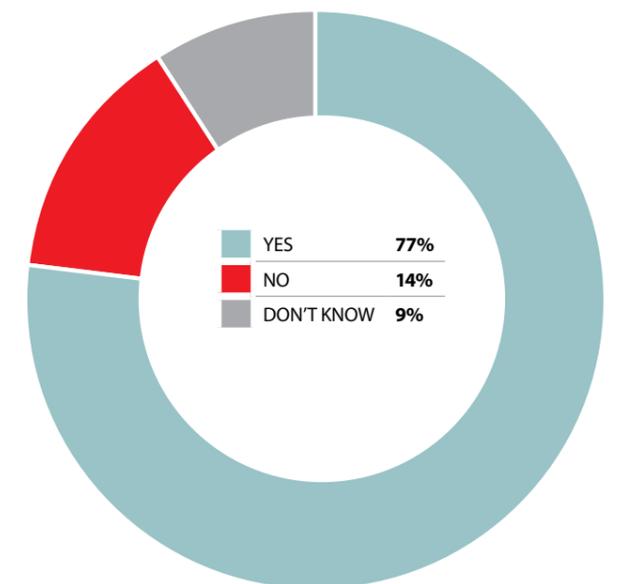
**Analysis:** A Customer Advisory Board is an initiative that takes place after a PLM implementation. A CAB will provide direct interaction between the customer and supplier, and serve as a valuable tool for helping to shape the future growth of both solutions and the long-term partnership referred to in question 39. In a dramatic change from last year's results (where close to 90% of suppliers operated a CAB) more than 80% of respondents in 2013 reported that their supplier either did not operate an advisory board in their area, or that they were not aware of one's existence. Given the weight placed on customer service and post-implementation support, suppliers would be well advised to ensure that they provide a CAB or similar forum in each of their major territories over the coming year.

*“After several of our suggested enhancements proved beneficial to the Vendor's core customer base and increased the system's commercial viability, we were able to directly influence the Roadmap.”*

**41** Either way, do you feel as though your business would benefit from the existence of a truly independent CAB?

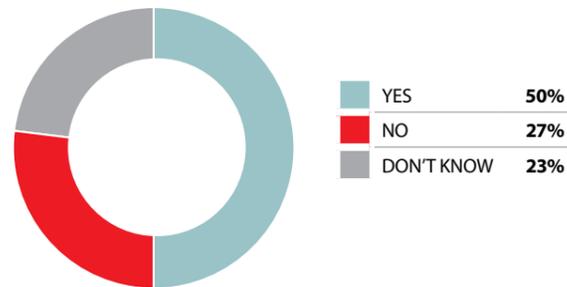
**Analysis:** A Customer Advisory Board (CAB) provides direct interaction between a group of customers and their supplier, and serves as a valuable tool for helping to shape the future growth and development of both solutions and the long-term partnerships referred to in question 39. In a dramatic change from last year's results (where close to 90% of suppliers operated a CAB) more than 80% of respondents in 2013 reported that their supplier either did not operate an advisory board in their area, or that they were not aware of one's existence. Given the weight placed on customer service and post-implementation support, suppliers would be well advised to ensure that they provide a CAB or similar forum in each of their major territories over the coming year.

*“Time is not always available so if others have the same issues this would help.”*



CUSTOMER RELATIONS

**42** Does your PLM supplier have a clear policy in place for the provision of future enhancements to the solution?

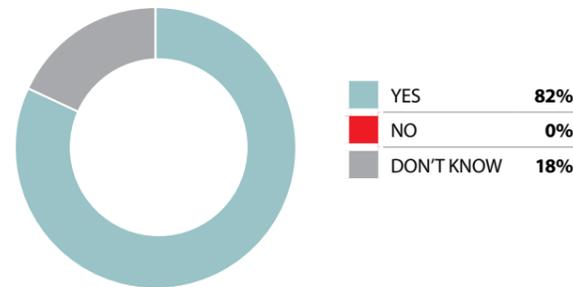


**Analysis:** As is the case with any enduring partnership, the relationship between customer and supplier cannot remain static, and each and every vendor must grow their solution in line with the needs of their customer base - within reason. All suppliers dedicate a portion of their revenue to research and development (for more on this, see our section on "The Vendors"), and the new functionality and enhancements that result from this will steadily find their way into updates and revisions to the customer's installed solution. The clarity with which these additions and fixes are communicated to customers is a vital component of cordial relations between the two parties, and as such it's disheartening to see a 10% drop in the number of customers who feel this is being done effectively in their case.

*"There is a policy in place, but this could be much clearer." "No schedule and poor at advising of upgrades."*

*"The product is constantly improving, oftentimes we feel like they have read our mind when improvements are made."*

**43** Does your supplier listen to your requests for enhancements and / or changes?



**Analysis:** In addition to the CAB setting, customers often remain in contact with their supplier's support team, from whom they might request routine support or, in some cases, specific enhancements or changes to the solution itself. The supplier will need to factor these requests into their ongoing development - something that has previously been done and communicated to varying degrees of success. Encouragingly, none of the customers surveyed this year reported that their requests are ignored, and indeed more than 80% of respondents indicated that their bi-directional relationship with their supplier was open, frank, and productive.

*"All of our major requests have been taken care of. The one that have not are always reviewed, and we get feedback on how we can handle it within the current system."*

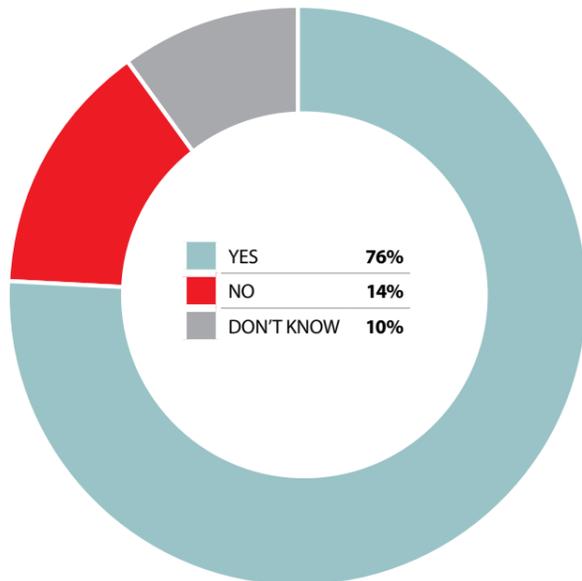
*"Yes, but each enhancement is extremely costly as this is a 100% customized solution."*

**44** Have any of your requests or recommendations subsequently been integrated into the solution?

**Analysis:** A supplier listening to their customers' requests for enhancements is one thing; their actually incorporating those requests into a development roadmap is quite another. Fortunately the overwhelming majority of this year's respondents reported that their suggestions had sooner or later been incorporated into the solution. Although these changes may not always reflect best practice and can, at times, be influenced by the idiosyncrasies of the individual customers, a receptive supplier can rely on their customer base to provide indications for future innovations. And, as a corollary benefit, by incorporating the most-requested of these enhancements into the core of their solution, suppliers can do their part in avoiding unnecessary and costly customisation.

*"We and other customers suggested improvements to a particular area, and as a result [our supplier] is rebuilding a whole area in order to meet the current challenges everyone in our industry faces."*

*"Yes, for better or worse."*



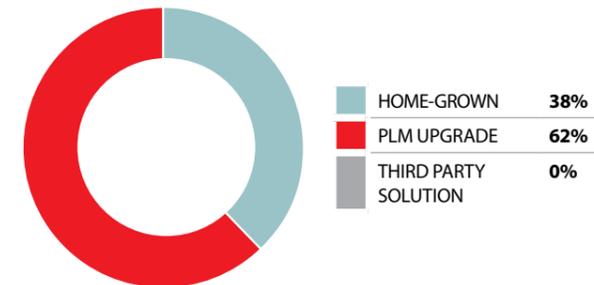
CUSTOMER RELATIONS

**45** In the results of last year's survey, the following features were identified as top priorities for the future development of PLM solutions, with mobile device integration and advanced planning emerging on top. Please rate these processes from 1 to 5 (one being the highest) in terms of how well you feel they have been achieved within your business:

**Analysis:** As market analysis shows, suppliers continue to invest substantial portions of their revenue in research and development - informed by feedback received from customer advisory boards, in direct consultation with end users, and from surveys such as the one we have now been running for three years. In last year's results, mobile device integration appeared to be in high demand, whereas this year it is buried in the middle of our respondents' achievements, suggesting (as our 2013 results do elsewhere) that customers are focusing more on the short-term, concrete benefits of modern PLM - bill of materials, systems integration and seamless working between PLM and the Adobe Suite - than they are added-value initiatives.

1	MULTI-DIMENSIONAL ABILITIES FOR BOM/COSTING
2	IMPROVED ABILITY TO INTEGRATE TO 3RD PARTY SOLUTIONS
3	DEEPER INTEGRATION TO ADOBE CREATIVE SUITE
4	MOBILE DEVICE INTEGRATION
5	FEATURE BASED COSTING TOOLS
6	ADVANCED PLANNING SOLUTIONS
7	STANDARDISED XML FOR COMMON PROCESSES AND KEY ATTRIBUTES
8	INTEGRATION TO BOL PROVIDERS

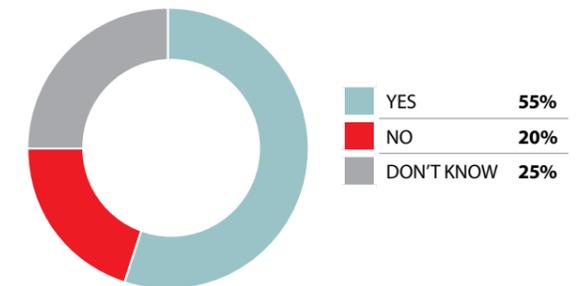
**46** Where you rated any feature or process particularly highly, was its support brought into your business environment through a home-grown method, an upgrade to your existing solution, or the purchase of a third party solution to plug a PLM functionality gap?



**Analysis:** Where customers have sought to add some or all of last year's in-demand functionality to their ways of working, they have been presented with three methods of doing so: through their own in-house development efforts; by petitioning their supplier through one of the aforementioned avenues; or by purchasing a piece of third-party software. The third avenue is one that no customer has explored this year, and this is perhaps unsurprising considering the strong relationships that most respondents appear to enjoy with their suppliers. More than 60% (a considerable majority) therefore realised these additional enhancements through an upgrade to their chosen PLM solution, with the remainder developing their own systems in order to meet internal demand.

*"Generally home-grown in reaction to demand."*

**47** Do you believe that your supplier has a clear road map for the future support and development of your solution?



**Analysis:** As well as the software itself, as we have explained, adopting a PLM solution requires a customer to buy into an "ecosystem" for a set period. Barring any unexpected events (such as acquisitions or liquidation), a solution will be supported and developed over a period of several years following its initial implementation, and these support and development arrangements should always be made as transparent as possible in order to build effective and enduring supplier / customer relations. On this basis, the customer has an expectation that the supplier will provide them with insight into the future direction of their platform - not just in the areas influenced by their direct suggestions. While fewer respondents this year reported that their supplier's roadmap was unclear (a drop of 14%), those numbers were transferred to the "Don't know" column as opposed to representing an increase in clarity and direction. Indeed, more than 10% fewer customers this year believed that the future of their chosen solution was visible to them.

*"Yes there is a road map, but this could be expressed more clearly."*

*"They have called to interview us regarding challenges we face and our feedback is taken into account as they develop and improve features."*

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CUSTOMER RELATIONS

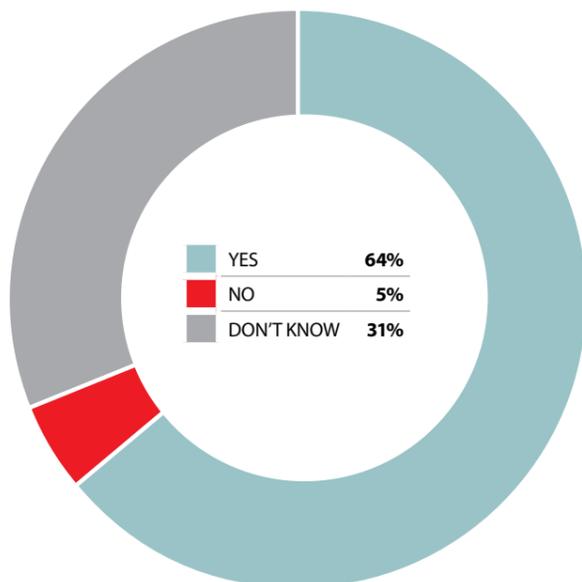
**48** With each new year comes a host of new demands and new functionalities. Please rate the following emerging trends on the basis of how soon you'd like to see them built into your PLM solution or brought into your business via other methods:

**Analysis:** Analogous to the way that suppliers rely on customer feedback to influence the future development of their solutions, here at WhichPLM we endeavour to keep a finger on the pulse of end user demand. Judging from this year's responses, improved core functionality, data performance and convenience are amongst the most popular requirements. An oft-neglected benefit of PLM (something we are all guilty of taking for granted) is its potential to archive and make accessible a wider range of data than the "pure" product information we typically consider - things like marketing materials, social media information, video and more can make their home in PLM, tied to a product identifier to create a one-stop location for absolutely all - considering the number of integrations - pertinent information for a particular item.

1	E-PLM INTEGRATIONS E.G. CAD/CAM/BOL/ VISUAL COMPONENTS DATABASE		
2	TRUE "STORYBOARD" PROCESSING	DIGITAL ASSET MANAGEMENT	OFFLINE WORKING
3	MERCHANDISE PLANNING "ALGORITHMS"	2 & 3D VIRTUAL SAMPLING INTEGRATION	
4	MARKETING PROCESS SUPPORT	MOBILE DEVICE PROCESSING	
5	SOCIAL MEDIA INTEGRATION & ANALYTICS		

**49** Would your company support a move to a standardised data format for apparel specific product information to allow bidirectional synchronisation of data/documents between enterprise systems such as PLM or ERP?

**Analysis:** With integration points rising to the fore as one of the most widespread additions to PLM, and ERP being considered (and sometimes even adopted) simultaneously with PLM, the potential for standardisation between systems is greater now than ever before. As it stands, communication between ERP and PLM is traditionally handled through bespoke methods, allowing for the sheer variety of each solution that exists within the market. Were a standardised data format to be established, data could be readily transferred and synchronised between these and other enterprise-level systems without a lot of the costly and time-consuming development work that is required today. Of those respondents who expressed a preference one way or the other, a considerable majority believed that standardisation would represent a step in the right direction in a world of increased integration and interoperability.



*"This type of real time integration of data would really help the flexibility of an overall organization, from buyers through to the supply chain."*

*"That would be great but I don't see it happening. It seems like no matter how good the intentions of industry groups, everyone thinks they are different and does whatever they think is in their own best interest."*

# THE PLM MARKETPLACE 2013

## A Year in Review

**As the sections that precede this one – exclusive articles, partner briefings, and the results of our customer survey – demonstrate, our aim with the WhichPLM Annual Review and beyond is to create informed and empowered customers.**

A large part of that empowerment comes from general education: customers benefitting from the insight of industry experts and from the hindsight of other retailers, brands and manufacturers who have implemented PLM and chosen to speak candidly about the experience. An equally vital component of any prospective customer's ability to approach vendors on their own terms is timely and accurate market intelligence.

With that goal in mind - relying on a mixture of our own insight and on figures provided by the vendors themselves – the following section analyses the overall size of the PLM market for retail, footwear and apparel, as well as examining specific trends originated from within it.

Just as we did last year, over the course of the fiscal year 2012/13 we mapped the PLM industry's growth potential, its geographical diversity, and some of the panoply of forces that have driven companies of all shapes and sizes - from the boutique to the monolithic - to adopt PLM in the past twelve months.

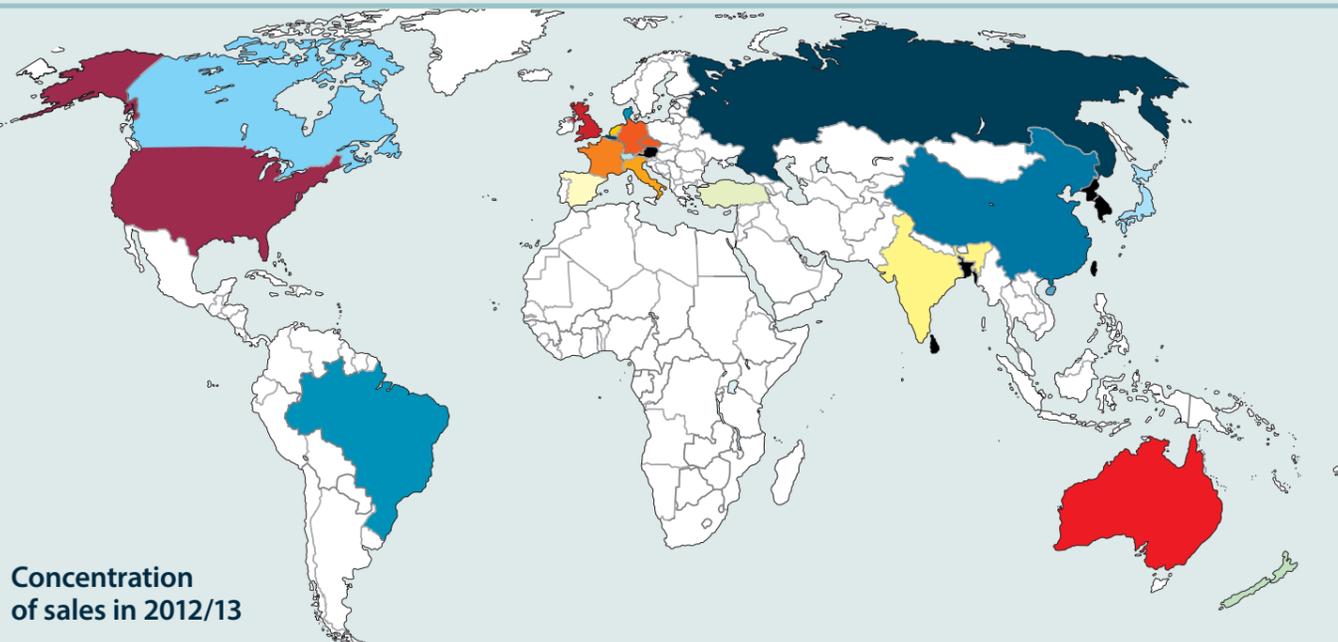
Our intention, as with everything contained within these pages, was to build the most comprehensive portrait possible of our industry as it stood at the close of that financial year. In broad strokes, our analysis covers three distinct areas: the overall shape and size of the market, as seen on the pages immediately following this one; the active players in the market, listed alphabetically, and accompanied by their vital statistics and what they believe to be their unique selling

points; and finally our conclusions, examining this year's winners in terms of raw turnover, quantity of deals won, investment and more.

For the purposes of this analysis, we adhered to the commonly-accepted standard of mapping the fiscal year from the calendar months April to April, and as such any mention of "2012/13" in the results collected here refers to the period between the beginning of April 2012 and the end of April 2013. This approach, especially where we can contrast its results with those from our 2012 Annual Review, allows us to draw meaningful conclusions about the market that other interim or more regular publications cannot duplicate, and it ensures that we were able to collect the most up-to-date and accurate figures from each vendor.

As was the case in 2012, this year's market analysis combines information provided by vendors with an element of our own insight. This may seem to run counter to the idea of a factual, scientific market analysis, but we believe that our long-standing relationships with customers and suppliers in every corner of the world, and our five years of providing educational, unbiased news and opinion to the entire fashion industry, qualifies us to make qualitative and quantitative assessments where figures may not necessarily be publically available. Needless to say – as is the case with all of our work – these insights are both as rigorous as possible and resolutely independent. Despite enduring and productive relationships with many of them, we own our own thoughts and answer to no single supplier. And although many of them (considerably more than in 2012) have parted with their financial figures and allowed us to directly contact their customers, our sole responsibility remains that which we have to you – the prospective customer or end user of PLM. Where it was appropriate for us to incorporate our own insight, it comes with the assurance that it is educated, informed and impartial, and readers can be assured that it is at no stage coloured or influenced by any third party.

However you choose to approach the PLM industry, we are absolutely certain that it both requires and deserves the kind of exhaustive and detailed intelligence and analysis that we have compiled and collected in the following pages.



Concentration of sales in 2012/13

USA	31%	ITALY	9%	NEW ZEALAND	3%	DENMARK	2%	AUSTRIA	1% EACH
UK	22%	NETHERLANDS	7%	SWITZERLAND	3%	BRAZIL	2%	TAIWAN	1% EACH
AUSTRALIA	18%	INDIA	4%	JAPAN	3%	CHINA	2%	SRI LANKA	1% EACH
GERMANY	13%	SPAIN	3%	CANADA	3%	BELGIUM	2%	BANGLADESH	1% EACH
FRANCE	9%	TURKEY	3%	HONG KONG	2%	RUSSIA	2%	HOLLAND	1% EACH
								KOREA	1% EACH

# The Customers

“Despite the fact that WhichPLM is based in the UK, we have long been a global publication. And in recognition of this, these pages and the ones that follow adopt the US Dollar as a standard currency for ease of communication with our worldwide audience.”

## OUR ANALYSIS

In last year's Annual Review, we surmised that the PLM market for retail, brands, footwear and apparel rested on “extremely stable foundations that [would] underpin considerable growth in the very near future”.

And with a total market size of \$548 million in 2013 – close to \$150 million above our highest expectations for the period from last year's Annual Review – “considerable growth” may have been something of an understatement. PLM for fashion has always been a growing market, but

the global momentum demonstrated in this year's results suggests that it may have reached critical mass in a widespread array of territories.

To understand the global spread of PLM this financial year – indicated on our heat map – we must look back to a time when the market was constrained not just by geographical boundaries, but by technological ones also.

It may be a glib and misleading acronym, but OOTB (Out Of The Box) carries a significant amount of weight to retailers, brands and manufacturers who were involved in PLM at the point of its inception. At that time, towards the

## About our Tiers

Throughout this section and elsewhere in this year's Annual Review, we refer to customers as falling into three distinct “Tiers”. In a year when PLM sales to the middle and lower market are growing rapidly, it is important to differentiate – for a range of purposes, but not least for drawing conclusions about market leaders – between a sale to a large, multinational organisation and one to a boutique brand. For the purposes of revenue analysis alone, the former sale will likely be worth substantially more than the latter, and it is only possible to build accurate market estimations when these disparities in value and size are taken into account.

### For clarity's sake, our customer tiers are delineated as follows:

- TIER 1 Predominantly occupied by large, multinational organisations with revenue in excess of \$1 billion.
- TIER 2 Encompasses a wide variety of retailers and brands in what is commonly referred to as the “mid-market”, with revenue from \$500 million upwards.
- TIER 3 Takes in those smaller organisations that fall below the revenue threshold of Tier 2 – typically boutique or specialist retailers and brands with revenues from \$30 million upwards.

beginning of the millennium, picking a PLM solution was akin to selecting a toolbox: it came with most of the equipment you might need, but some significant assembly and a sometimes-bewildering panoply of components were needed in order to achieve real results. Over time, PLM solutions evolved to the extent that they could be considered standalone products, able to deliver value without the often-significant amount of customisation and heavy lifting their predecessors had required.

Much of this functionality, though, was made possible by these solutions becoming web-based. International working and multi-departmental collaboration is, after all, only feasible where those departments and supply chain partners share a comparable standard of connectivity. This was often not the case, as bandwidth and latency issues prevented supply chain partners in overseas territories from being fully brought into the fold. And in turn, this gave rise to a number of prominent early adopters who bought PLM, but found themselves constrained by both the technological environment and their own mindset, trapped in an era of PDM.

Although much has been done to educate customers on the far-reaching value of PLM since – spurred on by the aforementioned reductions in the total cost of ownership – it was not until the consumer industries prompted an upheaval in the communications and technological infrastructure of the Far East that the initial tidal swell of PLM interest began to break its banks and spread from the USA and Western Europe into emerging and maturing markets the world over.

As a result of this uplift, PLM is now active at more links of the supply chain than ever before, moving beyond suppliers to suppliers' suppliers, and from agents to vendors to factories to mills in a steady cascade of collaboration.

It may seem strange to think that the infrastructure of a different continent could affect PLM adoption and the effectiveness of PLM implementation domestically, but research undertaken on behalf of some of our most recent clients suggests that supply chain collaboration is seen as a critical requirement of modern PLM. Production, sampling and manufacture are, after all, some of the most price-sensitive and time-consuming parts of the product lifecycle, and so it follows that customers want to be able to manage them as transparently and effectively as possible.

Customer expectations for what we might call advanced PLM functionality are set high, then – and not just for the essentials we've spoken about elsewhere. And those expectations have in turn spurred growth of PLM in territories that may be separated by physical oceans, but that are drawing closer to co-existence digitally.

This pollination of PLM from the Western world eastwards – from the brands to their overseas partners – certainly accounts for some of the growth we have seen in new territories like India, Turkey, Bangladesh, Taiwan, Sri Lanka, Hong Kong and China, but it is important to realise that successful collaboration is as much of a driving force in Europe as it is overseas. We may never know the exact number of brands who bought PLM on the promise of being able to coordinate their overseas manufacturing and supply chain partners, but our research certainly suggests that increased supplier collaboration has roused a number of American and European brands into action.

Although the progression of PLM from Northern Europe to Southern Europe, and from the Middle East to the Far East and Australia has, as yet, seen few implementations in Asia for those

territories' domestic retailers and brands. We know from experience, though, that many former manufacturers are making the transition to developing their own products and brands to compete against the foreign equivalents that have thus far dominated the market. These include brands that, like Chinese Olympian Li Ning's eponymous sportswear lines, are today challenging the dominance of global fixtures like Nike in their home territories.

Our experience in Europe and the USA suggests that, sooner or later, increased competition in these territories will drive retailers and brands to devise new ways of remaining efficient and profitable – new technologies and processes to enable them to remain on top.

If this sounds familiar, it's because this search for the competitive edge was one of the largest factors in the creation of the American and European PLM industries – the thing that galvanised brands in a number of proven territories to seek out the best possible methods for optimising their product lifecycles, and the thing that continues to drive the explosive growth of our industry as a whole.

As the statistics contained within these pages demonstrate, the RFA PLM market is now approaching a \$3 billion industry, taking account of software, support and implementation costs from the very beginning of PLM until the close of the most recent financial year. Other publications have put its value in the tens of millions, but as this year's sales figures demonstrate, software revenue alone in the period 2012/13 accounts for significantly more than the total market size ascribed to the industry elsewhere.

So who's buying PLM? The short answer is: everybody.

This year saw numerous sales of PLM to every tier of the market, from large, Tier 1 organisations

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(around 20 sales), and medium, Tier 2 enterprises (around 60 sales), to much smaller organisations in Tier 3, who collectively account for more than 130 sales in the financial year 2012/13.

These statistics do not necessarily reflect the composition of the market as a whole. Of the approximately 825 customers who we believe have adopted PLM to date, Tier 3 organisations are not likely to be so well represented, given that the cost of ownership remained prohibitively high for many of the industry's early years.

Another relatively small sector of the market, at least in terms of sales figures, is what we refer to as the "Super Tier". Although it only comprises around 20 actual customers of PLM, each Super Tier organisation has revenues in excess of \$20 billion, and has deployed its chosen solution to thousands of users, making this hidden tier by far the largest in terms of pure volume. These organisations have a significant impact on the PLM industry, commensurate with the impact their sheer size gives them on the market and the economy at large; Walmart, users of PTC FlexPLM, has revenues of more than \$450 billion, and similar brands like Nike (more than \$20 billion) and H&M (more than \$50 billion) have also become PLM's worst-kept secrets over the last few years.

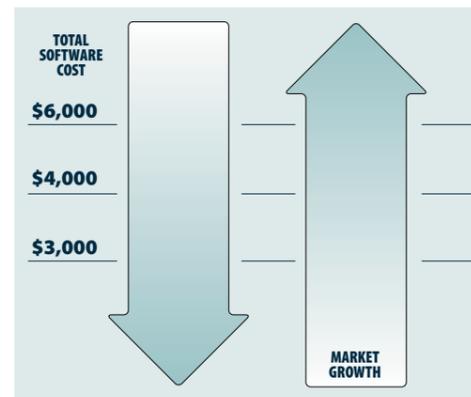
We may not see these Super Tier brands appear often in yearly statistics, but their impact and their status as pioneers (placing them squarely at the epicentre of the PLM expansion) is keenly felt at all levels of the industry, right down to the proliferation of businesses in Tier 3 who have begun to realise true value from PLM as an indirect result of the vote of confidence placed in the industry by these gargantuan brands.

And Tier 3 has demonstrated by far the most significant growth this year. In our 2012 Annual Review we predicted that the floodgates would open and precipitate a deluge of new customers in the mid-market, or Tier 2, and although this did occur, the growth in the small-to-medium sector has been eclipsed by the sheer number of Tier 3 organisations adopting PLM this year.

Despite the fact that we predict this low-end growth will continue apace over the coming year, our research also suggests that Tier 1 contains significant untapped potential. To date, PLM is only in use by approximately 10% of Tier 1 businesses worldwide – coupled with the seismic changes in infrastructure and growth of domestic brands in emerging markets, we believe this will conspire to create extremely solid growth. It is important to note, too, that the actual number of Tier 1 brands is

always growing, as yesterday's boutique online-only businesses become international powerhouses in their own right, and turn to modern PLM's broad and deep functionality to manage their expansion.

No doubt this top-and-bottom growth will be accompanied by continued, steady adoption of PLM in the middle market and, given the degree to which the market in 2012/13 exceeded our expectations, may yet drive more unexpected and explosive growth than even our headiest predictions for the coming year.



## THE MARKET FROM DAY ONE / OVERALL MARKET SIZE

<b>Total customers of PLM to date</b>	<b>825</b>
Total customers Tier 1 to date	206
Total customers Tier 2 to date	412
Total customers Tier 3 to date	207

The above figures represent WhichPLM's best estimation of the total number of sales of PLM to the retail, brand, footwear and apparel industry to date, which is defined as from the inception of PLM towards the beginning of the millennium, until the close of the fiscal year 2012/13. These figures were compiled by analysing the total customer bases of each PLM supplier, including those that are not yet the subject of public disclosure.

<b>Total no. of seats to date</b>	<b>370,800</b>
Total no. of seats – Tier 1	206,00
Total no. of seats – Tier 2	123,600
Total no. of seats – Tier 3	41,200

These figures provide some insight into what we believe to be the approximate mean average of total "seats" (i.e. individual full users of PLM software) sold to date, as well as how those are divided between our already-defined customer tiers. For Tier 1 customers we have assumed an average of 1,000 seats per implementation; Tier 2 customers an average of 300, and Tier 3 the lowest number of seats at 200.

By assuming an average per-seat price of \$4,000 (taken as a midpoint between the early costs of \$6k and today's reduced costs of \$3,000 and below) we are able to derive a total software cost to date.

**Total software cost to date \$1.483billion**

Software, however, is by no means the whole story – in our industry or any other. Each software sale is accompanied by support costs of, on average, 20%. Taking account of the overall software cost to date, we can therefore estimate the total cost of support, too.

**Total support cost to date \$297million**

And this is without factoring in the actual expenditure associated with implementation, something that must be weighed on both the client and supplier side.

A general rule of thumb dictates that for every single day a supplier spends on implementing the software they've sold, the customer must set aside three days' worth of their own time. Assuming the following supplier implementation days as average (they originate from our first-hand experience of PLM implementations), we can calculate the cost of implementation from the supplier perspective:

<b>Total implementation cost for suppliers</b>	<b>\$493 million</b>
<b>Tier 1 implementation costs for suppliers</b> 1,000 days per implementation, at an average day rate of \$1,500	<b>\$309 million</b>
<b>Tier 2 implementation costs for suppliers</b> 300 days per implementation, at an average day rate of \$1,500	<b>\$123 million</b>
<b>Tier 3 implementation costs for suppliers</b> 150/200 days per implementation, at an average day rate of \$1,500	<b>\$61 million</b>

### And the customer perspective:

<b>Total implementation cost for customers</b>	<b>\$556 million</b>
<b>Tier 1 implementation costs for customers</b> 3,000 days per implementation, at an average day rate of \$750	<b>\$309 million</b>
<b>Tier 2 implementation costs for customers</b> 900 days per implementation, at an average day rate of \$750	<b>\$185 million</b>
<b>Tier 3 implementation costs for customers</b> 600 days per implementation, at an average day rate of \$750	<b>\$62 million</b>

We have calculated the average number of days from both the supplier and customer perspectives on the basis of time spent on implementations from the very beginning of the nascent PLM industry to the close of the financial year 2012/13. In reality, the number of days required from both parties is decreasing dramatically today as a result of the proliferation of

Out Of The Box (OOTB) solutions, best practice process and baseline functionality improvements. This has led to a commensurate decrease in total cost of ownership, and helped to drive up the value that customers are able to realise from their PLM investments.

With each of these figures to hand, we are now able to arrive at an overall market size for the PLM industry for retail, brands, footwear and apparel – something that other publications have previously attempted but, in our estimation, grossly underestimated.

Total software cost to date	<b>\$1.78 billion</b>
Total supplier implementation cost to date	<b>\$493 million</b>
Total customer implementation cost to date	<b>\$556 million</b>
<b>Grand total PLM market size to date</b>	<b>\$2.9 billion (approx)</b>

It is important to note that, for the purposes of this market size estimation, we have not factored in any costs of hardware or general infrastructure, which can be as high as \$1 million and potentially a great deal more, depending on the number of users, the size of the client organisation, and the state of its current infrastructure. For smaller companies, we might expect to see hardware costs of around \$150,000, and for medium enterprises this cost will typically rise to around \$500,000. Although hardware and infrastructure costs are often shared between PLM and other enterprise systems, this may still account for an unseen cost of around \$0.5 billion.

## THE MARKET IN 2012/13 AND BEYOND

In our 2012 Annual Review, we estimated the PLM market across all tiers to have been worth between \$270 and \$350 million, and predicted that the following year (i.e. 2012/13, the period covered by this publication) could see a rise of 14%, leading to a predicted total market size of between \$310 and \$400 million.

At the time of writing last year's publication, however, we could not have foreseen the precipitous growth – coming in well above the industry average at 18.3% – in volume, geographical spread and diversity that has led to 2012/13 being the biggest year for PLM to date. The analysis accompanying these statistics qualifies the driving forces behind much of this growth, but it is important not to discount the essential fact that PLM has simply become more popular than at any prior point in its history, and has become so more rapidly than even we had anticipated.

<b>Total market size 2012/13</b>	<b>\$548 million</b> (incorporating \$173.2 million in software sales, \$93.9 million in supplier implementation costs, and \$281.7 million in the customer counterpart)
Tier 1 software sales 2012/13	<b>19,000 seats at an average license price of \$3,000 = \$57 million</b>
Tier 2 software sales 2012/13	<b>17,400 seats at an average license price of \$2,000 = \$34.8 million</b>
Tier 3 software sales 2012/13	<b>26,200 seats at an average license price of \$2,000 = \$52.4 million</b>

<b>Predicted total market size 2013/14</b>	Ours is a buoyant market, and despite the generally gloomy economic climate, we expect to see another year of continued overall growth for PLM as the world's economies begin to right themselves. Although double-digit growth is unheard of in many industries, we predict the PLM market for retail, brands, footwear and apparel will grow a further 15% in 2013/14. This creates a total predicted market size for next year of around <b>\$630 million</b>
Predicted Tier 1 market share 2013/14	<b>We predict 10% growth in the upper market over the coming year.</b>
Predicted Tier 2 market share 2013/14	<b>The continued, steady expansion of PLM into the middle market lead us to expect around 15% growth over the next twelve months.</b>
Predicted Tier 3 market share 2013/14	<b>The explosive and unforeseen progression of the lower market suggests that we may see growth as significant as 20% in 2013/14.</b>

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No analysis of any market would be complete without a detailed examination of the suppliers that cater to it – particularly when we consider the contention put forward throughout this year’s publication that the power rests firmly on the customer’s side of the equation when the time comes to evaluate these suppliers.

Mirroring the quantity and diversity of companies that now rely on PLM in both its core and E-PLM forms, the number of suppliers that produce solutions for our industry has also increased considerably in an extremely short time. This was also the case in 2012, and yet the past twelve months have seen some important new additions to the landscape, particularly in the form of suppliers of cloud-based or Dynamics AX-based solution stacks.

As has always been the case, some of these suppliers cater exclusively to the retail, footwear and apparel industry, while others develop and supply PLM to a wider range of verticals – automotive and aerospace in particular – and have expanded to take in our industry as a consequence of their success elsewhere. In a pronounced change from last year, however, this year’s unquestionable market leaders have their sights set wholly and exclusively on the fashion industry.

The list collected over the coming pages is not an exhaustive catalogue of every supplier catering to the fashion market (for that, readers are invited to visit our comprehensive supplier listings on WhichPLM), but is rather a list of those that have been most active in our industry in 2012/13, and those that have helped to shape the results we see both in this market analysis and in our earlier customer survey results. To that end, the following pages are designed to provide some insight into how each of those suppliers has performed this year – using both objective statistics and the suppliers’ own thoughts on what they believe sets them apart from their competitors, and what forces they expect will shape the industry in years to come.

While you will see suppliers listed in this section who have sold comparatively few solutions in 2012/13, these are included on the basis of their inclusion in the shortlists of many retailers, brands and manufacturers. Although we do take account of sales figures in awarding the title of “market leader”, these are not the sole metric by which a supplier merits inclusion

# The Vendors

within these pages; where we know from first-hand experience that prospective customers are being approached by (or choosing to approach themselves) a particular supplier, we have made every effort to encourage their participation, even where they may not have been successful in their sales efforts this year.

**THE NUMBER OF SUPPLIERS THAT PRODUCE SOLUTIONS FOR OUR INDUSTRY HAS ALSO INCREASED CONSIDERABLY IN AN EXTREMELY SHORT TIME.**

On that basis, each of the following pages is dedicated to a particular supplier (they appear in alphabetical order according to company name) and includes several sets of statistics and context that are intended to qualify and add weight to the conclusions we later reach in our concluding analysis of the market. First of all, we set out a list of those customers who have adopted the supplier’s PLM solution in the financial year 2012/13, substantiated by press releases where possible, and subject to WhichPLM verification and, in some cases, redaction where we felt as though a customer or customers did not fit into our stringent criteria. Secondly, we have reproduced (where this information is a matter of public record, typically unavailable for private companies) the supplier’s revenue derived from, and reciprocal re-investment in, PLM.

Many of the suppliers listed cater to a range of verticals, but the figures that appear here are confined to the sale and development of PLM for the retail, footwear and apparel industry only. Where a given supplier works across multiple industries (or where they supply a range of products to the apparel industry, as is the case with vendors of CAD/CAM, pattern making software, three-dimensional design,

and other components of extended product development), we have disregarded income and investment that falls outside the scope of this confined analysis.

Finally, we contacted each supplier and asked them to provide their own insight into what they feel has differentiated them from their competitors this year, and to explain what they see as the prominent emerging trends for the near future. These insights are exclusive to the WhichPLM Annual Review, and provide unique insight into the roadmaps, ethos and future direction of a large number of the market’s biggest players.

We have placed the sales and R&D figures we were provided in bands (with \$1 to \$5 million being the lowest and \$50 to \$70 million being the highest) both for ease of comparison and because it simplifies the process of placing the suppliers themselves into a comparable tier structure to that we have used for the customers themselves.

Where actual sales to customers are concerned, we remind readers that despite our best efforts towards verification and completeness, these lists are not exhaustive. Many of the suppliers listed here have made sales that have not been disclosed to the public – either through reasons of brand secrecy, or because those implementations have not yet reached agreed milestones at which they can be discussed in public forums. Although these sales must remain absent from publications such as this one, we have afforded suppliers the opportunity to number but not name them, allowing us to adhere to our goal of providing the most accurate market intelligence without compromising customers’ rights to secrecy.

Each supplier’s website is listed alongside their name, allowing you to quickly and easily discover more about those that merit your attention as you begin to assemble your solution shortlist.



www.aras.com

<b>New customers in the financial year 2012/13</b>	Blauer, ECCO Shoes, Strongweaver, Gemvara	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$11-50 million	
<b>R&amp;D investment in the same period.</b>	\$6-10 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Aras is a global company delivering the next generation of enterprise Product Lifecycle Management (PLM) solutions.</p> <p>We include business ready solutions to support global product development, outsourced manufacturing, supply chain, quality compliance and more.</p> <p>Our modern PLM platform provides greater scalability, flexibility and extensibility than conventional PLM systems while an open architecture, open data model and open APIs give your business complete control over your PLM environment.</p> <p>Pure web browser experience with powerful functionality</p>	<ul style="list-style-type: none"> <li>• Stage-gate Project Management for NPDI</li> <li>• SKU and Bill of Materials Management</li> <li>• Approved Vendor List for Qualified Suppliers</li> <li>• Multi-CAD Product Data Management</li> <li>• Enterprise Change Workflows</li> <li>• Requirements Management</li> <li>• Microsoft Office Integration</li> <li>• Integrated 3D PDF Visualization</li> <li>• CAPA, quality planning and more</li> </ul> <p>Aras runs on Microsoft SQL Server and deploys in the data center, Cloud or hybrid scenarios with strong security and robust integration capabilities.</p> <p>Discover your next generation PLM at <a href="http://www.aras.com">www.aras.com</a></p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>Innovation continues to accelerate resulting in fantastic new products and consumer experiences, however, the flip side of the innovation push is constant change and ever greater complexity to manage.</p> <p>Today, fashion, apparel, retail and consumer products often include electronics and even software combined with new packaging, material substances and composites which complicate the global development and management across the lifecycle.</p> <p>At Aras we understand that yesterday’s “best practices” are tomorrow’s “worst obstacle”. We believe that PLM must enable opportunities for next generation products, and that fast moving companies need the ability to continuously adapt PLM processes quickly to achieve a sustainable competitive advantage.</p>	<p>That’s why we deliver business ready PLM solutions based on advanced technology which is highly flexible, scalable and secure. Your company can get started quickly using out of the box capabilities and then we encourage you to customize your PLM environment constantly to transform and optimize for changing market conditions. And with an Aras subscription we’ll even upgrade all your customizations for no added charge.</p> <p>We see a future where companies must constantly differentiate through products, processes and consumer experiences, and the only way to achieve that vision is with a PLM platform built for the future that can lead the way.</p> <p>Discover your next generation PLM at <a href="http://www.aras.com">www.aras.com</a></p>

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# AXIND

Technology for Fashion

www.axind.com

<b>New customers in the financial year 2012/13</b>	Garcia Jeans	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$1-5 million	
<b>R&amp;D investment in the same period.</b>	\$1-5 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Axind specializes in technology for Fashion. We understand the industry and its processes, and we have embedded into ChainReaction® decades of expertise in the retail, footwear and apparel industry. We serve brands, retailers, manufacturers, and exporters talking their language, and helping them reduce costs and increase sales.</p> <p>ChainReaction® is out-of-the-box ready for implementation, with a large number of preconfigured processes resulting in fast deployment, low TCO, and fast ROI. Our customers</p>	<p>spend less time implementing software tools and more time developing and managing successful, fast selling products.</p> <p>ChainReaction® is built with the latest Microsoft® technologies, on a pure web-based architecture, thus ensuring location-independent, multi-device access to a single view of the "truth", in a single environment integrating support for retail and manufacturing.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>We see two main trends in our interactions with customers and industry stakeholders.</p> <p>The first trend is towards "extended PLM", what we call PLM++. The need to closely engage and interact with the extended supply chain requires software tools to provide additional support for order management, material management, etc. into an integrated, easy to use and deploy platform.</p>	<p>The second trend is towards streamlined and out-of-the-box deployments, helped by cloud-based solutions, addressing the need to realize faster the promised benefits from PLM.</p>

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www.centricsoftware.com

<b>New customers in the financial year 2012/13</b>	Ports 1961, Build-a-Bear, Proenza Schouler, Crocs, Uniek Inc., Tally Weijl, Systeme U, AMG Group Limited, Mango, Children Worldwide Fashion, Aubade, Triple Aught Design, Black Diamond Equipment Plus four additional customers whose identities are not yet the subject of public disclosure.	
<b>Revenue derived for apparel PLM sales in the same period.</b>	Private company or no financial information provided	
<b>R&amp;D investment in the same period.</b>	Private company or no financial information provided	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Centric 8 is designed specifically for retail, apparel and footwear companies. Based directly on the needs of these companies, Centric developed Centric 8 as an intuitive, user-friendly and completely web-based PLM solution that deploys and delivers value rapidly.</p> <p>With industry domain expertise, business best practices and supporting data models incorporated in the software as it is delivered "out-of-the-box," the core PLM suite is easily configured to meet individual requirements without the need for customization or programming. In fact, Centric 8's industry-unique ease of use and upgrade/deployment model generates the lowest total-cost-of-ownership model on the market.</p>	<p>Centric introduced the industry's first (patent-pending) mobile apps for Centric PLM. Current apps include: Capture It for iPhone App, Collection Book for iPad App, Sample Review Mobile App and Factory Audit Mobile Apps. Centric also offers a mobile application Software Developer's Kit (SDK).</p> <p>Centric's Agile Deployment(SM) implementation methodology, based on agile software development principles, allows for implementations up to nine times faster than possible with other PLM solutions. The company offers the Centric 8 solution as a SaaS/cloud deployment, or customers can install and deploy the solution locally through traditional licensing models. The Centric team's industry experience and expertise is well recognized and regarded.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<ol style="list-style-type: none"> <li>1. Omnichannel. This trend will continue to shape the industry, demanding more and more SKUs, and placing enormous pressure on product teams. In response, an effective PLM implementation can get companies beyond limiting systems, including PDM systems and spreadsheets, to keep up with demand. This leads to a requirement for out-of-the-box PLM systems that product development teams can start using immediately.</li> <li>2. Fast fashion. What used to be a differentiator for a few companies is now being adopted across the industry. Fast fashion drives unheard-of development cycles, which require PLM software that implements fast.</li> <li>3. Changing regulatory requirements. As companies face more requirements, they will have to be able to generate accurate documentation on demand. Whether a company conducts its own audits or outsources them, PLM will need to be able to help companies respond quickly to</li> </ol>	<p>developing situations, develop audit templates, track and record findings, and get them to employees or auditors.</p> <ol style="list-style-type: none"> <li>4. Companies breaking into new markets. Not only are companies looking to create more SKUs, they are identifying new markets. To take advantage of opportunities, they need to make sure their software can handle the requirements. For PLM, that means flexible, configurable solutions that offer excellent cost control.</li> <li>5. Mobile apps. As the retail, apparel and footwear industries rapidly change the way they work, mobile apps for PLM will enable many of these changes. Mobile apps will continue to change the way the entire product development team—from designers, sourcing, compliance managers and quality control, to planners, merchandising, marketing, sales, executives, and even customers—perceives PLM.</li> </ol>

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www.cgsinc.com

<b>New customers in the financial year 2012/13</b>	Creative Apparel Concepts, Peace Love World, Velvet by Graham and Spencer and additional customers who are not yet subject to public disclosure.	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$6-10 million	
<b>R&amp;D investment in the same period.</b>	\$1-5 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>CGS is a leading technology and services provider, delivering innovative solutions to a diverse global client base, helping to overcome some of their toughest strategic and operational challenges. As a business and technology pioneer, for 30 years, CGS has developed strong and enduring partnerships with its customers, who have benefited from its superior portfolio of market leading products which include apparel business software, contact centre services, enterprise training and technology infrastructure solutions.</p> <p>CGS has a worldwide presence in over 20 locations, with corporate headquarters located in New York and over 5,000 specialist employees strategically deployed across the globe, to service the requirements of its customer base and deliver value.</p> <p>A dedicated business unit consisting of over 250 professionals all with extensive apparel industry knowledge and experience, remain focused on providing best practices and delivering solutions to the apparel, retail, footwear and accessories sector, covering the entire concept-to-consumer lifecycle; from design and development to sourcing and production through delivery.</p> <p>CGS's award-winning BlueCherry® Suite is a comprehensive range of fully integrated best-in-class apparel software solutions (ERP, PLM, DSS, SCM, WMS,</p>	<p>EDI, MCMP, MSM and BI), designed to meet the specific needs and challenges of the fashion industry. Due to their highly specific nature, BlueCherry ERP and PLM are feature-rich modules. BlueCherry PLM leverages key features from ERP and is a key component in BlueCherry DSS (Design and Sourcing Suite), which combines strong PLM functionality with added sourcing and production capabilities, to create a truly unique offering in today's marketplace.</p> <p>BlueCherry is used by many of the world's leading fashion and apparel companies to improve process efficiency, gain visibility, reduce costs and increase productivity. Customers benefit from:</p> <ul style="list-style-type: none"> <li>•A globally recognised and proven implementation methodology.</li> <li>•Award-winning technical support and service, with centers located around the globe.</li> <li>•Unparalleled industry collaboration via a large and active BlueCherry community.</li> <li>•The lowest total cost of ownership and out of the box capabilities.</li> <li>•A single-source code base leveraging customer enhancements and evolving industry trends.</li> <li>•Seamless integration and a visually stunning Microsoft Office®-like user interface.</li> <li>•A true multi-tier architecture with unlimited scalability.</li> <li>•An industry leading progressive software roadmap.</li> <li>•CGS's long term commitment to research and development.</li> </ul>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>The precise definition of PLM continues to evolve, as retailers, brands and manufacturers measure its current scope against their own processes and requirements. Those requirements today go beyond design and development, and demand strong sourcing and production capabilities, as evidenced by the significant uptake in global adoption of our BlueCherry® Design and Sourcing Suite.</p> <p>More customers than ever are adopting "end-to-end" solutions rather than adopting PLM in isolation, helping them to plug any gaps in their extended supply chain operations. BlueCherry is focused on delivering that holistic, comprehensive view – going beyond PLM to meet and exceed customer needs and expectations</p> <p>Mobility will also become a watchword over the coming</p>	<p>year, as increases in smartphone and tablet adoption drive the need for the integration of mobile technologies with enterprise data. The ability to access functionality like trend research, sample development, factory auditing, and sales catalogues remotely and digitally will soon become a key driver in the adoption of mobile applications such as CGS's Threadvine salesforce automation tool.</p> <p>Multi-touch experiences (creative and consumer) and social, ethical and environmental compliance will also become key initiatives, and technology suppliers will be called upon to provide the tools to make both a reality.</p> <p>Finally, retailers will continue this year to understand the true impact of omni-channel retailing, attempting to align their physical and digital strategies accordingly.</p>

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www.coresolutions.com

<b>New customers in the financial year 2012/13</b>	Safeway, Groupe Adeo	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$6-10 million	
<b>R&amp;D investment in the same period.</b>	\$1-5 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Core Solutions CBX software is a truly end-to-end solution, covering the entire concept to delivery lifecycle of a product. Another differentiator is that the solution is highly adaptable to different sectors. Most of our clients rely on CBX to manage their RFA products, but then extend into other areas.</p>	<p>Key differentiators:</p> <ul style="list-style-type: none"> <li>• Deep capabilities in request for quotation and request for samples</li> <li>• Global Trade Management capabilities (Order Management, Logistics and Finance)</li> <li>• End to end Concept to Delivery Critical Path and Workflow</li> <li>• Supply Chain Collaboration with vendor and service provider extensions.</li> </ul>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>Certainly omnichannel is one of the big trends, essentially an extension of ecommerce, but is important from a supply chain point of view, in that the supply chain is called on to solve a number of integration challenges. We also expect to see even faster leader times, along with more seasons and smaller orders. All this information</p>	<p>will need to be effectively managed with systems. Another trend we are seeing is in the sourcing landscape, where companies are having to continually reevaluate their sourcing locations and in some cases shifting to other low-cost markets or closer to home.</p>

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www.cuskit.co.uk

<b>New customers in the financial year 2012/13</b>	Eurisko, White Knight, TecWear	
<b>Revenue derived for apparel PLM sales in the same period.</b>	Private company or no financial information provided	
<b>R&amp;D investment in the same period.</b>	Private company or no financial information provided	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Dedicated to the Apparel, Footwear and Textiles industries, TeqControl has been an easy to use, efficient and fully integrated software package since its first version over 25 years ago.</p> <p>By pioneering agile development methodologies Cuskit have been able to bring enhancements and new features to their customers with both speed and accuracy thereby keeping costs low.</p>	<p>Having a common and easy to navigate user interface throughout all our software allows new end users to get quickly up to speed and existing users to be seconded to new departments with only minimal training necessary.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>In terms of technology, the increased requirement for device/location independence is a true driving force behind today's software. Transitioning between mobile and desktop should be seamless and equally as productive - The ability to make timely decisions based on available data is crucial to business success.</p>	

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www.3ds.com

<b>New customers in the financial year 2012/13</b>	Ostin, Celio*, Macy's, ASICS, FOSSIL	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$11-50 million	
<b>R&amp;D investment in the same period.</b>	\$1-5 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Dassault Systemes, the 3DEXPERIENCE company, provides business and people with virtual universes to imagine sustainable innovations. The 3DEXPERIENCE Platform for Fashion and Footwear brands and retailers is the only business platform focused on the consumer that includes social and 3D capabilities and provides companies with the best collaborative environment for managing the global Product Lifecycle. Connecting people, innovation and knowledge.</p> <p>With over 60 leading apparel and footwear brands and retailers using our platform and thousands of users around the world, our customers have informed and inspired our innovation process. In fact, Dassault Systemes' leadership in this market has been recognized in IDC Retail Insights 2012 PLM MarketScape where we were named leaders in Strategy, Innovation, Capabilities, Functionality and Offering.</p> <p>Dassault Systemes offers clear Industry Solution Experiences that deliver top line value and digital</p>	<p>continuity for product innovation and the consumer environment.</p> <p>My Collection and Fashion Collection for Small and Medium Businesses (SMB) - 2 collaborative platforms to fit your sourcing strategy:</p> <p>My Collection is a new experience in collaborative product innovation enhancing the brand identity, focusing on the complete business process from idea to consumer mainly targeting large companies.</p> <p>Fashion Collection for SMB is designed and packaged to address the unique requirements of SMB customers.</p> <p>My Store is a unique solution using 3D visualization to help brands and retailers model, validate and deliver a better consumer experience across all channels.</p> <p>Ultimately it's all about connecting your business objectives with your consumers to turn your best ideas, into your best products!</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>Fashion and Footwear companies are in the midst of a digital revolution while they continue to face significant challenges and accelerating change. Connected, informed, and increasingly interested in spending again, the consumer expects new products and new shopping experiences - on-line and in-store. Today's Merchants have to work harder than before to communicate a compelling brand persona and deliver that "WOW" moment to the consumer. Brand loyalty is fragile, and Social Innovation continues to change the way consumers interact and spend.</p> <p>Countries that used to provide low-cost labor now represent millions of new middle class consumers,</p>	

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www.desl.net

<b>New customers in the financial year 2012/13</b>	Eileen Fisher, A.H. Schreiber, COLIN's, Christ, Elope, Linea Aqua and one additional customer who is not yet the subject of public disclosure.	
<b>Revenue derived for apparel PLM sales in the same period.</b>	Private company or no financial information provided	
<b>R&amp;D investment in the same period.</b>	Private company or no financial information provided	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Quite simply, the DeSL Fashion PLM solution is the most "technically unrivalled" in the industry today and the fastest growing PLM vendor globally. We are fashion people, delivering solutions to the fashion industry, and our solutions support the whole design, sourcing, production and sales process. Customers include some of the world's leading brand names and garment manufacturers.</p> <p>The DeSL PLM solution is unrivalled in terms of functionality, configurability, scalability and ease of use. DeSL is also a Microsoft Gold Partner and the platform has been developed using the latest Microsoft.Net Framework – ensuring that customers have the latest and most superior technology. Our solution is completely 100% web enabled and can</p>	<p>run across platform including iPad, iPhone &amp; Android. We also offer flexibility to our customers by offering a SaaS option.</p> <p>DeSL has driven innovation in the Fashion PLM sector, for example our integration into Adobe Illustrator is the most powerful and comprehensive in the market today, with design teams achieving a 20% reduction in design time. Plus, we have developed an exciting range of Apps which manage key business processes, for example Ethical Trading &amp; Vendor Compliance and many more.</p> <p>In summary, DeSL has been rated number #1 in a series of global vendor evaluations which reflects our "technically unrivalled" position in the market.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>Without a doubt, we will see further advancements in mobile technology – everything from e-commerce, assortment replenishment to PoS. Quite simply the traditional "path to purchase" is no longer relevant and has been replaced by a more complex environment.</p>	<p>Many clothing companies will tell you it's a challenging market – decreasing footfall and slow growth in revenues. Retailers have no option but to embrace mobile technology to help them engage with their customers. Use of mobile technology has the power to inform consumers prior to the purchase, actually make the purchase and drive behaviour once they actually enter the store.</p>

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www.ecvision.com

<b>New customers in the financial year 2012/13</b>	Dick's Sporting Goods	
<b>Revenue derived for apparel PLM sales in the same period.</b>	Private company or no financial information provided	
<b>R&amp;D investment in the same period.</b>	Private company or no financial information provided	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Founded in 1998 as an EDI provider, ecVision's mission is to streamline supply chain processes from design to delivery through our Cloud-based collaboration platform called ecVision Suite®, launched as a cloud portal in 2011 after 10 years as an installed application.</p> <p>Private label brands, manufacturers and retailers sourcing internationally utilize our solutions speed the concept-to-delivery cycle, improve margins and minimize supply chain risk by improving communication, creating visibility, and strengthening collaboration with every link in the trading party network.</p> <p>Realizing technology's pivotal role in retail processes, ecVision successfully focuses its technology expertise toward developing innovative software solutions that facilitate secure international communication, establishes a common collaboration platform, and manages day-to-day business among companies in both hard and soft line vertical markets.</p> <p>Presently ecVision only serves the retail soft and hard goods vertical retailers, manufacturers,</p>	<p>importers, private label brands, and suppliers; apparel, footwear, sporting goods, and promotional items.</p> <p>As a module-based solution, ecVision customers utilize different components of ecVision Suite. The platform supports the full product supply chain lifecycle stages including the following areas:</p> <ul style="list-style-type: none"> <li>• Innovate &amp; Plan – All aspects of product innovation and collaboration; Supplier Qualification and On-boarding; Collaborative Capacity Management</li> <li>• Commercialization – Product Safety Testing; Facility Compliance; Material Collaboration and Collaborative Costing; BOM costing.</li> <li>• Make – All aspects of PO Collaboration including WIP tracking; Order to Ship; Finished Goods Inspection including Mobile device capabilities.</li> <li>• Ship – Manage the aspects of Book &amp; Track; Shipment, Trade and Customs document creation and transmission; Logistics Tracking; US CBP Filings.</li> </ul>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>Commercialization is the supply chain management process that provides structure for developing and bringing to market new products jointly with your suppliers and their suppliers. Because of the need to connect so many parties, that are often globally dispersed and typically don't communicate directly, commercialization is the phase that is likely to bring about the greatest risk of failure or slippage.</p> <p>When executed properly, implementation of the process not only enables management to coordinate the efficient flow of new products across the supply chain, but also assists supply chain</p>	<p>members with the ramp-up of manufacturing, logistics, marketing and other related activities to support the commercialization of the product.</p> <p>To ultimately contribute to sales targets, profit margins and competitive impact on the market, apparel and footwear companies are looking to extended PLM solutions. The platforms include new modules and functionality, along with increased integration to other applications in order to make new products that are innovatively designed and easily commercialized.</p>

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www.edgeax.com

<b>New customers in the financial year 2012/13</b>	None that are the subject of public disclosure
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$11-50 million
<b>R&amp;D investment in the same period.</b>	\$1-5 million
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	EdgeAX PLM (Product Lifecycle Management) solution embedded in Microsoft Dynamics AX 2012 harnesses the unique power of AX with customized features to deliver optimal results at incredibly operational costs for the apparel and retail industry. The EdgeAX PLM solution is collaborative, scalable, cost effective and helps in managing fluctuations in demand through efficiency in managing product portfolio, delivery and inventory turns resulting in greater margins.
<b>What do you see as the two most important emerging trends for the coming year?</b>	IT systems, technology landscape and applications are going through fast evolution. Evolving from silo'd applications to the integrated ERP system components in the enterprise, the continued trend is expected to move toward more unified core ERP systems which are cost effective to maintain and deploy and require minimal effort to integrate with specialized point solution though open integrated standards. This applies more to the broader SMB market compared to fewer large size companies.

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www.fanplm.com

<b>New customers in the financial year 2012/13</b>	DC Shoes, Roxy Apparel
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$6-10 million
<b>R&amp;D investment in the same period.</b>	\$11-50 million
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>We take a genuine interest in the success of your unique business needs and challenges. Our business model is fashioned for aftersales activities for your users and executives benefiting by empowering adoption and total use of our solution. We set a new standard in agile configuration, easy integration and speed to full deployment to allow a cost effective actualization of your unique needs today and your new business challenges tomorrow. We do not offer a "one size fits all solution" like our current competitors. We offer the most highly configurable solutions to address your unique competitive advantages while allowing agile globalization and multi-currency challenges.</p> <p>Our business and investment programs are built around the contemporary needs of both our businesses.</p> <p>Progressive programs that understand your economic needs, reduces risk and increases maximum ROI recovery quickly. Early accessibility and value realization in the short term, while allowing an intelligent contemporary strategy for long term goal achievement.</p> <p>Our agile business solutions configurable to your unique differentiators and total visibility to the business without the typical Cap Ex cost or invasive disruption to your daily business. Our programs are designed with the ability to have us manage the project from all sides, allowing your human capital to remain focused on your daily business needs. Technology alone without industry leading thought leadership does not create success. Combined they advance business efficiency to a new level.</p> <p>Our programs are specially designed to bring a level of consistency and best practice efficiency while balancing appropriate cultural adoption rates.</p> <p>While tools alone gets you started, our combination of aftersales activities lead to improved decisions on the part of all stakeholders daily improving productivity. We maximize your relationship success by focusing on overall investment by providing a seamless organization of recognized senior industry leaders offering 150+ years of experience including hands on leadership and experience assisting more than 100 companies nationally.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>Open Source architecture. Advanced deployment methodologies focused not on just how, but the what and the why is where our approach increases the levels of success. Ability to easily use Web Services style integration to third party software solutions. Adaptability to recreate process, function and workflow capabilities in a highly efficient manner.</p> <p>Web deployable external hosted environment</p> <p>Access to low cost agile configuration ability</p> <p>SaaS deployable yet scalable</p> <p>Differentiated based on corporate role and responsibility</p> <p>Multi-Currency configurable</p> <p>Dynamic definable functions and processes.</p> <p>Advanced design allows agile alignment to current state and future state methods, processes and requirements. Easily allows for setting critical milestones that can be tracked and measured systemically. Depth of highly relevant and organized functionality to allow creative flow and expression within consistent workflow. Allows for agile adjustment to emerging trends and opportunities all within native solution and User Interface.</p> <p>We contributed to your design vision and efficiently delivered solution from initial discovery to go live in a professional manner resulting in excellent ROI. Our deep industry knowledge allows you to consider fresh ways to look at your business. The advanced deployment methodology &amp; architecture allows rapid speed to value even in complex global environments. Highly flexible and configurable deployment design allows us to rapidly address the unique challenges of your business.</p> <p>A Variety of professional configuration and delivery strategies to fit any size business. Excellent models to support even the most resource challenged businesses. Our consultative methods and approaches allows for fast efficient start up and timely improvement as needed. Advanced analytics allow for immediate improvement of daily decisions and quick realization of investment return.</p>

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www.gerbertechnology.com

<b>New customers in the financial year 2012/13</b>	Adorn Fashions, Aeropostale, Perform Group, Todd & Duncan, Life Is Good, J Jill, Gloria Jeans, J.J. Mills, Bosco Sport Italia, ICICLE, B&H, Pendleton Woollen Mills	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$11-50 million	
<b>R&amp;D investment in the same period.</b>	\$11-50 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>With Gerber's rich history of providing innovative solutions for design development and production of apparel products we are uniquely qualified to bridge the gap between the creative process of product design and development and the business process of product delivery and profit generation. We seek to accomplish this with innovative solutions that excel in usability, visibility, mobility, flexibility and scalability. And we back it up with an unprecedented team of globally deployed industry experts.</p> <p>Gerber Technology unique qualifications:</p> <ol style="list-style-type: none"> <li>1. 40+ years of innovation in apparel design and manufacturing technology</li> <li>2. Unprecedented global customer base ensures best practice enablement</li> <li>3. Deep industry expertise deployed on customer sites</li> <li>4. Global award winning PLM solution with proven successes</li> <li>5. Solutions designed for the retail, footwear, and apparel industry, by people from the industry</li> </ol>	<ol style="list-style-type: none"> <li>6. Intuitive user experience fosters proven rapid adoption, including by design</li> <li>7. Flexible, scalable and extensible platform that grows with your needs</li> <li>8. Unmatched global support for your organization and your partners</li> <li>9. Customer engagement in product development ensures long term value</li> <li>10. Financial stability for a long term partnership</li> </ol> <p>The brands and retailers we are working with have retained their existing solutions and are successfully implementing our collaborative platform to maximize the investments by using the information to make timely, fact-based decisions with input from vendors and suppliers. This gives the retailer the ability to effectively manage the supply stream by weighing the options when making choices that will have a better outcome.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>Better ability to engage, manage and track supply chain partners.</p> <p>Out of the box functionality that rapidly meets the vast majority of requirements, enabling swift value realization.</p>	<p>Mobility that allows you to design, develop, negotiate and track from anywhere you need to be.</p>

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www.human-solutions.com

<b>New customers in the financial year 2012/13</b>	Terrathree/Adidas Sailing, Walbusch, Laurel, Texport, Benvenuto, Happy Size Versand	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$1-5 million	
<b>R&amp;D investment in the same period.</b>	\$1-5 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>The companies of the Human Solutions Group offer technologies which make development and production more efficient and at the same time provide key size &amp; fit data for your target groups, seamlessly integrated into your processes. And we take the optimal path in every sector.</p>	<p>A universal technology landscape for fashion provides support from development to delivery, giving you all the available dimensions and tools for optimizing size &amp; fit.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>Customer and market-driven products are the goal and the route taken to achieve that goal must be constantly shortened, making processes increasingly faster and more cost-efficient. In the intensive development world of the Fashion industry, this can only be achieved through the right product and the correct size &amp; fit information.</p>	<p>3D Software for the whole process from the first idea to the point of sale without any interface best in the cloud or as SaaS.</p>

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www.indigo8-solutions.com

<b>New customers in the financial year 2012/13</b>	We Are Handsome, Nookie, Nevenka, Lisa Maree, Sally Phillips, Vanguard Fashion, Luxe Industries, Kloke, TCF Sourcing, Australian Fashion Labels, Rembrandt Ties, Kowtow Clothing, Euphoria Design, Kahlo, Viktoria & Woods, Alfie Apparel, SpencerLacy, Mission Brown, Elsom, Three of Something, The Coat Man, Valerie Travers, Love Your Wardrobe	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$6-10 million	
<b>R&amp;D investment in the same period.</b>	\$1-5 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Clearstream is truly web-based providing companies with the freedom and flexibility to grow easily in uncertain markets. Our system runs native on both Mac and PC . The systems foundations are based in the Bill of Materials enabling greater detailed style development and Sample management that relates specifically to the Clothing and Manufacturing industry.</p> <p>Clearstream provides companies with a modern solution to manage their entire supply chain with minimal financial outlay. Ours is a fully Hosted/ leased system providing small companies with an affordable solutions that will scale and grow with you.</p>	<p>At Indigo8-Solutions we also build modern fully integrated Websites / e-boutiques. Our websites are rich in functionality including content delivery network (CDN) ensuring great speed all over the world, Pre-order functionality and full social media integration. Most importantly our sites ensure that you will never sell an item that you do not have in your warehouse through our stock integration. We also provide 2 click invoice generation along with many other features that ensure success in the competitive market of internet sales.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>At Indigo8-Solutions we feel that the most important thing to ensure fashion and clothing companies are future proof and competitive in this changing market is the flexibility provided by modern web-based production systems.</p> <p>We are constantly amazed by the fact that some companies are still investing in older systems that are confined by the four walls of their office and expecting to be competitive in a global marketplace. Whether you like it or not internet sales are having a huge impact upon retail high streets all over the world, so we think the best way for fashion companies to make up for falling wholesale orders is to get on board the most affordable retail store in town - the internet.</p>	<p>Along with good SEO and a commitment to a strong social network, a professional, fast and modern website is the key to success in this market. The great thing about our sites apart from a level of system integration that few companies can match, is that we build them from the ground up. These are not sites that are pieced together from existing modules. Our customers can come to use with as little as an idea or as much as a full design spec and we work with them to build truly unique representations of their brand.</p>

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www.infor.com

<b>New customers in the financial year 2012/13</b>	Jiangsu Bicaway Dress Co., Ltd, Change of Scandinavia, Just Brands B.V, IC Companys A/S, GSUS Wholesale & Design BV, Van Gils Fashion B.V	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$1-5 million	
<b>R&amp;D investment in the same period.</b>	\$6-10 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Infor has, in her development plans, planned for a new application that combines existing solutions (Infor Assortment and replenishment planner and PLM functionality) into one new application.</p> <p>As consumers and 'fast fashion' are intensifying the pressure to cut time-to-consumer the solution is focused on lean and mean. We plan to support collaborative, processes from design all the way</p>	<p>through to production, supported by merchandise planning including; budgeting, collection and line planning processes, tightly linked to product development and assortment and store planning for wholesale, retail or mixed environments. The application will enable customers to innovate faster, with more accuracy and with greater input from your internal and external partners.*</p> <p>*product details are subject to change.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>The fashion industry has always been fueled by change, and now and in the future where trends are short-lived and consumers are fickle, apparel organizations have two choices: keep up with consumer demands or move out of the way. Having an industry leading PLM solution can help.</p> <p>Inexpensive prices, combined with the omni-channel assault, plus social networking and you have now put the power to dictate the market into the hands of the consumer. In order to survive, businesses must react instantly to fashion shifts, stop looking for trends and start listening for buzz. They need to shift attention from "time to market" to "time to consumer," focusing on how to go from design, to production, to getting the product in the consumer's closet as quickly as possible.</p> <p>The key to this success is achieving the right stock mix to meet demand, which can only be done by listening to customers and sharing information</p>	<p>across the value chain. Starting with the initial design of a garment, customer feedback should be a primary consideration to increase the odds that a product will appeal to consumers. To help them apparel companies can set up online communities where customers can interact and share desires regarding the prints, colours and even fit. By using the right CRM technology, this data can be analysed and shared with the design team in real-time to provide direction.</p> <p>Mind, even this cannot guarantee success because today's consumers want to develop their own unique style, and thanks to fast-fashion powerhouses, they're able to constantly update their core wardrobes without breaking the bank. What's popular one week may not be popular the next, and the only way for retailers to keep up is by constantly communicating with consumers and sharing the information across the value chain.</p>

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www.insys.be

<b>New customers in the financial year 2012/13</b>	RiverWoods, Jon Adam Fashion Group, R95, Ready To Fish, Melvin, An additional 3 customers who are not subject to public disclosure.	
<b>Revenue derived for apparel PLM sales in the same period.</b>	Private company or no financial information provided	
<b>R&amp;D investment in the same period.</b>	Private company or no financial information provided	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<ul style="list-style-type: none"> <li>Fully configurable up to field level at runtime</li> <li>Integration with 2D and 3D CAD systems</li> <li>Full history of changes on every field</li> <li>Integrated sewing plan</li> <li>Integrated viewer for patterns</li> <li>Workflow input from smartphones or tablets</li> </ul>	<ul style="list-style-type: none"> <li>Rich Client with possibility to open multiple windows at the same time</li> <li>Cloud version optimized to work over wide area networks</li> <li>Datacaching by application server</li> <li>Webservices for integration with other systems</li> <li>Integrated Reporting and Planning Tool</li> </ul>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>Further integration with different suppliers and systems will avoid double data entry and will speed up the time to market.</p> <p>Changes of information in the PDM/PLM system will automatically trigger changes in production and retail process.</p>	

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www.koppermann.com

<b>New customers in the financial year 2012/13</b>	Victorinox, Betty Barclay, Bonita, Peek & Cloppenburg, Monari, Southwick, Sommermann	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$1-5 million	
<b>R&amp;D investment in the same period.</b>	\$1-5 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Koppermann's PDM/PLM Solution TEX-DEFINE is tailored according to the needs and challenges of the ever-changing fashion and apparel industry; industry leaders choose Tex-Define for various reasons:</p> <ul style="list-style-type: none"> <li>• Reach and integrability: Ability to unleash unparalleled synergies and to add value along the entire value chain;</li> <li>• Excellence in product development: Extended PLM reaching from a precise and effective collection planning to the presentation and management of products in the stores;</li> <li>• Smart Design: A module feeding the data arising during the design process directly into the system;</li> <li>• Effective monitoring tools: E.g. a dashboard giving an immediate overview of the collection development status, informing about criticalities and possible delays and providing user-specific information about the outstanding tasks;</li> </ul>	<ul style="list-style-type: none"> <li>• Strong analytical and reporting tools;</li> <li>• Communication tool: Tracking and management of style-relevant communication facilitating the cooperation with suppliers;</li> <li>• Mobile solutions: Data and image input from everywhere directly into the system;</li> <li>• Industry experts: Project-managers and teams with many years of experience and highly knowledgeable of the industry best practices;</li> <li>• Agile project management: Streamlined implementation and fast and effective results</li> <li>• Solution scalability: Guarantees a continuous adaptation of the system according to the evolution of the company's processes;</li> <li>• Do-it-yourself: Flexible and intuitive solution allowing customers to perform adaptations autonomously and without any programming.</li> </ul>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>Now, companies are coping more than ever with the challenges of a tough competitive landscape laid out across several channels. This dynamic omni-channel presence and competition call for a strategic, effective and centralized data-administration, for solutions empowering integration and the synergetic management, usage and transfer of information. The strategic handling of big data becomes a source of competitive advantage. Collaboration tools are becoming more important than ever and are empowering the entire business. Also, the new market dynamics raise the need for a more accurate and focused collection planning so as to meet customer market demand better and more precisely.</p>	<p>The constant renewal of the assortment displayed on the POS becomes a must for traffic generation, a challenge to be tackled by an increased number of delivery dates, and the provision of intermediate and demand-oriented collections. The remarkable increase in the collection development pace needs to be supported systemically, among others by providing a solution guaranteeing streamlined processes and minimization of time and effort. The provision of solutions enabling a tighter supplier control and code of conduct compliance will also massively increase in importance. All these solutions are already integrated in Koppermann's PLM system Tex-Define.</p>

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www.lectra.com

<b>New customers in the financial year 2012/13</b>	DBA Group, Baroque, Façonnable, TGM, Zhejiang Nali Apparel * *Lectra's PLM solution is also in use at NC State University.	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$1-5 million	
<b>R&amp;D investment in the same period.</b>	\$6-10 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Lectra Fashion PLM is just that: a PLM for fashion. We were born in the fashion industry and have evolved alongside it, so we know how important design and development are to creating a successful product.</p> <p>We have continuously invested in our fashion platform to stay innovative and offer new technologies like 3D prototyping that respond to real design needs and provide solutions to the</p>	<p>challenges of speed and cost that preoccupy each and every one of our customers. We also understand that technology is only one part of the equation, which is why we have specialists around the world to teach and support fashion best practices.</p> <p>We cover all aspects of fashion and apparel from design to production for all sorts of fashion companies, from brands to retail to manufacturing.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>Fashion companies continue to face the challenge of attracting and retaining consumer interest. Increasing the number of drops per season, delivering garments that fit and continuously offering compelling designs are now important to any successful brand or retail strategy. Solutions for meeting these challenges have become more powerful and further reaching.</p> <p>The 3D revolution is sweeping the fashion industry.</p> <p>With 3D product development, companies better master design and fit while reducing the number of physical prototypes they produce. The result is earlier decision making, faster time to market and reduced development costs--and better designs.</p>	<p>When design and development teams can visualize concepts digitally from the conceptualization phase, before any physical samples, fabrics or garments are developed, the opportunities for collaboration and teamwork increase. 3D visualization helps bridge fabric design, technical design, patternmaking and merchandising in order to merge design and style development. Concepts can be shared and decisions made faster than when using a classic process, even within a traditional PLM.</p> <p>Incorporating 3D technology into PLM opens up powerful new possibilities for communicating information across an organization. This is an important trend for the fashion industry and one that will change the way fashion companies and their suppliers work together.</p>

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www.ngcsoftware.com

<b>New customers in the financial year 2012/13</b>	Dolce Vita, Obermeyer, FAM Brands, Lunada Bay, Jay Franco, Revise Clothing, Mann Bros., Grupo Karim, Cary Francis Group, Excelled Sheepskin & Leather Coat Corporation, Alberto Makali, TIBI, Fashion Avenue Sweater Knits, Legendary Whitetails, Eric Jayits, Nicole Miller, and six others not subject to public disclosure.	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$11-50 million	
<b>R&amp;D investment in the same period.</b>	\$6-10 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>No PLM provider can match NGC's extensive experience in the fashion industry. From the leadership team to our professionals in product development, consulting and implementation, NGC's key personnel all have many years of experience in the fashion, retail and consumer goods industries, which gives us a deep understanding of the challenges our customers face and the functionality that's required for our PLM software.</p> <p>As a result, NGC's PLM solution reflect our 30+ years of fashion industry experience. A key differentiator is that NGC's PLM is available with "expanded supply chain integration," allowing</p>	<p>our PLM solution to provide the most advanced degree of supply chain integration in the fashion PLM industry. NGC's PLM can be fully and seamlessly integrated with Supply Chain Management and Global Sourcing, providing a single, collaborative platform that standardizes all processes, from product concept to delivery of the finished goods.</p> <p>NGC's PLM delivers out-of-the box functionality based on industry best practices, providing a real-world solution that helps our customers optimize lead times, drive down costs, maximize profit opportunities, and respond quickly to fast-changing consumer preferences.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>One of the most important trends is an increased desire to integrate supply chain management and ERP functionality into the PLM footprint, so that PLM can also encompass sourcing, production tracking, procurement, supply chain execution, logistics, distribution, purchasing and other key areas. As Apparel Magazine's 2013 PLM study noted, "the next wave of PLM excellence will be supported by work" in areas that include "direct materials sourcing and supplier collaboration."</p> <p>Mobility is another very important trend, and the latest version of NGC's PLM software fully supports mobility and can be used with any mobile phone or tablet. BI/analytics dashboards</p>	<p>are increasingly a "must-have" for PLM solutions as well, with the ability for users to have at-a-glance, real-time insight into any area of design or production.</p> <p>Finally, product safety, social compliance and sustainability underscore the need for companies to have deep insight into their vendors. PLM software should be able to help companies closely monitor and manage global sourcing vendors and provide critical information such as factory safety records, along with vendor profiles that include each supplier's current compliance audits, performance and quality history.</p>

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www.ptc.com

<b>New customers in the financial year 2012/13</b>	Brooks Brothers Group Inc, Cabela's, 10 additional customers not subject to public disclosure	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$11-50 million	
<b>R&amp;D investment in the same period.</b>	Private company or no financial information provided	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	PTC's Retail Solution, PTC Windchill FlexPLM, collaborately plans, designs, develops and sources products. PTC Retail solution combines industry specific best practices for Retail, Footwear and Apparel to its comprehensive capabilities for merchandising, design, development, sourcing,	quality and supply chain and aligns these key cross functional processes to deliver on trend, on time and on cost value to our customers. PTC is a solid and stable long term partner and has the most experienced industry team in the market, and continues to provide innovative solutions.
<b>What do you see as the two most important emerging trends for the coming year?</b>	Within the industry and our customer base, we continue to see trends such as Supply Chain Agility, Mobile, omni channel, time to market, reduction in cost of overall products and continued emphasis on quality and compliance. Other trends such as voice of the customer (big data), Virtual sampling and predictive analytics	are also topics of interest within the industry and our customer base. Consumers will continue to use technology to shop, whether its mobile, texting company websites, or voting for products on line, Retailers will have to be prepared to incorporate the consumer opinions fast and effectively to ensure bottom line sales.

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www.ronlynn.com

<b>New customers in the financial year 2012/13</b>	Jason Wu, Charlotte Olympia, John Varvatos, THE ROW, Todd Snyder	
<b>Revenue derived for apparel PLM sales in the same period.</b>	Private company or no financial information provided	
<b>R&amp;D investment in the same period.</b>	Private company or no financial information provided	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	This company declined to take part in the WhichPLM Annual Review	
<b>What do you see as the two most important emerging trends for the coming year?</b>	This company declined to take part in the WhichPLM Annual Review	

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www.timereaction.com

<b>New customers in the financial year 2012/13</b>	No customers whose identities are the subject of public disclosure.	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$1-5 million	
<b>R&amp;D investment in the same period.</b>	\$1-5 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Timereaction is a social business platform that allows team members, customers and suppliers to communicate, collaborate and manage business processes in real time regardless of geographic location from development of products or projects through to production and delivery.</p> <p>The globalization of the product life cycle has resulted in a supply chain that spans across continents and time zones involving many diverse and complex client, supplier, factories, distributor, and agent relationships. Important information is often inefficiently communicated between key players by using a limited toolbox of email and spreadsheets.</p>	<p>Timereaction simplifies work flow management critical in the movement and tracking of products from development to delivery. Timereaction improves communication across the value chain, reducing email and attachment dependency. Furthermore, this solution fills a significant and unique gap that enhances by adding a social layer and integrate with current business operations including Customer Relationship Management (CRM), Enterprise Resource Planning (ERP), Business Process management (BPM), Supply Chain Management (SCM), Product Lifecycle Management (PLM) and Accounting.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>While customers are the primary focus of many companies, more are starting to incorporate social approaches into the day-to-day activities of their workforces. As organizations either expand globally or participate in global supply chains, information and insights become scattered around the world. Such knowledge as how to solve problems, handle exceptions to normal processes and address local market conditions often resides in widely separated, often unconnected repositories. A critical trend</p>	<p>identified by those firms is the application over the next two years of social approaches beyond organizational boundaries. They are looking to improve coordination with customers, vendors and partners, Using social approaches to improve how work gets accomplished increasing the visibility and transparency of knowledge, finding and building expertise, collaborating outside organizational boundaries – is clearly taking root in many companies.</p>

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www.tradestonesoftware.com

<b>New customers in the financial year 2012/13</b>	Urban Outfitters, Kohl's, New York & Company, Carhartt, MGF Sourcing, Daymon Worldwide, Kaufland, American Eagle Outfitters, The GAP including Banana Republic, Old Navy and Athleta.	
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$11-50 million	
<b>R&amp;D investment in the same period.</b>	\$11-50 million	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>Our Merchandise Lifecycle Management suite consists of the following: PLM, Collaborative Sourcing, Order Management, Global Trade Management and Supplier Community Management. We also have solutions for BI, Quality, Trading Companies and more.</p> <p>TradeStone is the only company covering the retail "shopping" and "buying" process. Retailers "shop" – for inspirations, ideas, and products. Much of this information is disconnected – it lives on individual laptops, smartphones, and paper. TradeStone brings the process into today's digital world through our virtual marketplace – Bamboo Rose – where designers, buyers, and suppliers collaborate on ideas and products. Retailers can find and propose ideas, get feedback, and refine their assortment – then send that information to the "buying" platform – TradeStone's Merchandise Lifecycle Management suite. Our 'buying' capabilities span from product design through delivery covering development, sourcing, ordering, and trade management. Beyond the scope of our solution, we see three key differentiators.</p>	<ol style="list-style-type: none"> <li>1. Our solution was built exclusively for Retailers and Brands.</li> <li>2. Our solution is pre-configured with Industry Models which capture workflow and content aligned around both product category and business process. This approach has helped reduce deployment time to as little as 100 days as well as increased adoption to over 50,000 global users.</li> <li>3. Our solution is built around internal and external collaboration – making it easy to have external partners such as agents, suppliers, and testing companies on the same platform as well as to integrate to existing legacy systems such as ERP.</li> </ol> <p>We have been recognized by leading analysts and press as the most innovative platform on the market with the widest footprint. TradeStone helps remove weeks from the concept to delivery time and helps drive continued differentiation of the brand.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>We see three major trends impacting our industry:</p> <ul style="list-style-type: none"> <li>• Omni-Channel</li> <li>• Analytics</li> <li>• Mobile</li> </ul> <p>Many retailers and brands are expanding channels to drive growth – e-commerce, international expansion, and franchises. As a result, product development and sourcing has become increasingly more complex – from design variations by market to sourcing constraints to complex import/export regulations. Often the result is increased headcount and more spreadsheets. It's difficult to support the Omni-Channel Consumer without an Omni-Channel Supply Chain.</p> <p>Analytics are driving further business precision. Product development and sourcing has yet to be tapped as the data often lives in disparate systems and spreadsheets, and can be challenging to extract.</p>	<p>Mobile is changing the way people work and their expectations. The gap between what technology employees use at home and what they use at work continues to widen – impacting both recruiting and productivity. Using a green screen or spreadsheet at work isn't as appealing when compared to using an iPad at home.</p> <p>At TradeStone, we believe we are uniquely positioned to capitalize on these trends. Our solution was designed to consider the entire design to delivery process in a multi-channel environment – many of our customers import and exports to dozens of markets. Our solution breadth and open architecture allows for comprehensive data analytics across the product lifecycle as well as easy data extraction to support both our pre-packaged analytics, or export to other systems. Finally, we continue to put the "fun" back into retailing by leveraging mobile technology to support the user experience.</p>

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www.txtgroup.com

<b>New customers in the financial year 2012/13</b>	Christian Dior, Delsey, Kenzo, Loewe, WP Lavori in Corso, Prenatal, Pzero, Tod's	
<b>Revenue derived for apparel PLM sales in the same period.</b>	Private company or no financial information provided	
<b>R&amp;D investment in the same period.</b>	Private company or no financial information provided	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>TXT's PLM is end-to-end. Its unique value sits in the ability to extend core PLM capabilities such as Design, Collection Development, Costing and Calendar Management not only to Sourcing and Quality Assurance but seamlessly to Merchandise and Assortment Planning. All functions from Merchandisers to Designers, Product Managers, Buyers and Suppliers work towards the same perception of the line, products, materials, calendars, business and strategic goals right from the earliest stages. This results in more balanced collections consistent with the company business and strategic targets, minimized reworking, optimized quality, faster concept to cash times.</p> <p>The flexibility of the solution (multi-product and multicategory including apparel, shoes, leather and jewellery) as well as its scalability mean TXT's PLM is able to grow with the business and support</p>	<p>customers as they extend their business-model to new lines, geographies and channels.</p> <p>Strong commitment to innovation, including the launch of TXTMobile in 2013; an offer which is differentiated in the marketplace as functionalities available on the move extend from the "classical" inspiration and storyboarding phases, to key retail processes such as buying and in-store assortment.</p> <p>20 years experience in the sector and a strong project management and delivery team of Fashion and retail experts: business process expertise and product know-how, precise project sizing and on-time delivery resulting in low TCO.</p> <p>A proven track record of over 150 PLM customers with longstanding partnerships with TXT; many of them are now in their 3rd generation of TXT's PLM.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>The convergence of core PLM with Integrated Retail Planning: with many manufacturers embracing retail and many retailers launching their private labels, relying on one solution to cover the whole product lifecycle becomes ever more strategic. Very often business objectives are not communicated correctly to the design and product team. Reconciliation is done too late in the process implying reworking, sampling proliferation and ultimately high collection costs. Planning and Development integrated means design, development, sourcing benefit right from the beginning from a real tangible insight as to the company's business and strategic direction.</p> <p>Product Portfolio Management within PLM. Companies increasingly look at PPM not just in financial terms (understanding what most contributes to marginality): they see strong value in the ability to analyse best sellers by geographies,</p>	<p>by product attributes or the most popular price points, and to feed the information back into creativity and development.</p> <p>The frontiers between SRM and PLM are blurring. Essential to fashion companies is having visibility on quality, progress, as well as intercepting delays to gain reactivity from the supply network; advanced supplier collaboration is seen increasingly as a key PLM initiative.</p> <p>The great potential of mobile and social. Interest is in supporting business mobility at 360 degrees - share concepts through mobile, but also negotiate with suppliers, collect orders, manage your assortment. In regard to 'social', strong opportunities come from product testing but also from the ability to understand customers better, sense and translate information coming from communities for new product introduction, assortment and portfolio decisions.</p>

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www.visual-2000.com

<b>New customers in the financial year 2012/13</b>	<p><b>These customers adopted the company's Visual PLM.net solution:</b> Aydinli Group, Charles Parson, Fine Fair Exports India PVT Ltd., Liquid Knits, Jelli Fish Kids Inc., Aquarius Ltd., J. McLaughlin</p> <p><b>These customers adopted the company's end-to-end ("E2E") solution, incorporating aspects of PLM and ERP:</b> BLK DNM Group, Revolution Dancewear, Cydney Mar Inc., Ring of Fire, PTS America Inc., Dance Direct, Motionwear, Renwill, LEF Industries, PGI, JA Cosmetics US Inc., Mode Vie, Isabi Fashion Limited, Headrush Brand, Garmatex Technologies, SlavinRaphael, Vision Eleven Apparel Management, DSA Apparel Inc., Vin Rouge, Blankets and Beyond, Aquarius Limited, Gorski Group Limited, Fullum and Holt.</p>	
<b>Revenue derived for apparel PLM sales in the same period.</b>	Private company or no financial information provided	
<b>R&amp;D investment in the same period.</b>	Private company or no financial information provided	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>In contrast to generic, one size fits all systems that focus mostly on highly structured industries like transportation and electronics, Visual 2000 software solutions are dedicated to the unique interests and needs of apparel, footwear, accessories and other fashion-related companies. By tailoring our software to meet specific client requirements and individual styles of operation, our unique and intuitive approach removes risk and uncertainty for our customers.</p> <p>Visual PLM.net is designed to manage the complexities of a fast-changing and highly competitive fashion industry by delivering the highest level of configurable, out-of-the-box design, merchandising, development, sourcing, and other capabilities available in the fashion PLM market. In addition to providing a rock solid and continuously advancing platform for our solutions, our commitment to leveraging the latest Microsoft® technologies provides</p>	<p>clients with a comfortable and familiar work experience that empowers them to quickly become more proficient and productive than ever before. This same platform also minimizes the time and human resources required for implementation, training, and system maintenance.</p> <p>In addition to our fashion-proven software, Visual 2000 clients have the support of a complete team of technology partners with in-depth industry experience and understanding. As a global leader in PLM, ERP, and other business-critical software solutions for fashion, Visual 2000 has established worldwide operations to align with our clients' needs.</p> <p>These and other important factors help Visual 2000 customers enjoy the lowest total cost of ownership, increase visibility, and see their business in a new light. That is the Visual difference.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>To succeed in today's fast-paced and highly competitive business environment, fashion retailers and brands must have transparency and control over every stage of the concept-to-consumer lifecycle. With little room for errors or delays, the most successful companies are leveraging the latest information technology to speed new products to market, manage global sourcing and supply chain operations, closely manage inventories and generate sales.</p> <p>PLM technology enables companies and their business partners to more effectively manage and collaborate around all product information and front-end processes; including images and colors, raw materials and components, merchandise and line plans, size and technical specifications, sampling and costing, time and action calendars, and more. By making product information and workflow tracking readily accessible to internal teams and supply chain partners, PLM can enhance collaboration,</p>	<p>increase visibility, reduce product costs, and streamline the design, product development, and sourcing processes. When fully integrated with PLM, Sourcing and Supply Chain Management solutions help companies break down the barriers of time and language to streamline production, delivery, and other critical operations. Integrating business partners into these systems empowers them to view and print purchase orders, enter container loading and in-transit data, and manage all the information they need to produce and deliver accurately and on-time.</p> <p>Integrated ERP systems can provide the tools needed to manage the complete order-to-cash process and empower teams to manage orders and financials, source raw materials and finished goods, plan and execute production, control inventories and better serve multi-channel customers with on-time and accurate deliveries.</p>

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www.walter-partner.com

<b>New customers in the financial year 2012/13</b>	Hess Natur-Textilien GmbH, FHB Original GmbH	
<b>Revenue derived for apparel PLM sales in the same period.</b>	Private company or no financial information provided	
<b>R&amp;D investment in the same period.</b>	Private company or no financial information provided	
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>With focus on RFA W+P Solutions can show 30 years of experience in the fashion business with an average of 15+ years of industry experience with regard to our employees. Our philosophy is to cover the whole range of process - from sheep to shop, end to end solutions on one platform into which we have totally integrated PDM/PLM.</p>	<p>With this we are harmonizing these important processes.</p> <p>We are offering a standardised system with a clear release schedule, rather than relying on customisations.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>From our perspective we see two things growing back: the retail market, and ERP. With verticalisation, we'll see more companies using PLM alongside ERP and retail solutions.</p> <p>Obviously it will be preferable to have all of those solutions operating one common platform. Therefore we can see more and more and much larger businesses talking about fully integrated solutions of every kind.</p>	<p>The integration of the entire value-chain (demand and supply chain) with transparent information flows towards all employees, customers manufacturers and suppliers, to cover everything from product design and development to product catalogues, all in one place, will get more and more important.</p>

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www.wfxondemand.com

<b>New customers in the financial year 2012/13</b>	Kokatat, Rapha, DownEast Basics, Dallas Cowboys Merchandising, National Wholesale, Basil, De Evenaar, Kinta, Beximco, Darling, Complete Clothing, Trendyol, Iron Fist Clothing, Urban Expressions, Amicale, Faviana, Daniel Cremieux, Kaue Plus Size, Asmara, Xceed Sport, BioTippo
<b>Revenue derived for apparel PLM sales in the same period.</b>	\$6-10 million
<b>R&amp;D investment in the same period.</b>	\$1-5 million
<b>What differentiates your company from other PLM suppliers in the retail, footwear and apparel market?</b>	<p>WFX provides the only true Cloud-based PLM solution for Fashion. WFX Cloud PLM fits into various different business processes without customization and configuration is simple. Being Cloud-based makes it a great option for even SMEs who are strapped for time and resources and can even choose to implement the solution with a proven on-line training program. Companies can start with a smaller number of users, prove its success and seamlessly grow as their needs expand. It is a proven alternative and far easier to implement than traditional PLM systems that require complex configuration, extensive customization, hardware and months in implementation time.</p>
<b>What do you see as the two most important emerging trends for the coming year?</b>	<p>The most notable trend is the proliferation of Cloud technologies and convergence with mobile devices. Companies Big and Small prefer to use Cloud-based services over others as the Cloud has become an integral part of people's personal computing behaviour and now is spreading to all areas of the enterprise as well. Users want to be able to use their tablets and other devices to access work related data and increasingly demand easy apps and methods of access via their mobile devices.</p>

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# MARKET SUMMARY 2013

**As we might expect, the increased customer confidence that has come to characterise the marketplace in 2012/13 has been reflected in increased sales. This year's market leader and a number of other runners-up have exceeded the pure quantity of sales of the 2011/12 winner, and they are accompanied by a growing number of other vendors who have realised slightly reduced but still extremely respectable quantities of new deals in the last financial year.**

At an overall level, that confidence in the results of PLM (as demonstrated in our customer surveys for both 2011/12 and 2012/13) has equated to an increased confidence in buying decisions, with customers better able today than at any point in the past to choose the right solution for their needs. It goes without saying, then, that vendors

of all shapes and sizes are now vying for the attentions of a broader, better-equipped and more diverse range of customers than ever before.

Market research typically arrives at its conclusions through two distinct prongs of analysis: trend mapping, and direct comparison. The earlier section of this publication – “The Customers” – is intended to map broad-brush trends in PLM buying and chart this year's approach to critical mass, leaving this section to draw more concrete conclusions regarding individual sales of PLM, and the suppliers behind them.

The most obvious metric for direct comparison would be revenue gleaned from sales of PLM to companies in the retail, footwear and apparel industries. Comparing vendors like-for-like on the basis of turnover is in many ways, though, counter-productive. Firstly, the market is comprised of a mixture of public and private companies, the latter of whom are not obliged to divulge their financial performance. Secondly, it would prove impossible to obtain full license and seat details for every customer listed in these pages. Most importantly, though, a winner's podium based on pure monetary statistics would be a disingenuous thing for us to put together when we take account of our well-rehearsed mantra that the most profitable or biggest business should not automatically be considered the right choice for you. To put it simply, the fact that a supplier has made a great deal of money does not necessarily mean they deserve your money.

So, while “The Customers” section used our proprietary formula to gauge the overall size of the PLM marketplace for retail, footwear and apparel (as well as giving an indication of how this revenue is broken down into tiered bands) we chose here to approach the honouring of a 2012/13 market leader on a different and, we feel,

more broadly applicable basis.

Provided customers have some degree of confidence that their chosen supplier will continue to support and develop its solution for years to come, a far more reliable bellwether of current and future market success than simple revenue is the number and diversity of customers that have chosen to adopt a given supplier's solution – particularly since each passing year appears only to be increasing the fervency of competition in our industry, making every deal a battle hard-fought irrespective of whether it falls in Tier 1 or Tier 3.

From the quantity of customers cited in this year's supplier profiles, there are seven vendors who have each added more than ten new customers to their roster, demonstrating significant progress for Centric Software, Indigo8 Solutions, NGC, PTC, Visual 2000 International and WFX. The position of overall market leader is awarded on more than just sales quantity, however, and takes account of a number of other metrics. When we take the diversity of its customer base, the comprehensiveness of its expansion and development, and the intelligent direction of its recruitment into account, it becomes clear that of those group leaders, Centric Software emerges as the preeminent force driving the PLM industry forward this year.

**Judged on that basis, 2012/13 has one clear market leader: Centric Software.**

Launching from the wake of their success with UK retailer JD Sports, the company positioned itself intelligently, focusing on those customers it had the experience and expertise to develop into long-term partners. Initially concentrating on sportswear, Centric soon diversified into the footwear sector (signing Crocs and a number of luxury shoe companies) and, later, into the traditionally-technology-phobic luxury industries of southern Europe. A US-headquartered company, Centric has nevertheless solicited several rounds of investment to bolster their expansion into new markets and new territories, as well as the hiring of extremely knowledgeable and proven people from their competitors.

The company also leapt from the starting blocks extremely quickly with a well-rounded mobile strategy. As well as partnering with Apple to deliver seminar demonstrations and talks the world over, Centric produced a suite of mobile applications spanning the product lifecycle from trend research to sales catalogues. Crucially, it did so before anyone else. And as we saw in Karen McCandless's earlier briefing on mobile applications, supplementing PLM with these kinds of enhanced experiences has proven to be a key differentiator for Centric and other vendors this year.

**It is important to bear in mind, though, that leading the market one year does not necessarily give a supplier the luxury of resting on their laurels.**

Although last year's market leaders, PTC, remain strong in their home territory of North America and in providing comprehensive, robust solutions to the industry's biggest names, the company has encountered some stumbling blocks further afield and in the lower customer tiers. Here at WhichPLM, we know that behind the scenes PTC have undergone a year of transitional investment – uplifting from FlexPLM version 9 to version 10, using the Windchill framework – but from a market perspective this inward-looking period has left prospective customers with the perception of a comparatively high cost of ownership married to a quiet period in immediate-term innovation. From speaking to the team, however, we understand that PTC is strategically focused on extending its current customers' deployments into the extended Supply-Chain, and on bringing to market its Value-Ready deployment – a pre-configured, out-of-the-box retail offering that the company claims can be implemented in just four months.

Last year's most successful and biggest investors in product and innovation, Lectra, may have chosen not to provide figures this year, but the company has still delivered a similar brace of improvements to both the core functionality and public perception of their solutions nevertheless. Under the banner of “Lectra 3.0” the company has employed its investments in furtherance of visible and quantifiable developments: the release of the third version of its new generation PLM solution; the building of integration to its Modaris and Kaledo systems; the running of carefully-

considered trials of three-dimensional working; and the building of robust integration to the Adobe suite. As is the case with Centric Software, Lectra has also recruited several leading enterprise level software experts to bolster its already-imposing capabilities.

There are perils, though, to investing too heavily in the future. This is visible in Dassault Systèmes' focus on pure innovations like FashionLab – placing a strong emphasis on futurism at a time when customers are feeling emboldened by their newfound grasp of the essentials.

Achieving a more effective comingling of far and near-term development this year was Gerber Technology, in the guise of its newly-christened Yunique Solutions division. Developing YuniquePLM version 5, Yunique 360, integrations to their own Accumark solutions, and what WhichPLM considers to be class-leading bi-directional integration to Adobe Illustrator, Gerber has effectively maintained and engendered new interest in its PLM platform as well as leveraging the potential of customers who may already have been familiar with its other hardware of software products.

That same synergistic approach is one shared by several companies – CGS, NGC and Visual 2000 most notably – who have focused this year on expanding and implementing their true end-to-end capabilities, comprising aspects of PLM, ERP and other enterprise systems into a cohesive and beneficial whole. Visual 2000 in particular have reached a large number of customers with their “E2E” offering, which offers components and mixed processes from a range of separate solutions.

The holistic approach is one that has long served “supply chain collaboration platform” developers ecVision well, and this is a direction that has seen them develop truly class-leading social, ethical and environmental compliance functionality this year.

Also firmly in expansion, extension and consolidation mode in 2012/13 have been TXT, who acquired the Maple Lake merchandise planning solution in late 2012 and have continued to integrate

both the Maple Lake software and their own planning solution to their PLM platform.

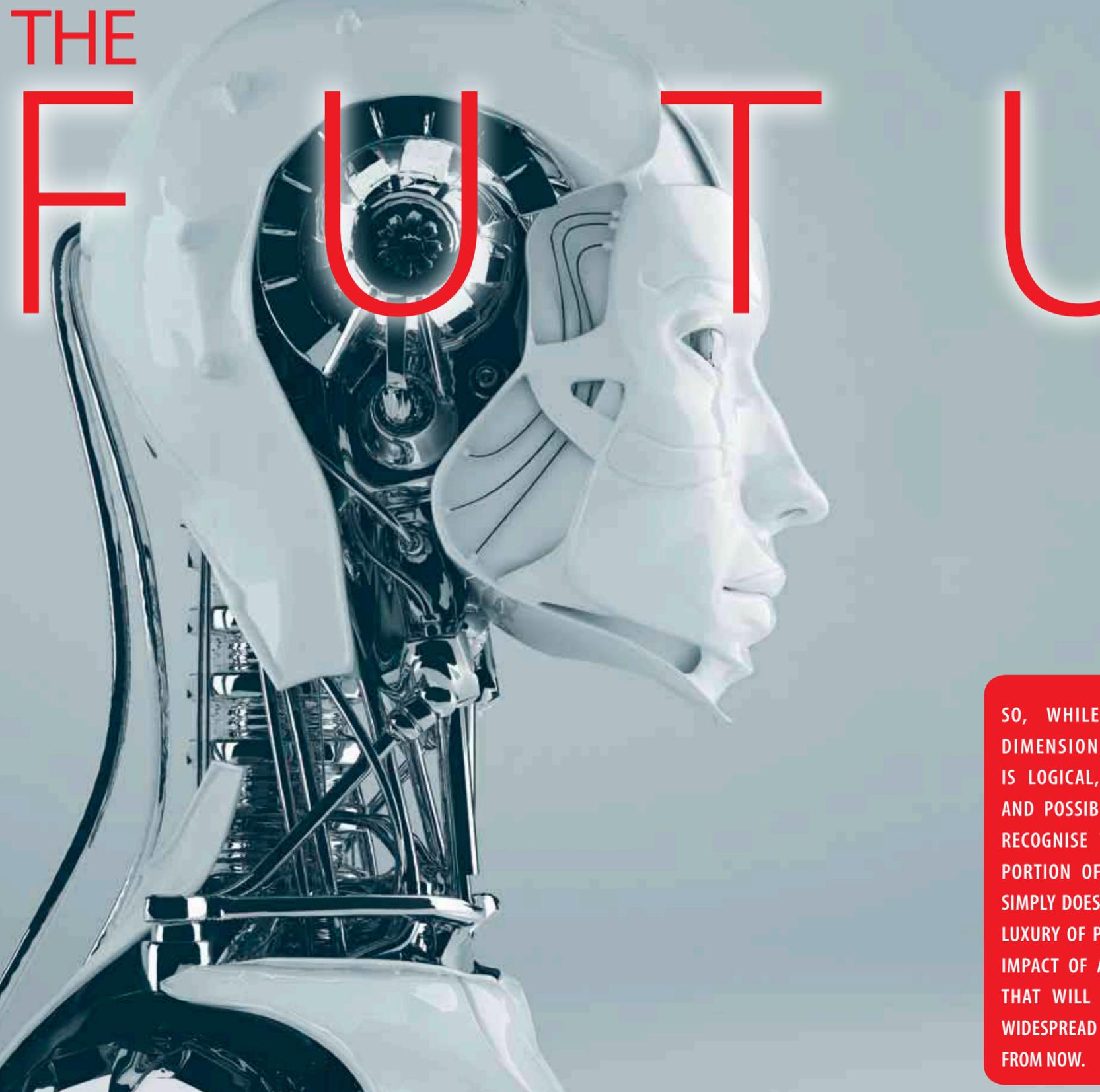
New to this year's Annual Review (but not to the market itself) is WFX, who have attracted an influx of Tier 3 organisations with their low cost, cloud-based solution. In last year's Annual Review we received no responses from hosted / SaaS solutions, whereas this year the company has been almost single-handedly responsible for the rise of cloud deployments to almost 20% of this year's survey respondents.

Although this analysis names an overall market leader and features a small host of honourable mentions, we must remember that today's PLM industry is, if anything, even more diverse than it was in 2011/12, when our Annual Review painted the picture of an already extremely broad, and ever-expanding, marketplace.

**For the customer, empowered as they are by education and experience, and buoyed by the continued strength of the market itself, this all means one thing: choice.**

Should the biggest and the boldest company emerge as the right choice for your business, our analysis certainly supports the idea that your investment would be well-chosen and relatively secure. But we must remember that each vendor who appears in our market analysis this year has played at least some small part in shaping the PLM landscape between April 2012 and April 2013. And as a result, their insights (contained within these pages and on www.whichplm.com) into the catalysts behind their recent and future developments all make equally important reading for any retailer, brand, or manufacturer seeking to empower themselves with a real understanding of PLM in all its multivariate forms.

**“SHOULD THE BIGGEST AND THE BOLDEST COMPANY EMERGE AS THE RIGHT CHOICE FOR YOUR BUSINESS, OUR ANALYSIS CERTAINLY SUPPORTS THE IDEA THAT YOUR INVESTMENT WOULD BE WELL-CHOSEN AND RELATIVELY SECURE.”**



# THE FUTURE OF PLM

**In a year where the customer's reign is undisputed, it follows that the retailers, brands and manufacturers who make up the PLM market also have a firm grip on the reins of its future. And this will be a future defined, at least in the short term, not by pipedreams, but by pragmatism and practicality. By the market's collective expectation of concrete answers to real world challenges – challenges that stem from the realities of creating clothing, footwear and accessories in today's environment, with today's technology, for tomorrow's consumers.**

In last year's Annual Review we painted an elaborate picture of garments positioned in-store according to their social media popularity, and talked at length about the potential for so-called "virtual mirrors" to reinvigorate the high street shopping experience. These were not distant dreams, since the technologies and infrastructures that might support them exist today, but it has proven exceptionally difficult in the twelve months since for businesses who are mired in the demands of getting things done in the immediate term to look sufficiently far ahead for these to seem like the viable scenarios we made them out to be.

So, while three-dimension design (one of 2013's hottest properties) is logical, desirable and possible, we must recognise that a good portion of the market simply does not have the luxury of pondering the impact of a technology that will only become widespread several years from now. These retailers, brands and manufacturers have seasonal collections to deliver next autumn and beyond, and by necessity their gaze is fixed firmly on the near-term future, on

the more grounded aspects of PLM – those that will help them meet and even exceed their immediate challenges and expectations.

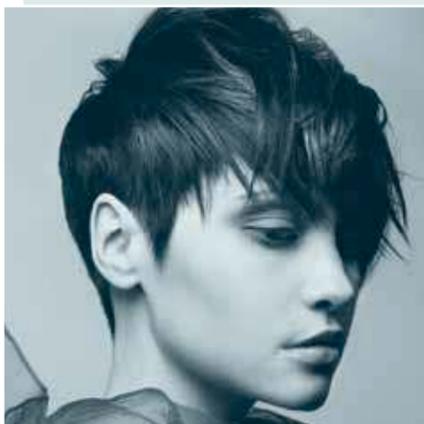
This is not to say that WhichPLM is short-sighted - we keep a telephoto lens fixed firmly on the horizon - but we recognise the importance of keeping the next twelve months as firmly focused as the ones that follow.

A stable future for PLM, then, is not built just on ephemeral inspiration, but by laying robust foundations on the bedrock of quantifiable customer need steadily, year-on-year. And only with those underpinnings in place can we begin to add strata of additional functionality and innovation – doing so with a sense of direction and clarity of purpose, acknowledging that customers want to see their futures painted in exacting, pointillist detail, not just broad strokes.

As we saw in this year's customer survey results, today's retailers, brands and manufacturers are placing a great deal of emphasis on functionality that is directly relevant to current production.

**SO, WHILE THREE-DIMENSION DESIGN IS LOGICAL, DESIRABLE AND POSSIBLE, WE MUST RECOGNISE THAT A GOOD PORTION OF THE MARKET SIMPLY DOES NOT HAVE THE LUXURY OF PONDERING THE IMPACT OF A TECHNOLOGY THAT WILL ONLY BECOME WIDESPREAD SEVERAL YEARS FROM NOW.**

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integration between it and their PLM solutions), the impact of integration will also be felt even more keenly at, and driven more forcefully from, the executive level. Several notable vendors in 2012/13 have been successful selling end-to-end solutions that incorporate facets of PLM, ERP and more, and as a result an impetus has been created for unifying these enterprise level systems to create a more complete and compelling environment.

It is here that the value of common and critical points of integration will become a differentiator, where systems that have established themselves as the perfect partners for PLM begin to be considered as such - as important integration touchstones - during both software development and implementation.

And PLM's future value will be weighed in turn by its potential to integrate into the modern product environment, and to offer a full suite of product development processes that go beyond the lip service level. Colour management capabilities of the solutions that successful weather the next wave of customer demand will be exhaustive, for example, and applicable down to the materials level, converting currently-subjective processes into objective data and potentially saving weeks' worth of time.

Likewise, tomorrow's PLM solutions will treat costing not as an afterthought, but as a fundamental component of successful product development. Customer demand for this kind of core functionality is driven by practicality, since only a holistic approach to costing - comprising accurate bills of labour and materials - can provide an indication of expected margins and profitability to any degree of certainty.

Similarly, sampling is a key part of the lifecycle of any product, but one that is often given short shrift in today's solutions in favour of processes suppliers might feel look more important or might sell better. A number of image-driven, collaborative solutions - including that launched by Yunique Solutions this year, and an equivalent offered by FastFit360 - offer to take some of the sting out of the tail of international prototyping and sampling, and having seen the value of these kinds of intuitive interpretations, tomorrow's customers are unlikely to be satisfied with anything less.

And this is to say nothing of the requirements of product development that fall outside the control of either supplier or customer. Social compliance (comprising ethical, environmental and technical facets) is no longer optional in 2012/13, and in the coming year further enforcement in the form of CPSIA, REACH and the HIGS Index, coupled with the tide of public opinion, will strengthen the mandate to do business in a way that is safe, honest, and environmentally sustainable. For tomorrow's customers, limited support for social compliance will simply be insufficient; faced with a moral and legal imperative, those customers who lack a robust compliance module will find themselves either rebuying PLM from a different vendor, or adopting and integrating a third-party solution in order to obtain the functionality they need.

Forward-thinking vendors have targeted short-term initiatives like these in a bid to win over customers for whom the absence of one or more of them has been a sticking point on their adoption of PLM. New Jersey-based ecVision in particular have pioneered a compliance solution that is currently ahead of that offered by their competitors, reflecting their understanding that in order to deliver

effective innovation, they must offer robust support for processes the near-term future will render essential.

This, then, is the modern face of innovation: creating a bulletproof infrastructure and framework to support the wilder dreams of the future. And that innovation isn't exclusive to the developers and vendors of PLM software, either. For the same reasons, we predict that the industry at large will continue to adopt other foundational developments of all shapes and sizes: technical textiles and materials incorporating electronic components into fabrics, for example, as seen in footwear and garments from Nike and other outdoor and

sports brands. And with seamless and robust materials management support, tomorrow's PLM solutions could easily manage the development, costing, sourcing and production of these pioneering products.

On the same basis, social media is used today as a one-directional channel - a method for brands to expose their products and their content to a captive audience, but not, perhaps, to its full potential. Once more of these brands begin to leverage the massive data centralisation and intelligence potential of PLM, though, the actual influx of data from customers will become a critical tool at virtually every stage of their product lifecycles.

Tomorrow's trendsetters and street style bloggers will influence the design of the latest collection from their favourite brands - the crowd-sourced data from their photography and comment threads providing designers with direct access to the collective pulse of their target demographic. And as we warned earlier, those same consumers will have the power to vote with their currency - both monetary and social cache - as a result of ethical policies; a customer who develops a garment (either out of ignorance or due to an absence of the proper tools) by cutting corners and dealing with a less scrupulous supplier will find themselves crucified amongst their biggest audience, often before the product in question can even reach the market. These potentials and pitfalls exist today in the sense that they are not infeasible, but the coming year will bring them to bear on customers and suppliers in every corner of the world.

Also technically possible today but neglected in practice is the potential for suppliers to build integrations to the entire Adobe Creative Suite, since Illustrator's sister applications, InDesign and Photoshop, occupy a similar place in the hearts of marketing departments as the drawing tool does with design teams. By extending the collaborative capabilities of PLM to allow marketing teams to use the materials and product data during the inspiration and design processes, key resources can be made available to the people who need them, helping

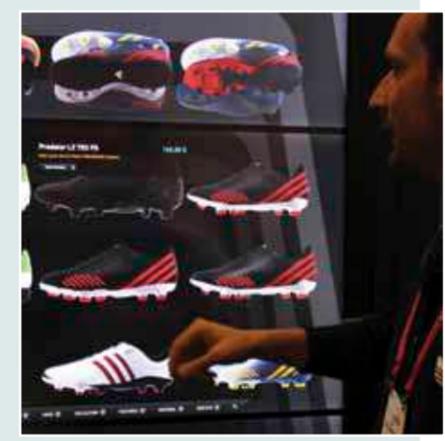
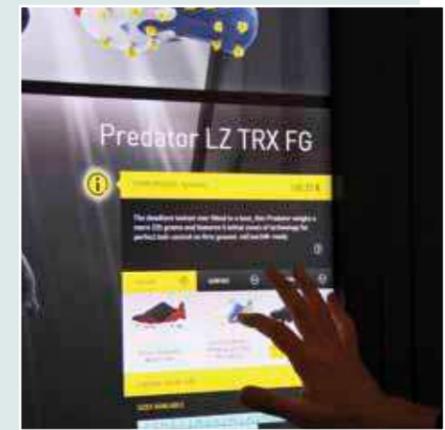
to create a new era of inclusion and integration from possibilities that exist today. This is something we saw in action just as this publication went to print, with Burberry (named as "the world's leading digital luxury brand") being given access to Apple's new flagship iPhones to capture their spring / summer 2014 runway show in digital form.

Of course, PLM vendors cannot be expected to simply respond to short-term customer need. We understand that the most forward-thinking suppliers are developing strategies today that will balance more immediate customer needs with innovations that stand every chance of reshaping the industry as we know it. Equally, though, those select few suppliers realise that they cannot shrug off the yoke of responsibility and run headlong towards the next big thing.

So the future is coming, resplendent in its glitz and glamour the further into it we gaze, with developments that are both transformative (3D design and printing) and iterative, supporting the growing clamour for access to baseline functionality. And after all, those functional foundations are the crucible in which all of the most potent innovations in our industry's short history have been forged. Without product data management, there would be no Illustrator integration; without tech packs, no visual sampling. Here at WhichPLM, we want as much as anybody else for three-dimensional working, smart materials, 3D printing and mobile applications to define the future of product development, but in order for this to happen we recognise that growing numbers of customers must be brought steadily into the digital democracy. And those customers will, not in three years or in five but starting today, focus their attentions on the essentials when they begin to shop for PLM.

To move forward, our industry must face up to some of the ghosts of the past (mis-selling and over-promising) in order to maintain the renewed sense of customer confidence that has suffused every page of this year's Annual Review. Today's customers believe in us and can become, with the right support, invested in our future. But, as a collective, we have to do right today in order to embrace the wonders of tomorrow with a clear conscience, in every sense of the phrase.

HERE AT WHICHPLM, WE WANT AS MUCH AS ANYBODY ELSE FOR THREE-DIMENSIONAL WORKING, SMART MATERIALS, 3D PRINTING AND MOBILE APPLICATIONS TO DEFINE THE FUTURE OF PRODUCT DEVELOPMENT...



At a time when deals are already won or lost on the strength of support for a particular design tool, it is obvious that customers will expect tomorrow's solutions to arrive more than ready for today's production environment: a place where a panoply of disconnected solutions is fast becoming the norm rather than the exception.

A good proportion of software integrations will always be bespoke, but the connecting of systems and environments promises to become commonplace over the next twelve months, creating a distinct advantage for those suppliers who are prepared. Beyond the design room (where Adobe Illustrator has established itself as the de facto standard, prompting a number of suppliers to build robust, bi-directional

