whichPLM

WHAT TO EXPECT FROM YOUR PLM JOURNEY (FAQs)

PLM PROJECT PACK 2021

What is PLM?

Although this has been covered at length in ‘What is PLM’ in this Project Pack, we thought it essential to include here, in our FAQs.

Product Lifecycle Management (PLM) software is a system or software platform that is first and foremost a methodology, used to support the improvement and the way that you manage a product from Concept to Delivery. It manages and integrates all the product data, processes, business systems, materials and, ultimately, people that will be operating across the extended value-chain. PLM, connected with ERP and other business systems, makes it possible to follow the lifecycle of each component and products, from Concept to Consumer and finally to a product’s disposal. PLM can be used for smarter decision making based upon real-time data feeds, highlighting problems, improving efficiencies, delivering faster product development, increasing sales at higher margins and reducing overall costs of goods sold (COGS).

How can PLM help to support a Digital Transformation strategy?

Quality master data is a basic requirement for any business that is implementing digital transformation components that are (or will be) sharing a common set of master data across the end-to-end value-chain. PLM provides a single organised version of the facts for this foundational data. Additionally, data gathered from multiple best-of-breed solutions, including manufacturing IoT (Internet of Things) devices (now being installed within factories' equipment) can be utilised to enable transparent product development by making the data available to all key stakeholders operating across the value-chain. A digital transformation strategy is much more than PLM alone - it's the connection of multiple technologies, modules, processes and sub-processes that can utilise shared data inputs and outputs that are already in use within the value-chain.

The journey to digital transformation begins with identification & digitisation of the master data used across the end-to-end value-chain and is incomplete without maximum digitalisation of all systems and processes. These include but are not limited to:

- Scanning data of bodies (to generate avatars), footwear & materials
- CAM (pattern & marker making)
- 2D & 3D CAD solutions
- VR / AR / XR (Virtual Reality / Augmented Reality / Mixed Reality)
- Material Platforms
- Colour solutions
- Digital Printing & Dyeing
- Inspection & sewing machines
- PLM (Product Lifecycle Management)
- ERP (Enterprise Resource Planning)
- CRM (Customer Relationship Management)
- E-commerce
- POS (Point of Sale)
- AI (Artificial Intelligenece)
- ML (Machine Learning)
- IoT (Internet of Things)

These are just examples of where such data can be found; the objective of any digital transformation project is to identify and share this data seamlessly

Why does my company need PLM?

Ultimately, we need the business to become more efficient and move away from the Excel and email methods of doing business; we need to utilise up-to-date smart digital technologies. In recent times and especially during the COVID-19 pandemic we've all experienced some form of shortage, be it food and general household supplies, PPE products, services, entertainment, or the inability to source or replenish products that your business may supply to its customers. To overcome these types of challenges, it makes perfect sense for any smart thinking business to invest in PLM not only because of improved efficiencies, but also because it will help your business to overcome these types of disruptions and will enable improved continuity across your supply chains.

Beyond the pandemic, todays customers and certainly the next generation customers will expect greater transparency & sustainability across the value-chain; they will expect improved quality of products, and they also want unique experiences. New generation customers are extremely impatient, have short attention spans and have more choices than ever before, coming from your competition that are ahead on the digital transformation curves, so unless you are able to move fast then you risk losing customers.

Surviving and prospering in the digital future will require your business to launch new style options, services and varieties at a much faster pace and produce them leaner. And this cannot be achieved without the use of an integrated, multifunctional, enterprise-wide PLM solution. PLM can increase product variety without increasing staff, leading to higher sales and increased gross margins. PLM can help a business to reduce the cost of products & services by efficiently utilising (people & material) resources, improving efficiency, speed and product quality.

What are the basic components of PLM?

The exact elements of a PLM system depend on each PLM vendor. However, there is a range of typical components or modules in an RFA PLM solution. These include:

- PLM Libraries (seasons, measurements, trims, components, materials, suppliers, product types, templates, critical paths, colours, etc.)
- Story & Mode Boards
- Digital Asset Management (DAM)
- NPI (New Product Introduction)
- BOM (Bill of Materials)
- BOL (Bill of Labour)
- Costing
- Sourcing
- Document & File Management
- Release or Change Management
- Access or Organisation Management
- Product Configuration & Template Management
- Critical Path & Lifecycle Management

A PLM system should also offer integration with common systems, like 2D CAD, 3D CAD, ERP and other best-of-breed business systems.

Which is the best PLM software for my business?

The answer to this question is relative. Is your business an SME that is fairly happy with using simple solutions (Adobe Illustrator, Excel, E-mail, 3D, etc.)? Then you should perhaps investigate low cost, pre-configured, best-practice multi-tenant solutions. If you're a multi-national enterprise with a very large turnover, the answer will likely be different.

The first step in attempting to answer this question is for your business to define why it feels it needs a PLM solution in the first place? Once you can answer this (i.e., what it is that you are trying to resolve) it's then time to define a list of requirements and from that step you can research the leading PLM providers on WhichPLM (and in some cases view their current Supplier Evaluation reports). You also have the option to share your requirements with an advisor of WhichPLM, who can then help you to create a short-list, after understanding more about your business strategy and objectives and assessing your current challenges. From that point we can help your business to complete an RFI that will help you to shortlist those PLM vendors that can best match your critical requirements.

What is a PLM strategy?

A PLM strategy is more than just selecting technology, it is a comprehensive understanding of the maturity of each of the modules, processes, organisational structures, product development strategies, and people that are required to make your business work. A comprehensive PLM strategy will guide you on your journey.

A PLM implementation is a unique journey with lots of learning and adjustment along the way, as each company will have different products, different cultures, is a different organisation, with different value-chain partners and working methods to manage.

Developing your PLM strategy is the first item on your project 'To Do List' and is the first step to developing your tactical path. Moving ahead without a carefully developed strategy and related project plan is likely to put you back many months; it's very easy to get lost in the sandbox of software complexities and ad-hoc developments and changes. Your strategy should consist of a high-level set of deliverables that will help your business to overcome its current challenges, then you can move onto the PLM solution selection, implementation and configuration of your chosen solution. PLM software and resources are costly, so your company must keep a careful eye on the budget and of course on milestone achievements and benefits. Every time you tick off another milestone, you should carefully record those benefits that achieve the desired financial return on your PLM project investment (ROI).

How do I know how I currently manage my product lifecycle?

It's important to map both the 'as-is' lifecycle, taking a snapshot of the current methods and time taken to get a product from concept to delivery. It's so easy to forget just how long things actually take after implementation. When getting started you should first define your seasons (quarterly, months, weeks or days) – and it's worth noting that, today, your business may be moving toward a data-driven, seasonless business. Once you have your seasonal durations (new target lifecycle time estimates) in place, then it's time to move onto your main processes and sub-process, again developing the task and estimated durations for each task. Essentially these should cover trend analytics, design, development, sampling (be it physical or virtual), new product introduction and development, costing, sourcing, production capacity forecasting, sourcing and so on.

After that you will need to map each of the processes within your PLM software and consider the handoffs (data outputs), integrations etc. There could be some overlaps with shared data and interfaces that may be shared, or in some cases replicated, but at some point you should design a process flow that brings the data back to a single source. The principle of a single source of data should be followed throughout your project and across all systems, by operating on a shared set of master data.

What is an API integration in PLM?

Technically, the API acronym stands for Application Programming Interface. At some point or another, PLM companies will have developed multiple APIs for their customers, to link their PLM solutions to common solutions that are typically found within any fashion business – thing like e-Commerce, CRM and ERP.

One of the core functionalities of PLM software is to store, manage and share common data between each solution - the likes of CAD 2D (pattern engineering & marker making), 2D creative solutions including technical and illustrative designs, 3D scanning and avatar engineering, AR/VR etc. These APIs can enable CAD tools that often share common integration standards or file formats (DXF, HPGL, AAMA, OBJ, U3M, etc.) allowing users to check-in and check-out files all sharing a common dataset during the design & development process, including version control and many other related functionalities.

These APIs allow users to search the same file data within the PLM software or within the CAD software bi-directionally and to operate seamlessly. The level of integration maturity may/will vary between best-of-breed solutions & PLM relative to the level of software design and development completed via each of the vendors.

As your PLM implementation matures, your level of integration will increase, so it's critical that as part of your early assessment of PLM vendors that you should ensure that they offer mature interface(s) to your core solutions and that they also offer a 'future safe' interface engine, so that over time you can continue to rollout and integrate your PLM solution to core supporting softwares that enable the sharing of systems and data across your value-chain partners.

What are some common software integrations found within leading PLM platforms?

PLM software can be integrated with almost all business systems, including: ERP, CRM, e-Commerce, Planning, Storyboards, Microsoft Office, Social Media (Instagram, Slack etc.), Adobe Creative Suite, 3D, Material Platforms, 2D CAD/CAM, Sourcing Platforms, Labour Costing, Machine IoT connections, 3D virtual simulation and many more.

The basic purpose of these integrations is to have a single source of data, which often originates in PLM systems and is typically found in the Tech-Pack. Most of the leading PLM vendors will offer multiple APIs, however it is very important that you should carefully test the capabilities of each of these APIs to ensure that they meet with your specific needs; some are less or more mature and this can be a very important factor in terms of the overall efficiency of the PLM platform linked to your best-of-breed solutions. It's also worth asking if the PLM vendor offers an API engine that will allow your IT team to develop future integrations on an 'as and when' required basis.

How is PLM software deployed?

Traditionally, PLM software was deployed as an on-premise client-server model and accessed by logging in using user IDs and passwords provided by the PLM system administrator.

In recent times, most PLM vendors have moved to on-cloud access where you can open PLM software in a web browser from the internet. These two methods allow businesses to develop complex developments using configurations and customisations and tend to be used by medium to larger enterprise businesses. There is also another cloud option: multi-tenant, which is a lightweight client architected solution that has been designed to offer pre-configured processes based upon best-practice methodologies, specifically developed for the Retail, Footwear and Apparel (RFA) sectors - and of course these practices are not limited to the RFA sector and are, today, used more and more by other industries and sectors.

What is the difference between PDM and PLM?

PDM was developed for the RFA sector in the late 1980s, by Microdynamics (and our CEO, Mark Harrop, was one of the founders of both PDM & laterally PLM in the late 1990s). PDM is, in its most simple of form, a data repository storing product data within a database rather than within separate files. It operates within the confines of a business and in the main communicates via emailing documents. You will still find PDM systems used today, but they are limited when compared to a modern PLM solution.

Product Lifecycle Management (PLM) develops over time as intellectual data grows and is shared across multiple best-of-breed solutions. This intellectual data is in the form of designs, drawings, Bills of Materials (BOM), Bills of Labour (BOL), measurements and make instructions (Tech-Pack), and anything that defines your product data.

PLM data is in the main non-transactional, whereas ERP systems operate on transactional data (orders, invoicing, payments) to support procurement, production, assembly, sales, finance, shipping and so on.

PLM uses real-time data and as more functionality is added automation is designed to 'push & pull' the data interchange automatically - this includes Critical Path, Workflows, and Document Management. Beyond data, PLM integrates departments, people, and processes across the extended value-chain. Whereas a PDM solution operates on statical (manual) data and its output is often limited to a basic Tech-Pack (PDF). Output is shared via third party solutions, with email being the main choice to share outputs.

Product Lifecycle Management (PLM) is a system or software that manages and integrates all the product data, processes, business systems and, ultimately, people in an extended enterprise. PDM is, today, a component of a modern PLM solution, which makes basic data management possible to automate in real-time.

Is this a good time to purchase PLM?

Given the speed at which the PLM industry for retail, footwear, and apparel has advanced in the last few years, there has never been a better time to buy a new PLM solution. Most modern PLM platforms have core functionality covered to a good degree, and there are several extremely strong solutions available on the market – all of which demonstrate broad, mature feature sets, as well as specialising in different areas. Whether your priority is a simple, easy to use OOTB (Out Of The Box) Technical Specification, or you have more complex requirements, there are no shortage of options and cost models for your business to choose from.

Is there an alternative to PLM?

If you are a fast-fashion business that primarily buys most of its merchandise from suppliers who are in turn responsible for the development of the product (block development, fitting, sampling, bill of materials, costings etc.) then perhaps you might want to consider a very light PLM. After all, detailed Bill of Material functionality is unlikely to be of much use to you. You may even find that a 2D or 3D design solution that would allow you to share basic specifications would support your needs, although this is rare (at least, at the moment). If you do go beyond pure design, into development, and source more than finished product then the answer is simple: you need PLM to be efficient and to stay competitive.

Is every PLM solution suitable for every business?

The answer is no, there is no such thing as ‘one size fits all’. PLM solutions can be complex, and they come with a multitude of different options – each with its own list of modules, main processes, sub-processes, features and functions. On average there are more than 40-50 different processes included in a typical PLM solution, each of which is likely to be of a different ‘maturity’ level when compared to the industry average – hence why WhichPLM evaluates and measures those that are open to transparency.

Can we extend PLM across our value-chain partners?

Until recently, technical specifications were typically shared between customer and supplier as a PDM Tech-Pack (PDF), via email. This process was replaced by dedicated vendor portals, introduced by PLM vendors as a way of bridging the gap between live PLM data and static email. Vendor portals essentially offered the same process but placed the Tech-Pack PDF into a central location to be downloaded and uploaded by the supplier, with some level of accountability. More recently we are seeing customers and suppliers sharing the same PLM platform with the ability to work on a single style in real-time, with no 'dead' data, along with full access and restricted security. We would strongly recommend the latter as the best-practice approach – and while it may not always be feasible to make PLM accessible to your suppliers early in the project, this extension should be considered a priority for the next phase once your PLM solution is being used to its full potential in-house.

Do we have a clear and solid business case for PLM?

If you haven't already developed a business case that is supported by an in-depth ROI (Return on Investment) analysis, then we suggest that you should avoid moving forward until you have completed one. Put as simply as possible: investing significant amounts of time and money – even with low-cost subscription PLM being a viable option today – with an uncertain return is not advisable.

Do we have the required expertise to integrate PLM to other internal software solutions?

In the vast majority of cases, a PLM implementation will include integrations to other business systems. In most cases this will mean linking PLM with ERP (Enterprise Resource Planning), but other common integrations include Merchandise Planning platforms, 2D CAD, 3D design tools and others. If we look at ERP only, then we would estimate for a SME (small to medium) business that around 20-40 days would be required to document, configure and to customise a bi-directional integration between ERP & PLM. If the PLM solution you have chosen is part of a portfolio that also includes ERP and other elements, then you may be able to reduce the cost of integrations via the vendor's own middleware integration engine.

Do we possess the internal skills to deliver a PLM project?

Your business will need to appoint a PLM project manager and user team with good project management skills – people who ideally are already experienced in selecting and implementing technology solutions. This team will then require the support of someone (a user-champion) with a great deal of experience across the business – covering both internal and supply chain processes. Together, this team should be able to deep-dive into all business processes and understand the impact that a PLM implementation will have on them. Beyond the business you should be extremely careful when choosing a vendor to ensure that they know your area of business and, like your own team, they should also have the expert resources to put onto your project from the very first day to the very last day. Often the PLM vendor A-Team is with you for the beginning of the project and then gets pulled off to other projects as new deals are signed, leaving less-experienced implementers or even third parties to deliver the later, even more critical, stages of the implementation. Both your in-house and your vendor's team should remain consistent throughout the project; if either is in doubt, your implementation could suffer.

How long will it take to implement a PLM solution?

This greatly depends on how complex your business is. Are you operating on an international level? Do you have multiple brands? Do you have a complex product range? The list of questions can go on and on. Assuming you're a medium-sized operation and you want to use a configurable, OOTB PLM solution, adhering to best practices, you will be looking at a duration of somewhere between four to six months. Note that this will be subject to the answers given to the above questions and could be reduced or go much higher – it's all relative to the complexity of each business.

I’m a footwear, knitwear or textile business – does PLM work for my business needs?

It will be important that you look for a PLM vendor that specialises in your product sector. It’s relatively easy for PLM vendors to develop a nice-looking footwear, textiles or knitwear presentation, only for the prospective customer to dig a little deeper and find that they have no real product expertise or customer references. There are several specialised vendors that support footwear, knitwear or textile products, so make sure that you look at every vendor carefully and assess their credentials when it comes to supporting your unique business model.

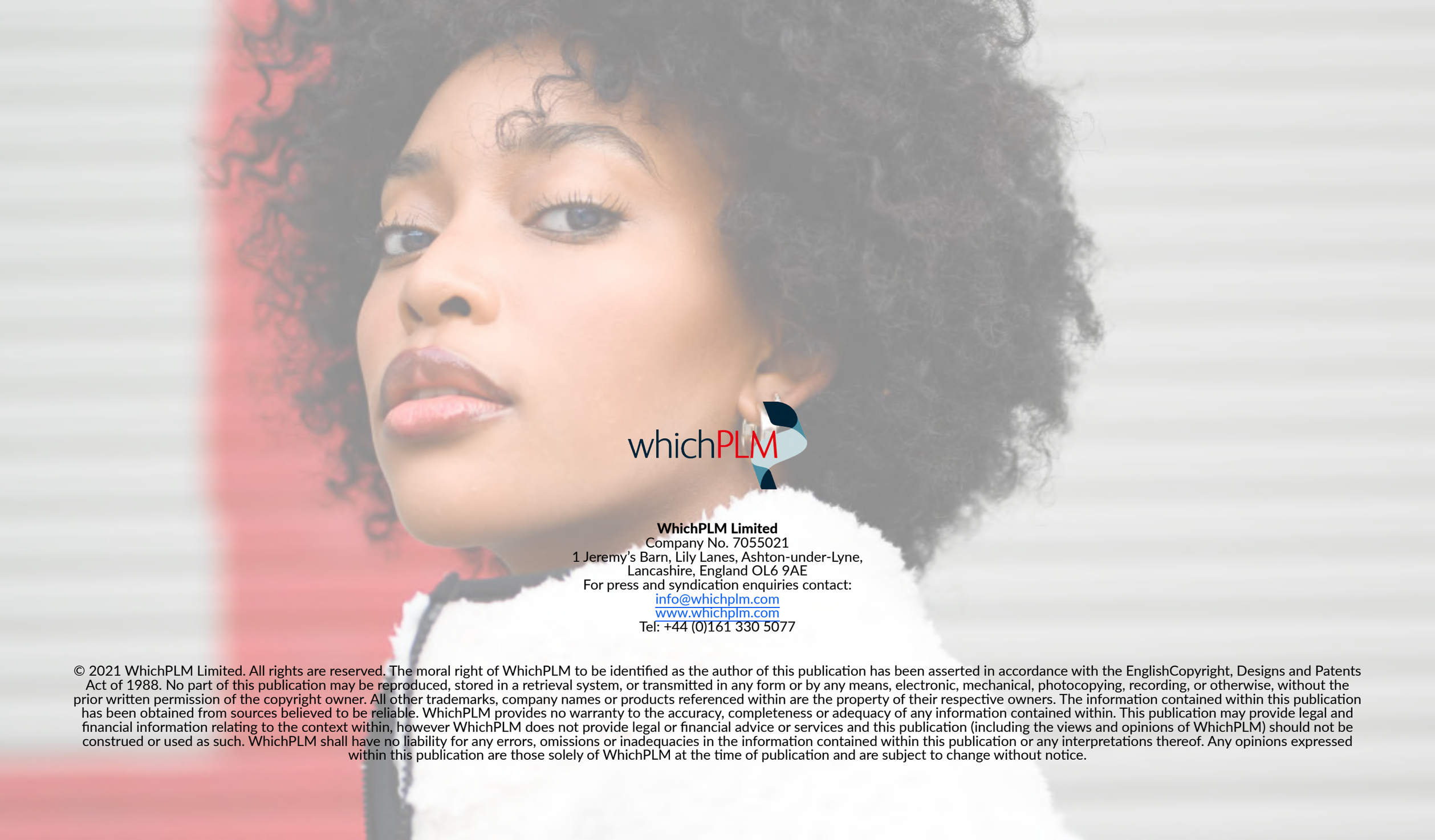
These are just a short example of the many questions that you should be asking yourself and your team before starting out on your PLM journey. And while prospective PLM customers are becoming better educated through resources like WhichPLM, it remains common for selection teams to lack the experience and deep domain expertise to scientifically measure everything they need to take into account before making their choice.

This isn't to say that project teams do not understand their businesses – most of them certainly do and that's going to be critical as part of any modern PLM implementation going forward. Keep in mind that the majority of the PLM vendors today offer OOTB solutions that can be easily configured compared to the previous generation of heavily customised PLM (Tool Sets). But even with that being the case, it's still not surprising, even today, for a company to select an OOTB solution that comes complete with a long list of modules and best-practice processes, only to find that the vendor implementation team continues to follow the old method of the 'as-is' (your current methods) and 'to-be' (your future methods) process workshops that should no longer be required!

When you buy a smart phone, do you start by configuring and customising the screens and apps to do what you need them to do, or do you simply charge it and learn to use it? PLM in 2021 and beyond should be no different and enable a business to get up and running in record time, providing they stay with best-practices and avoid too many configurations.

New PLM prospects should, therefore, be careful to ensure that they are not overpaying for long-winded and customisation-heavy implementations. Instead, PLM customers should be looking for solutions that come standard with fully documented best practice processes. Obviously, integrations to third party technologies will require some level of API customisations, but even then you should ask the vendor to confirm that your customisations are able to be developed in a framework that enables your PLM solution to take advantage of all future software upgrades at no extra cost or delay to your business.

We hope that this FAQ guide, along with its supporting Project Pack, will give you a small sample of the type of questions you will need to ask of your business before moving ahead on your PLM journey.



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