



# TOP TEN THINGS TO CONSIDER AHEAD OF A PLM IMPLEMENTATION

PLM PROJECT PACK 2021

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Based upon two decades of scoping, designing, implementing and researching PLM solutions from around the world, we would like to share our top tips that might prompt you to think about certain things you may not otherwise have considered. Let's phrase them as common mistakes, since our experience leads us to see them this way – as a list of ten things that are routinely overlooked and that can potentially jeopardise an implementation.

1. Not selecting the correct PLM solution that best serves your company's specific needs
2. Not ensuring your executives are educated and a part of the PLM project team
3. Not having the right team with complementary skill sets in place
4. Starting an implementation without the PLM team being fully educated on all aspects
5. Not defining clear ROI objectives prior to starting a project
6. Not measuring your PLM success drivers throughout, and following, the implementation
7. Not promoting your PLM journey and success throughout the value-chain
8. Looking at PLM as a quick fix, rather than as a global project
9. Not planning carefully for the effects of Master Data & Change Management
10. Not phasing the implementation correctly based upon successful milestones versus a big bang approach

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## 1. Not selecting the correct PLM solution that best serves your company's specific needs

In order to make the right selection, you and your team first need to clearly define what and why it is that you need a PLM solution, what challenges specifically you are trying to resolve. With this in mind your first step would be to make a list of your challenges and try to put them in some form of logical sequencing (critical path use-cases). During our own advisory sessions, we often start the process by helping our client with what we call the seven Ws: Why, When, Where, What, Which, Who and the How (which we know doesn't begin with 'W'!

Following this workshop session, you would then use your critical use-case listings to best match with WhichPLM's 'Assessment for Best-Practice Solutions (Checklist)', which serves here as your RFI (Refer for Information). It's worth noting that, we have updated the criteria, not only to list the critical elements of a modern PLM solution, but also to highlight many of the best-of-breed (point) solutions that will add significant value to any PLM implementation.

Even if a fully detailed RFI has been prepared, it still doesn't stop the suppliers from interpreting the questions to suit their own solutions, and the fact is that this happens on almost all RFIs and RFPs. Therefore, we have developed a set of processes that offer differing levels of importance for you to best match your requirements.





Example needs may include:

- How PLM can help to achieve a higher success rate on the percentage of products developed and then delivered to market
- How PLM can shorten and meet agreed development lead-times and deliver product to market on a more consistent basis
- How PLM can improve product quality and lower purchase prices
- How PLM can enable the globalisation of the value-chain leading to being able to compete better in an ever expanding and challenging market
- How PLM can assist in the management of compliance and limit the risk of liability or bad publicity
- How can PLM attract & hold good people to the business
- How PLM can do more with the same level of resources
- How PLM can better support its value-chain partners to meet joint objectives

It's also important to note that it is not only software that matters, and to achieve a successful implementation it is essential to choose a PLM provider with whom you feel you can build a mutually beneficial business relationship.

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## 2. Not ensuring your executives are educated and a part of the PLM project team

From past experience, we can say with confidence that the most successful implementations have been delivered when senior executives are involved at each key stage of the implementation. They help set the objectives, at least from a strategic level, and then play the role as gatekeepers to ensure that both the internal and vendor teams are delivering according to the plan. With this in mind, it's not only important to obtain commercial buy-in for the project, but also senior sponsorship to the point that those involved are educated on PLM's abilities to meet the needs of the business and stay with the project from beginning to end.

*[You can find more on this in 'Best Practices to get PLM-ready', within this Project Pack.]*

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### 3. Not having the right team with complementary skill sets in place

Like any good coach it is essential to appoint the best possible PLM team made up of key stakeholders that have a very good understanding of the business and its strategic goals, all with a positive attitude to change for the best. There should be a team member representing each department that will utilise the system and they should have cross functional knowledge of the product lifecycle and be well informed about the company, respected by management and staff, and be able to make decisions on future directions and have the required time to be involved in the project.

A key consideration is to ensure that your PLM provider can also display a robust implementation and support system in terms of quality of people who will be involved throughout the implementation and after to support the business especially in the early days of bedding in – remember that the majority of enterprises work on a global basis and therefore you will need to carefully consider and understand how your chosen PLM & best-of-breed vendors will be able to support your value-chain partners that may operate six days a week across multiple time-zones.

Another suggestion is to request the CVs of each of the implementation team to gauge their experience and to see what type of projects they have been involved in, to make sure that they have a good fit with your own specialty and can add value to your project.

Your internal team will need to demonstrate a detailed level of familiarity with your own internal and external processes and workflow. Then you will need to research and select key stakeholders and subject matter experts that will be open to change. Keep in mind that most people like things the way they are and don't really like change. Your team will require a set of complementary skills, people that can think outside the box, are open to change, interested in new technologies and that are able to demonstrate both a creative and analytical mindset. Beyond process experts it will be important to obtain the skills of the IT team to ensure that any future solution will be able to operate seamlessly together with today's IT strategic systems, as well as those that may come in the future. There is little point including departmental heads if they are going to delegate their role to a more junior member of their team. Appoint the person who will be carrying out the role, but conversely there is no point co-opting someone who is considered to be lightweight and whose opinions and efforts will be ignored.

Every good team needs a good leader - a project manager - and a PLM team is no different. But it is imperative to select the project manager with care. That single person will be responsible for overseeing the entire PLM strategy, and will be required to balance a great many different responsibilities and the interests of a huge range of stakeholders at once.

A successful PLM project requires a leader who can be cross functional, has a good working knowledge of the company on many different levels, not just their own department, and is a good manager who is respected and can be diplomatic when required. The project leader needs to be given the authority and responsibility for the project with full knowledge when any obstacles occur, they are able to consult the executive team for support and guidance.

Beyond the internal team and PLM vendor team, you may want to consider utilising the expertise of an external advisor, someone that can help through the journey and can be used as a go between to ensure that everything runs as smoothly as possible ...if you like: a PLM project auditor!

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#### 4. Starting an implementation without the PLM team being fully educated on all aspects

It is really important that as well as your executive board being educated, that the PLM Team and key stakeholders are educated. Your whole PLM team should have a full understanding of the project - especially the key company objectives. Without this, it will be near impossible to compile a cohesive implementation strategy.

The main project team should be involved from the beginning and should be involved in both the RFI-ROI stages. This will ensure they fully understand the business objectives for implementing a PLM system, and should give them a sense of responsibility to ensure the project delivers on the ROI objectives and doesn't fail, which can sadly be the result when a team feels a solution has been foisted upon them.

Project buy-in can be gained by education; when the team fully understands what PLM is and what PLM can do for them, they will be better equipped to help deliver a successful project.





In probability they will each have their own opinion as to what PLM can achieve in the business and if there is no control, they will all head off in different directions. Remember, speed is irrelevant if you are travelling in the wrong direction! Don't assume or take anything for granted – you need to check that everything that is required can be catered for to your level of satisfaction in the current version of the PLM solution and it should be fully tested prior to contracting. Once you have signed the contract it's then very difficult to get those assumptions adopted into the software!

All solutions should be able to deal with your market specific needs, as listed within the RFI; they should also be able to operate globally and on completion of the data entry the tasks should perform at around 5-7 second screen refresh rates, but it is worth checking everything thoroughly as sometimes there are technical specifics that get overlooked and/or taken for granted - especially when you are operating in real-time, sharing large file sizes. We've come across these issues as recently as 2020, so it's not what happened in the past, but what's still happening today.

Always check PLM's ability and experience to integrate seamlessly and, if required, bi-directionally with other best-of-breed solutions that you may already have within your business or may employ in the future. It's important that the Application

Programming Interface (API) integration tools have been fully tested and signed-off ahead of any agreement on PLM to ensure that you will be satisfied with the method of integration and that it is future proofed.

The business also needs to consider how it is going to cross-train all users across the entire value-chain, otherwise there is a potential danger that those who have been trained know the system but their colleagues in other parts of the organisation or across the value-chain do not know it at all – hence depriving the business of the full benefit of the solution.

Again, sadly we often see the case that the H.Q. did everything right when planning their PLM only to find themselves actually delivering a PDM system i.e., little consideration was given for their value-chain partners resulting in an exchange of a glorified Tech-Pack via a PDF file.

The best projects are those that have all members of the business fully educated and facing in the same direction.





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## 5. Not defining clear ROI objectives prior to starting a project

It is imperative to define the key drivers that will determine whether the project has been successful or not. There are methods (as well as ROI analysis) of keeping projects on track and actually defining their success, all of which should cover at least the following:

- Desired target: Define what you want to achieve based on your measured process maturity improvement objectives, examples of this could be things like:
  - Lead time reduced by 20%
  - Headcount reduced by 10%
  - New Product Introduction (NPI) rate improved by 20%.
  - Overall reduction in product costs by 10%
  - Overall improvement in margin by 5%
- Timeline: Phase 1 complete by [date], phase 2 complete by [date] and so on
- Budget: This should cover the upfront investment and the expected ROI and the time it should take to see these benefits come to fruition in terms of increased margins and profitability. (Remember that it may take a couple of season turns before the new PLM solution delivers the true ROI potential.)

This is sometimes defined as setting your Critical Success Factors (CSFs). These are the few key areas where things must go right for the business (and your PLM project) to flourish.

It is vitally important that project plans as well as tasks, goals and timetable include milestone points where the CSFs can be checked, progress identified, and plans realigned accordingly. This will enable the PLM team to assess if the project is on track and make adjustments to the plan where required.

Carrying out a full and detailed Return on Investment (ROI) will deliver the maximum possible return on investment, answering questions like:

- What is the value of the PLM installation and what value will that bring to the rest of the business?
- How do the costs of PLM compare to the PLM savings?
- How will the proposed PLM activities impact the bottom line?

This in turn will drive the Critical Success Factors (CSFs).

If you can clearly specify the value of PLM to your business it can assist in many different ways such as selling the value to the executive board, extended supply chain and business partners and then measuring and communicating the progress of the project.

Also keep in mind that your PLM solution will continue to evolve and will therefore require continuous funding based upon new ROI (Return on Investment) targets, and therefore past proven benefits will help to ensure further rounds of funding.

As we've attempted to hammer home, it's critical to define what your company will consider success to be when we're talking about a PLM project... but this will be pointless if those CSFs are not measured or progress checked throughout the project.

Don't forget the old adage: "If you can't measure, you can't manage".

Teams sometimes get carried away with ticking off the task list and believing that that in itself is the desired outcome, with no reality check as to what they have actually achieved.

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## 6. Not measuring your PLM success drivers throughout, and following, the implementation

By measuring results and then realigning initiatives, priorities and timelines there is a much higher chance of actually achieving a successful implementation.

A project plan is a critical part of any implementation and we believe that this plan should be bespoke to each individual project. It can be based on a standard “Best Practice” format utilising a supplier’s previous experience, but it should be adapted and refined to better suit the required and specific RFI processes of your individual enterprise.

Every business is unique, and that is why you must measure your business to get an idea of where to start, or where to continue, your PLM implementation efforts. You should not let a PLM vendor tell you what you need and where to start; they do not know your business in the same way that you and your team know it and therefore may not understand your challenges in the level of detail that is desired.

It is in our nature to enjoy the fruits of our success, and success breeds success, so it is essential to communicate any progress that has been achieved throughout the PLM project to all value-chain partners.



The PLM team should communicate all activities on a regular basis within the PLM project not only between themselves, but also to the wider enterprise; this is one of the keys to a successful PLM installation.

If you don't communicate current status, successes, even challenges, future plans and current activities, the project will get forgotten, people will lose focus, and no one will care about PLM outside of the core team that you appointed to safeguard the project. The cultural change that is required for PLM cannot happen without a great deal of positive communication across the entire value-chain - with all partners across countries and continents.

It is always beneficial to pick off some "low-hanging fruit" and realise some quick results and share these wins with the wider community as to how PLM has positively impacted the business. You will then find you start to get positive attitudes and willingness towards the planned changes. Do not underestimate the time taken to change the culture of the business; it's similar to turning an oil tanker around in a small channel!

Many companies approach PLM implementations as if it is a 100m sprint, when in reality it's more like a marathon.

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## 7. Not promoting your PLM journey and success throughout the value-chain

To successfully implement any enterprise solution like PLM or ERP into your business can be very tough, and PLM is especially challenging as it is a strategic solution that touches every part of the value-chain.

The amount of time and energy required to complete all the preparation required for a good PLM implementation can often be grossly underestimated. Think of all the bases you need to cover:

- Process re-engineering
- Business requirements gathering
- Solution selection
- Technical infrastructure
- Cultural change
- Management planning
- Solution configurations

- Master data gathering and structure
- Data migration planning
- Solution interfaces (APIs)
- User acceptance testing
- Training
- Rollout and on-boarding
- Support

These plans take time to create and manage and if plans are not carried out correctly then failure is a real possibility.

Remember we are writing about PLM, not PDM. In this day and age we need to ensure that we are talking about being a fully interactive solution working together with all departments and value-chain partners throughout the extended supply-chain, potentially linking to each of the tier partners.

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## 8. Looking at PLM as a quick fix, rather than as a global project

If we buy PLM and implement PDM then the expectations of the ROI will never be met.

PLM is not any one piece of software, and will not deliver a quick fix, but it's rather a way of integrating the many applications and methodologies through the entire extended value-chain. PLM allows a complex process to be manageable and it's going to take time to deliver value like the list below:

- Allowing designers to work more cohesively with development and manufacturing, understanding and considering their needs when creating new products.
- It will help your mills and trim suppliers to become part of an integrated process.
- It allows manufacturers to improve their collaboration with marketing and distribution.
- It's a way of linking design and development to manufacturing to retail and logistics.

To make sure these processes work seamlessly and efficiently takes careful and detailed analysis to ensure that they can link and function together.

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## 9. Not planning carefully for the effects of Master Data & Change Management

One issue that comes up time and time again as a reason for time delays is poor planning of Master Data and data migration. Too many companies are under the impression that data cleansing and migration will happen almost by magic. It is imperative to ensure there is an understanding and appreciation for the scale and importance of this task as we all know the phrase – garbage in, garbage out, and it can make or break the success of a PLM Implementation. Master Data is a project in its own right and needs careful attention to detail and again additional planning ahead of time! [You can find more on this in 'Best Practices to get PLM-ready' in this Project Pack.]

Likewise, change management is one of the toughest challenges when carrying out a PLM implementation and often one of the areas that can be neglected or forgotten as the implementation progresses. It's pointless to implement PLM over the same process methods; you need to challenge the status quo and find new ways to improve the process or even eliminate certain processes that will no longer be required.

Things will change when you implement PLM, and unless you prepare to lend a helping hand and actually help to manage people through this tectonic transformation, the project will suffer.





A PLM solution brings massive change to a company, such as:

- Old processes requiring modifications
- Process maturity improvements
- Eliminating the need for outdated processes and technologies
- New tasks which need to be identified and defined
- People changes – headcount, job roles, organisational restructuring
- Information being used in different ways across multiple systems and by different people
- Cultural challenges to be addressed - “we’ve always done it this way”
- Introduction of new solutions and technologies
- Rollout and training requirements for all enterprise partners
- Support operating 24 X 6 across multiple time zones

People are creatures of habit and we as humans are therefore instinctively wary of change and to some people it may feel like their world is falling apart. Do not underestimate the challenge of persuading people to stop using the paper/spreadsheet system they have been using for the last 10-20 years even though they have done nothing but complain about it, The idea of restructuring can be very intimidating.

If handled badly, change management can lead to many costly issues and general negativity about the project. But with careful planning and management of the user’s expectations, clear and frequent communications and integration of the teams, before, during and after the project, these types of challenges can be overcome, and a successful launch achieved.

Change can be time consuming, difficult and expensive and to bring about the required changes it is necessary for the following to be understood and accepted:

- The reasons for the PLM system being introduced and those reasons accepted
- That each person involved understands how the changes will affect them personally now, in the interim and in the future
- The change process is a major activity in its own right and will bring a certain amount of flux and perceived pain before settling down into what will be normal. (You may wish to consider using a Change Management trained expert)
- How the changes will be carried out and what those activities will be

It is also essential to formulate a well thought out cultural change management plan that will ensure the correct interactions with users before, during and after the implementation.



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## 10. Not phasing the implementation correctly based upon successful milestones versus a big bang approach

Once the PLM solution has been selected it is essential that the implementation process is properly executed. Most companies will opt to take a more careful, phased approach where they can choose to invest on a more gradual basis into focused modules/phases and therefore minimise risks. Others will decide on a big bang approach, covering the entire end-to-end business. In recent years, we've witnessed that the latter is less in favour due to the speed of change in most businesses today.

It is possible to phase the implementation in many ways:

- Across a single department,
- A single business unit,
- A single product type,
- A location
- Or by key set of processes i.e., Design, Development, Fitting & Measurements, Specification & BOM generation, continuing to send to suppliers by email and once the new method is proven then allowing suppliers access into PLM in a separate phase.

This allows you to check the theory and realign where required so the best method is achieved. By achieving some wins, however small, helps gain user acceptance and once some benefits have been seen it is easier to persuade the rest of the enterprise to accept the change. (People like success and to follow winners.)

Defining the phases for your PLM implementation should be based on the organisation's business improvement priorities and the ability of the phase to achieve results in a short time span and support the later steps in the PLM program. This will allow the key benefits to start to be realised as early as possible rather than waiting for months or years for PLM to be implemented across the entire end-to-end value-chain.

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**In conclusion, we hope that this guide will help provide value to your pending PLM project. As the industry's longest-standing group of independent PLM professionals, we've carefully considered what we believe are our top ten 'dos and don'ts' that will help to provide you and your team with supporting insights into what it takes to deliver a successful PLM project.**

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