



TECHNIA

PART OF ADDNODE GROUP

# Checklist for selection and introduction of a PLM system

The key questions you should ask yourself before and during a PLM project

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# Introduction

Nowadays, a lot of data is generated when creating products. From the concept (including design and production) to sales, and ultimately disposal, data is exchanged between a wide range of people, departments and sites in order to collaborate, develop ideas, plan resources, and process complaints etc. This amount of data is almost impossible to manage without Product Lifecycle Management. The benefits of structured data management are obvious:

- The latest version of all product data is available in one place - the “Single Source of Truth”
- Data from other employees, departments and sites can be easily accessed, without needing to request it by email and wait for an answer
- The processing and release status is visible at all times
- Duplications and outdated versions, which are erroneously in circulation, are a thing of the past

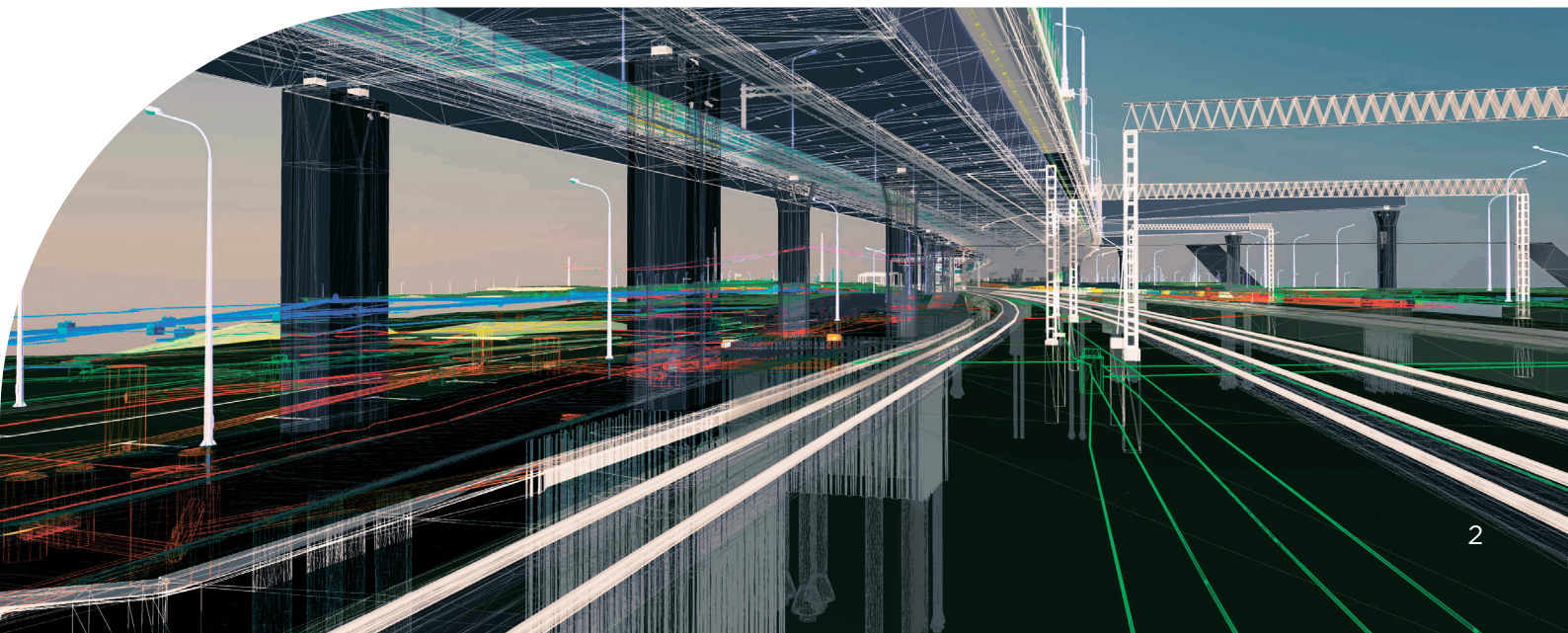
Product Lifecycle Management ensures significant cost savings and greater satisfaction for employees thanks to product-centered data storage.

However, to ensure that the deployment of a PLM system actually yields the performance you are hoping for, the necessary framework must be created in advance. Careful attention must be paid when preparing to introduce such a system.

This involves avoiding the following extreme situations:

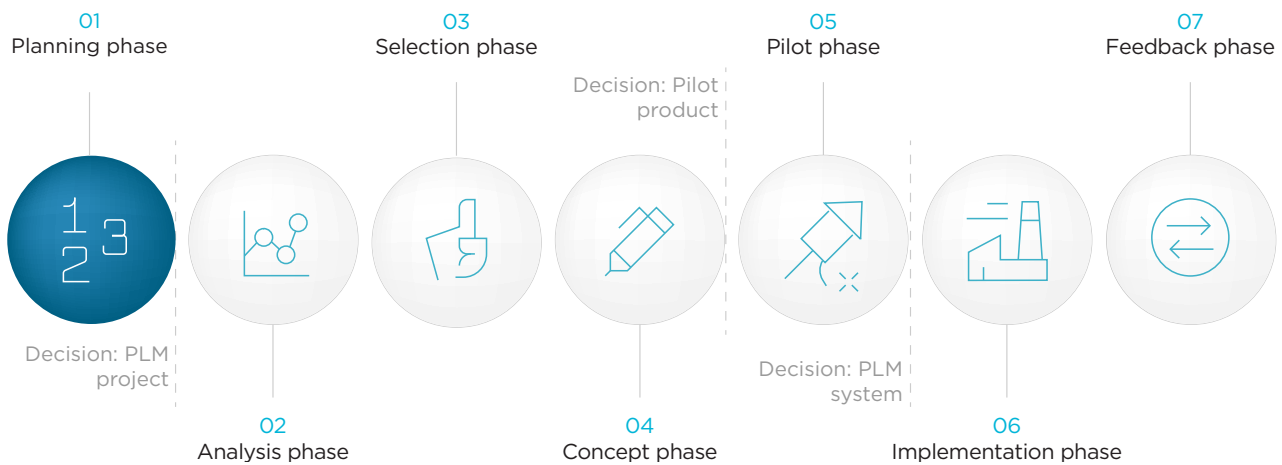
- Rushed implementation without having agreed on clear objectives
- Too detailed a focus on the concept phase: the technical and organisational framework conditions are frequently revised, right up until implementation

To facilitate the selection and introduction of a PLM system, we have compiled this checklist to guide you through the process. Benefit from our 30-plus years' experience of introducing PLM software.



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# 01 Planning or pre-project phase

**Goal: A clear strategy and timetable form the basis for success.**

## IDENTIFY THE NEED

At the root of every successful implementation, there is an understanding of what people really need and not what they would like. The “W” (and 1 H) questions are a good place to start in identifying the actual need.

## WHY AND WHAT FOR? - CLARIFY THE BENEFITS OF THE PLM PROJECT

Without a convincing reason why, doubters will always seize their opportunity and want to argue against change whenever there are stumbling blocks. Don't give the naysayers anything to feed on - repeatedly highlight the benefits of the PLM project. There are

essentially two different motivating factors, of which people need to be persuaded:

1. The pain that should be avoided (e.g. eliminating constant waiting times when it comes to providing the necessary design data), or
2. The reward, e.g. faster time-to-market and thus securing a considerable market share (and ultimately jobs)

All stakeholders should be aware of the benefits that the company expects from the introduction of PLM. This also involves considering the opportunity costs to the company if the investment is delayed.

The task of providing the entire workforce with a compelling vision (a 'Why') should fall to senior management, who must back the introduction of the PLM system in order to ultimately provide a budget for it. Senior management are most likely to be persuaded by a cost-benefit analysis. To this end, highlight the individual processes that can be optimised by PLM and compare current costs with the anticipated savings. This will provide you with a detailed insight into the benefits of PLM for the entire company.

### **WHO IS DRIVING THE PROJECT? - DEFINE THE INTERNAL CLIENT OR REQUESTER**

The internal client is the guiding hand for the project. Others look to the internal client when it comes to the objectives and price valuation of the project. The internal client can be a panel of experts or an individual. However, from experience, projects work better if the client is just one person. The following are key factors when it comes to the client's decision-making:

- Sufficient power to act, in order to be able make decisions alone
- A high level of personal involvement in the project benefits
- A high level of availability, in order to be able to make the necessary decisions quickly

The internal client assists the Project Manager if the necessary resources need to be adjusted.



### **FOR WHOM? - INVOLVE SPECIALIST DEPARTMENTS IN GOOD TIME, RELY ON A CORE TEAM**

IT and specialist departments need to work closely together, during both the requirements and implementation phases. Leaving the introduction of new software to the IT department alone would be a mistake, because the knowledge of experts is crucial in establishing the appropriate processes and subsequent application success.

The best approach is to recruit a core team of IT experts and specialist departments with in-depth knowledge of all the company's processes, products and services. This means that each specialist department is represented by at least one person, who stands up for their department's interests.

### **WHAT HAPPENS WHEN? - PLAN RESOURCES AND CAPACITIES**

The Project Manager must plan sufficient resources for implementation from the outset. Project tasks cannot usually be handled "just like that" on top of day-to-day business. Ultimately, how long implementation takes depends on the

available resources and the scope of the project. Teams that need to be involved in the project must be earmarked in good time.

A degree of urgency is also necessary for the project to be a success. Failing this, other projects will be squeezed in over time and drain resources. Counteract such unnecessary delays and ensure stability by clearly conveying the urgency of this project to all stakeholders.

### **HOW DO WE GET STARTED? - INTERNAL PLANNING MEETING**

In an internal planning meeting, you should establish the entire framework that is needed for implementation: technical infrastructure, project delivery framework, project responsibilities and capacity planning. This meeting is also used to identify uncertainties and problem areas (e.g. dependencies on other projects) and to jointly develop solutions for these challenges.

The Roadmap is also defined in this meeting: when will implementation take place in the individual departments? This allows each department to know when it can expect changes to its familiar daily routine. Be aware that this roadmap should be gradually optimised in further phases, as new insights emerge.



### QUICK TIP

How can awareness of PLM be raised within the company?

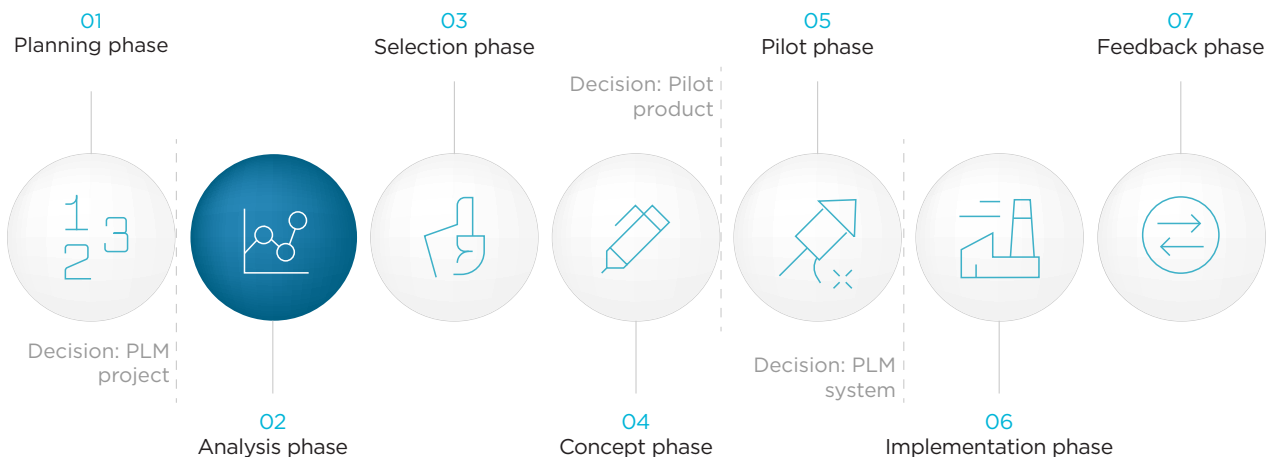
Changes to the company's organisation and culture represent the first potential hurdle in transforming your PLM business. As a result, your Roadmap for the introduction of PLM should depict an ideal scenario, while also being sufficiently flexible for all stakeholders to drive implementation forward by means of an iterative process.

Should the introduction of PLM be initiated, it is essential to raise awareness of this throughout the entire company. All employees should be part of its implementation. As part of this, they will learn about the benefits and how the implementation process will progress.

The support of management is no less important. Many PLM initiatives are condemned to failure because management are not 100 percent behind them. Experience shows that it is advisable for management to announce the introduction of PLM to employees in a speech. This encourages collective acceptance, enabling a joint learning process to be established. The entire company benefits from this - including all employees.

This [blog article](#) provides more information about the successful introduction of a PLM system.

It is also helpful to gain an overview of the various stakeholders. This enables influencers, supporters and the respective interests and balances of power within a company to be identified. Each of these areas should understand the extent to which PLM will change their own department and the specific benefits this will bring.



## 02 Analysis phase

**Goal: The basis for the system is created and preparations are made for the change of system.**

### GATHER IMPORTANT INFORMATION ABOUT YOUR DATA AND THE SYSTEMS USED

You already had initial thoughts about the “Why” and the potential benefits during the pre-project phase. During the analysis phase, support these assumptions with facts and derive operational goals from the previously defined strategic goals and visions.

- What form is the current product data available in?
- Does product data need to be migrated from other systems?
- Which other systems need to be connected to PLM, e.g. ERP?

### ANALYSE YOUR BUSINESS PROCESSES

Conduct a detailed process analysis of actual and target processes. Derive specific requirements for the new tool from this: which software tools will be deployed? What does the IT infrastructure look like? What interfaces are there with other solutions? What processes are there and where is there a need for improvement? You will obtain the best overview by consulting your individual specialist departments. You really should draw on the experience of the PLM solution provider, which has already implemented many such projects.

## **INVOLVE TECHNICAL CONTACTS**

Don't forget to bring your colleagues on board. They usually have extensive knowledge of the crucial factors when introducing software. This also enables possible uncertainties and mistrust to be dispelled. The introduction of PLM involves numerous process changes and optimisations. Regular meetings provide the opportunity to better convey successes and jointly achieved goals.

## **AGREE ON CLEAR GOAL DEFINITIONS AND ESTABLISH MILESTONES**

A PLM project involves multiple departments and processes within the company. This means that many people, who also have different interests,

expectations and objectives, are affected by this. It is therefore imperative to set clear, realistic and achievable objectives and to convey these to all stakeholders. The objectives should be agreed with management, as well as at all other levels of the company. It is also advisable to establish interim objectives, so-called milestones, in order to track the progress of the project and measure success.





### QUICK TIP

Keep on taking advice on the introduction of PLM

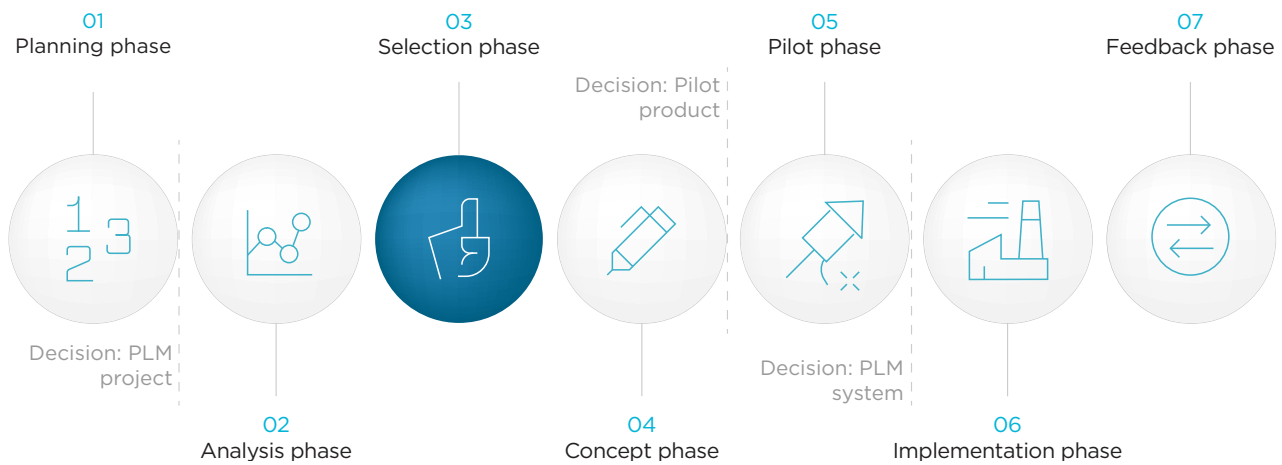
It is not always possible for the company's existing employees to take over the introduction of PLM. In this case, it is essential, at this stage, to fall back on external knowledge and experience.

External PLM Consultants ensure that all aspects are taken into account when setting objectives and that all options are fully exploited. For PLM and document management, CAD or ERP, consultants are also familiar with the systems and solutions used, in order to provide the company with tailored advice. They develop specific and highly promising PLM strategies in consultation with the customer. As PLM Consultants think in terms of the user interface, functionality and adaptation, they identify the best solution for the particular company.

If you opt for external PLM consultancy, talk about your expectations:

- What does their support look like?
- Which services are you offered?
- How is the process accompanied?

Set up regular meetings with the PLM Consultant to ensure you are always up to date.



## 03 Selection phase

**Goal: Your individual data model is set up**

### PRODUCE A SPECIFICATION

At this stage, the requirements for the new system are set out in a specification.

Concise scenarios for key business areas, which demonstrate the current processes, need to be devised in order to be able to compare the performance capabilities of different software providers. This results in the functional requirements for system providers.

### DEFINE THE PRESELECTION CRITERIA FOR PLM DECISION-MAKING

This involves precisely clarifying the technical requirements:

- What platform will the PLM software run on?

- Is a cloud or an on-premise solution preferred?
- What software architecture and data model will be used?
- Can the system run on the existing hardware?

You should also think about possible software:

- What software solutions are there on the market?
- What experience does the software provider have in your sector?
- Does the software provider have suitable partners for the introduction of PLM?
- Are the software provider and the consultant financially sound?



### QUICK TIP

#### Find the right PLM provider

Before you sign a contract, you should discuss your project objectives with your potential PLM provider:

- What do you expect from the introduction of a PLM system?
- Define key figures: How will you know that the introduction of PLM has been successfully completed?
- How could your expectations be exceeded?

You should only sign a contract once you are sure that the other party has fully understood your Use Case within the company.

Read our [blog post](#) for the questions you need to ask your potential PLM Consultant, in order to ensure that they are up to the task.

- Does the software offer potential for innovation?

Financial aspects are also an important decision-making criterion:

- What are the anticipated costs of software licences?
- How much does maintenance, training and support cost?
- How much consultancy is necessary and what are the estimated costs of this?

### CHOOSE YOUR PLM

If the specification is ready, you can choose your PLM in several steps:

1. Rough Selection: with the aid of rough requirements profiles, you can narrow down the choice of PLM providers by means of market research. To this end, the individual tenders are assessed against a draft specification. The first PLM systems can already be eliminated at this stage.

2. Detailed selection: the PLM systems are assessed in terms of their relevance (must/should/could criteria) with the aid of a detailed specification, which includes the requirements for all relevant areas. This produces a manageable number of suitable systems and providers.

3. Final Selection: in the end, you should have a maximum of three providers for final selection. Invite them to the supplier workshops (Benchmarks), in order to subject them to a detailed examination. The best approach for this is to prepare checklists with predetermined criteria. It is imperative that the key users of the software are present at these workshops, in order to ask specific questions and to be able to accurately assess the suppliers.

Make sure that the solution is flexible and can be easily adapted to changing situations. The PLM system should also be suitable for your business and sector.

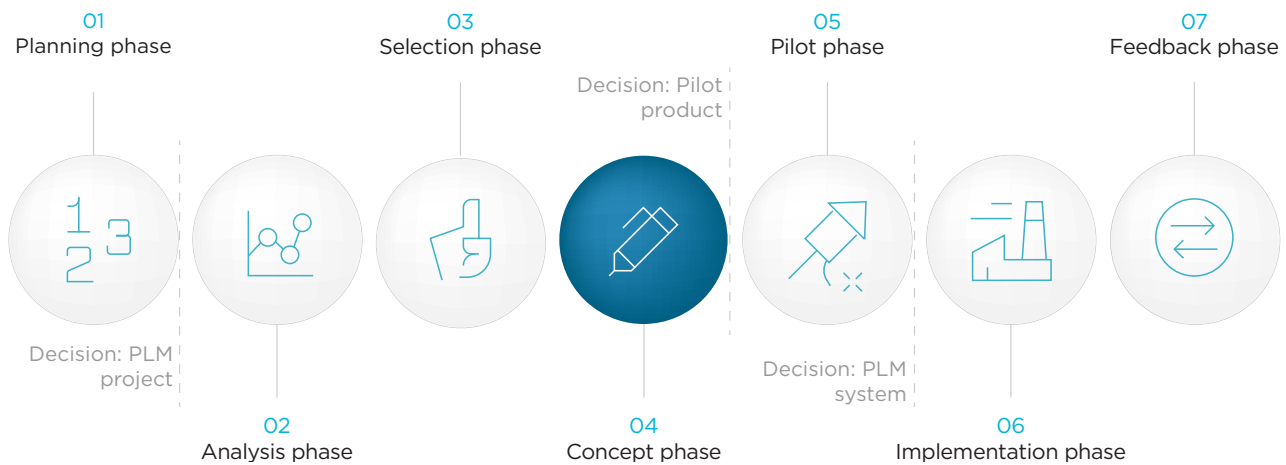


#### QUICK TIP

How to deal with problems and resistance?

Stakeholders with a wide range of mutually interdependent roles are involved in the implementation of PLM initiatives. This means that consistent, systematic and continuous management of risks and issues is essential for their success.

Risks and issues should be centrally managed and be subject to clear monitoring and escalation processes. When implementing activities and organisational changes, there should be plans to mitigate and repair any damage.



## 04 Concept phase

**Goal: A final implementation strategy with defined workflows and processes**

### DEFINE THE IMPLEMENTATION STRATEGY AND ADAPT THE ROADMAP

Once you have chosen your PLM provider, it's all about creating a seamless implementation strategy. Define the implementation phase together with your specialist departments and your PLM partner. Also define the interfaces that need to be implemented and the technology required for this. Document all results. The Roadmap should be further refined at this stage, at the latest, and adapted to the insights and requirements ascertained thus far.

### PLAN THE ROLL-OUT AND TRAINING IN PARALLEL

Produce a detailed plan, which defines the point in time when each department will move to PLM. At the same time, devise your training concept and arrange the first training dates for the core team. Ideally, organise training courses so that employees from the core team are trained by the PLM provider and are then able to train their colleagues. The core team speaks the same language and can address company-specific issues.



### QUICK TIP

How to encourage your team to adopt the PLM system:

The introduction of a new system in a company can cause anxiety and doubt, even if its corporate culture is still extremely stable and positive. However, the good news is that you can alleviate your team's concerns and encourage them to use PLM to achieve higher productivity in all areas.

Read our blog post "[How to get your team to embrace PLM tech \(yes, even the sceptics!\)](#)"

### CLARIFY PROJECT COMMUNICATION

How do all the project participants communicate with each other? Determine:

- Which communication tools are used
- Whether there are regular meetings
- To whom and when regular status reports must be delivered
- Whether there is any limited accessibility and/or availability

### ENSURE THERE IS ACCEPTANCE WITHIN THE TEAM AND TRUST IN THE SYSTEM

Another sticking point for successful PLM implementation is Business Change Management. A change of system

increases productivity in the long term, but usually encounters internal resistance among employees in the short term.

Involve all stakeholders in good time, highlight the opportunities of PLM systems and ensure that all stakeholders understand each other. Specifically identify influencers and key figures within the company who can inspire their colleagues with their enthusiasm for PLM.

The stakeholders include your IT department - of course. Involve them even before the implementation process begins. You cannot fail to benefit from their system knowledge. Meet or talk regularly, share project progress and results.

In order to maintain confidence in implementation of the PLM system and to ensure its compliance, it is important to obtain internal and external feedback. This could be by means of:

- Regular programme checks (“Health Checks”)
- Quality standards, control mechanisms
- Risk assessment and mitigation / rollback plans
- A common database for sharing knowledge and collaboration / [Training](#)



#### QUICK TIP

Why agile project management is worthwhile

In our experience, the agile project management approach, which focuses on teamwork and customer feedback, has proven its worth. Instead of defining a final project structure plan from the outset, an iterative approach is adopted. Stakeholders are more deeply involved in the entire development process. With agile project management, work is performed within so-called iteration cycles: for each cycle, the customer is presented with a provisional result, which they then duly “accept” or request changes.

This blog post contains the [top 5 tips for agile PLM project management](#).



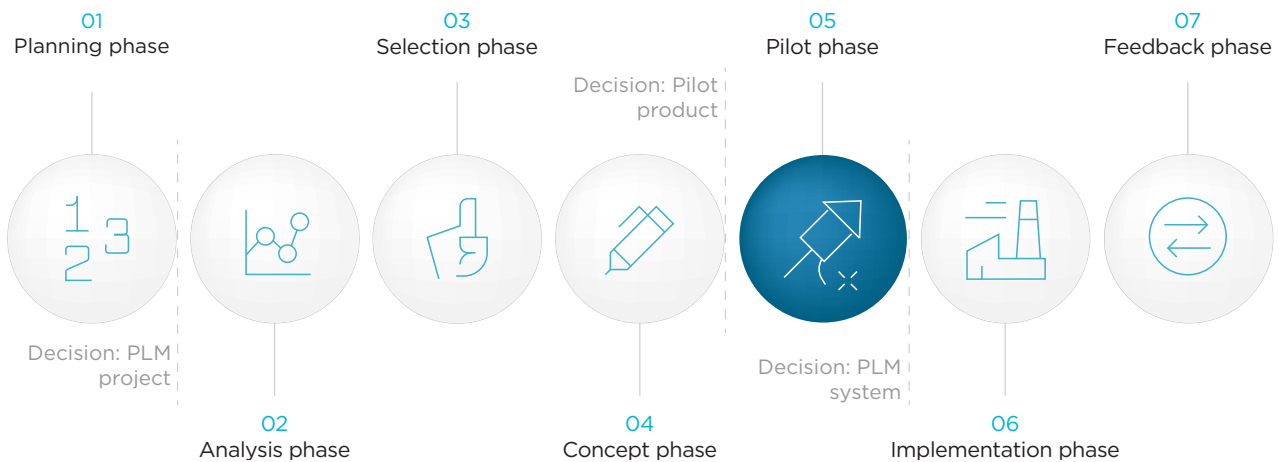
### QUICK TIP

What kind of training is useful for my company?

When training your employees, you should ensure that you target each employee as individually as possible. Therefore, in addition to standard courses, you should also schedule individual, practical training. Courses should also be as flexible as possible: classroom training on a provider's premises or directly on-site, or online and remote learning in a virtual classroom - using any standard computer and any location. This training can also be combined with other learning methods, such as e-learning or blended learning.

Ensure that your employees get up to speed more quickly, new users rapidly get on board and existing users are swiftly able to get to grips with recently added features. Nowadays, a number of providers also offer so-called Digital Adoption Solutions (DAS) or Digital Adoption Platforms (DAP). These are software solutions designed to enable instant and intuitive in-app learning. These programs use visual overlays to provide optimum guidance for use.

[Read here, what DAS are and what advantages they offer.](#)



## 05 Pilot phase

### Goal: Creation of a practice-oriented test operation

#### ALLOW SUFFICIENT TIME FOR DATA TRANSFER

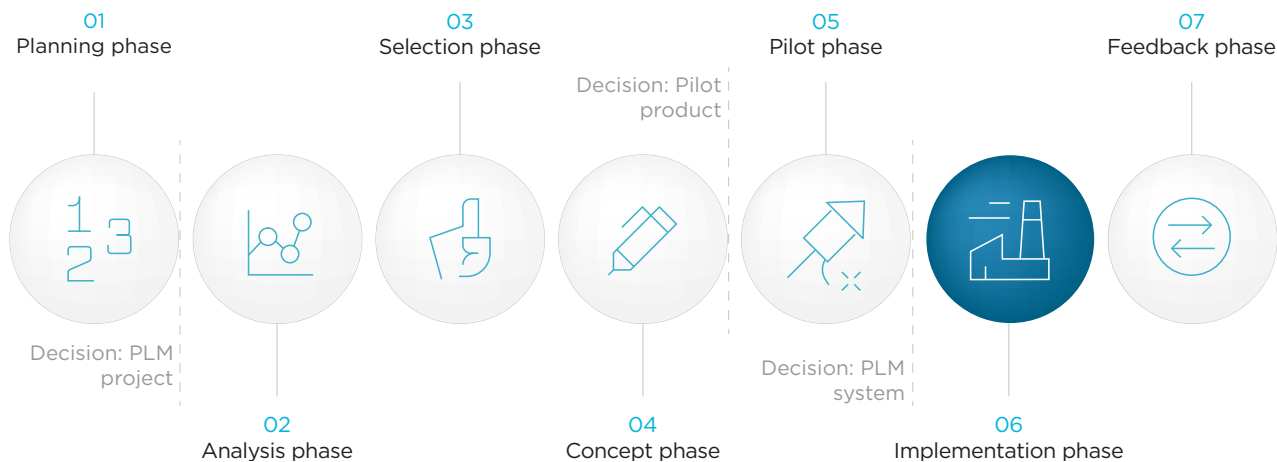
The transfer of master data, cleaning it and, if necessary, migration, often takes longer than originally thought. Changes to the data model or software architecture are still usually required before you can work with the master data in the new system.

#### LEARN FROM THE PILOT PHASE

If the transfer of master data has been successful, you will be able to gain initial experience with the new system. This pilot phase will once again provide you with important insights. If there have also been organisational changes within the company in the meantime, meaning that you need to order more licences than originally assumed, please discuss this with your PLM provider.

#### FINAL DECISION ON THE PLM SYSTEM AND PLM CONSULTANT

The final purchasing decision and, therefore, the decision on which PLM system to introduce and which PLM provider/PLM Consultant to work with, is made at this stage. As already mentioned at the selection stage, you need to be sure that your future PLM partner has understood all of your questions.



## 06 Implementation phase

**Goal: Successful implementation of the PLM system within your company**

### ADAPT THE SYSTEM TO YOUR NEEDS

While employees gain initial experience of live operation, you can implement further necessary interfaces and adapt the data to your needs with the aid of individual templates.

### STAY IN TOUCH WITH ALL EMPLOYEES

Unfortunately, during a system changeover, a certain level of disruption cannot be entirely avoided, but if your colleagues and employees know when they need to prepare for delays, they can plan their work accordingly and live with the interruptions.

Think about how you can best keep your employees up to date on the current

project status – via email, the Internet, personal conversations? Share the milestones that have been achieved so far and repeatedly reiterate the benefits of the new system, which is best achieved by means of concrete examples of colleagues for whom implementation has already been successfully completed.

Change projects, which also aim to achieve a degree of change to routines and working processes, often need an extended period to become established. It is therefore important to share partial successes during the course of the project, in order to maintain motivation. A milestone can even sometimes be celebrated with all the employees involved.

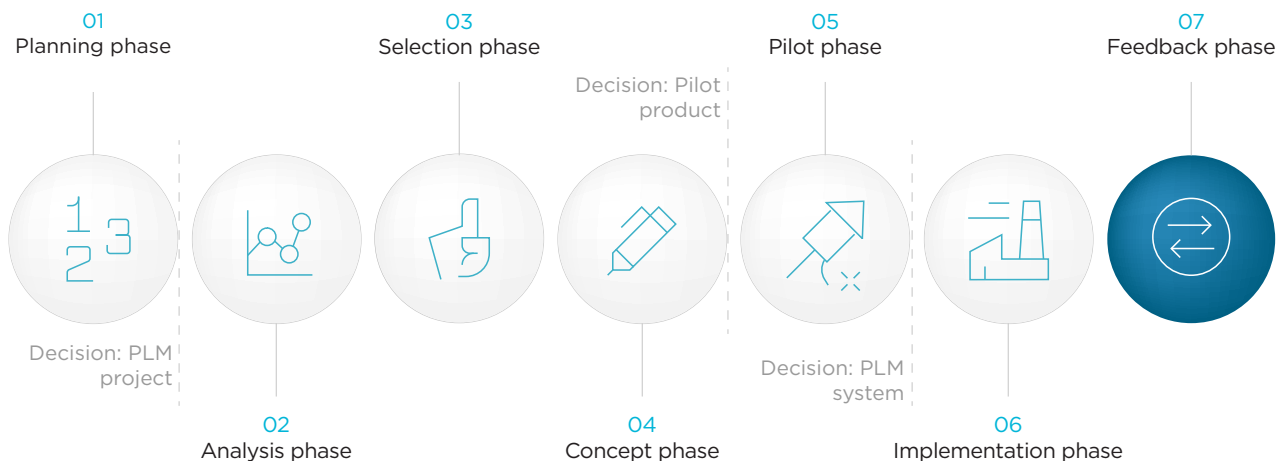
## MONITOR PERFORMANCE

During the roll-out, you should constantly monitor the KPIs (Key Performance Indicators) to ensure that you are achieving the final results you expect. Produce a report or a dashboard that compares actual performance with the agreed objectives.

## PLAN FURTHER TRAINING

Think about who needs or wants training. You can group colleagues together and, in doing so, consider individual requirements. Ensure you only use experienced trainers with practical experience of customer projects, for your training.





## 07 Feedback phase

**Goal: Optimally adapt the software to your company's and employees' needs for maximum day-to-day efficiency**

### **OBTAIN REGULAR FEEDBACK FROM YOUR EMPLOYEES**

Establish recurring feedback rounds and retrospectives, during which your employees have the opportunity to provide feedback on the system introduction. If necessary, call in your PLM provider, who can address very specific questions, to act as an advisor. You should also encourage the exchange of information and experience between departments by means of these open feedback rounds. Best practice can be shared and proposed solutions for possible problems developed.

### **EVALUATE YOUR SUCCESS**

Employee surveys can be an effective tool for making the quantifiable success of a PLM system introduction known, allowing you to demonstrate that the effort and temporary downtimes have been worthwhile.

Regularly measure your success and present it in the form of interim results – this will foster acceptance and the success of the PLM project.

Answer the following questions when reviewing the entire project:

- Did you achieve the stated objectives?
- Was your schedule realistic?
- What milestones have you achieved?
- Are there still outstanding milestones? If so, why is this?
- What went well?
- What could have gone better?

### **WORKING WITH YOUR PLM PROVIDER**

If the PLM solution was successfully introduced you should not stop working with your chosen PLM provider. Continued

interaction with your provider will help to uncover further opportunities for optimisation.

While software, hardware, and processes undergo continuous improvements, your day-to-day business continues.

Your PLM provider will gladly advise you if you decide to further expand and optimise your business processes with the PLM system.

### **THANK YOUR EMPLOYEES**

To ensure that your PLM project is remembered as a positive experience, it is important to share a professional project completion.

It is best for the client to personally recognise the efforts of all project participants and to express their appreciation for their contribution to the project- possibly in the form of a thank you letter or certificate. This could even take place during a small celebration. On successful completion of the project, employees are once again available to focus on their departmental tasks.



# Conclusion

In our view, the preceding seven phases are crucial in order to successfully implement a PLM project.

Bear in mind that the introduction of a new configurable solution does not just affect product management, but all of the company's employees: from the CEO to student interns. Smooth implementation ensures that the entire workforce can rapidly benefit from the solution. At any rate, product information processes should be automated and improved, thereby freeing up time for critical tasks. In short, a new era has begun for you and your colleagues - with clear processes and prioritisation of tasks.

PLM is only problematic if you don't know how to use it. However, once your employees understand what it is, what it can do and what it requires, implementation of your PLM will be far smoother.

It is important to set your PLM expectations from the outset. This is best achieved by working with a PLM provider that is a true partner on your PLM journey. As a first step, they will find which tools and processes best help you and how you can structure your system to translate all these opportunities into reality.

The key thing is that PLM is about the balance between need and want, technology and people. Using what works - and adjusting for the future.



## ABOUT TECHNIA

# Smarter products faster

TECHNIA is the leading global Dassault Systèmes partner, providing unrivaled customer value with our unique combination of partner solutions, in-house software, and expert skills.

We provide complementary software, services, training, and support for the complete Dassault Systèmes portfolio of products: 3DEXPERIENCE, BIOVIA, CATIA, DELMIA, DYMOLA, ENOVIA, NETVIBES, SIMULIA, SOLIDWORKS, and more.

We actively seek out clients whose leading-edge technologies provide creative solutions to the world's most pressing concerns. We build long-lasting relationships with ambitious customers who trust that we're big enough to deliver yet small enough to care.

Together, we make sure innovation has the best conditions to thrive, so that our customers can bring smarter products to market faster.

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We take our responsibility to the world around us seriously, TECHNIA is certified according to the ISO standards 9001:2015 and 14001:2015. This guarantees that the way we work with quality and our environmental impact is continuously improved and objectively reviewed.