

Le 1<sup>er</sup> Congrès des innovations  
mécaniques CIM'08

# Projets PLM

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# Contenu

1. Profits et défis de PLM
2. Structuration d'un projet PLM
3. Sélection d'une solution PLM
4. Exemples de projets
5. Coûts des projets PLM

# Profits et défis de PLM

- Profits
  - Conformité aux réglementations et aux exigences des OEM
  - Réduction des temps de développement
  - Réduction des erreurs
  - Amélioration de la qualité
  - Gestion de la complexité
- Défis
  - Technologiques
  - Gestion du changement
  - Gestion des risques de déploiement
  - Interopérabilités et intégration des systèmes d'entreprises
  - Financiers

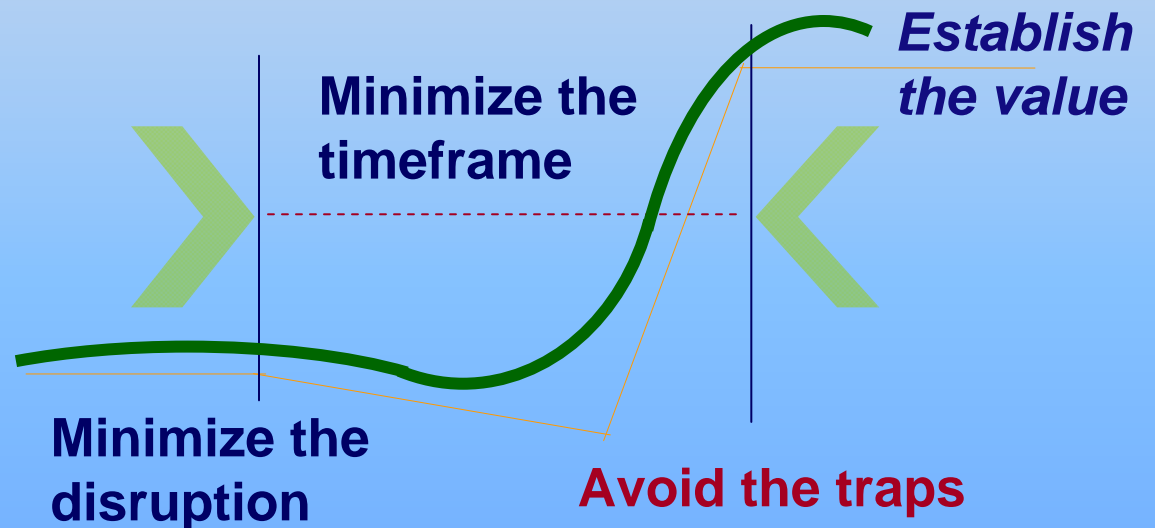
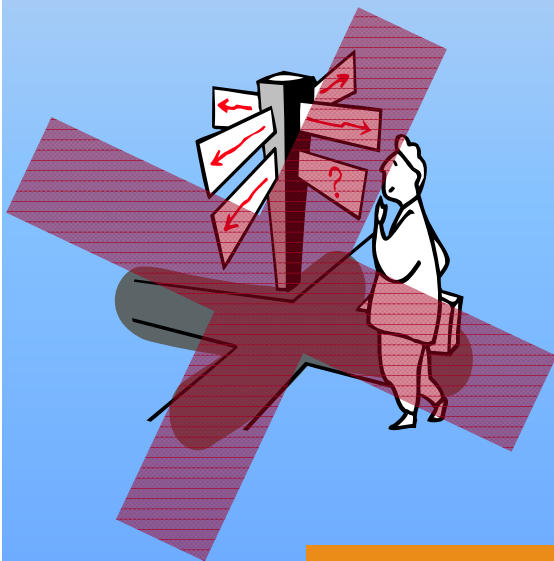
# Structuration d'un projet PLM

- Vision stratégique de la compagnie
- Préparation d'un « PLM Roadmap »
- Importance de la pratique de Gestion de Projet
- Phases et jalons d'un projet PLM
- L'approche « livrables »
- Les principaux intervenants
- Développer à l'interne ou sous-traiter?

# The Most Critical Step Is the First One

- Before you take that step, you need to understand what the whole program will look like:

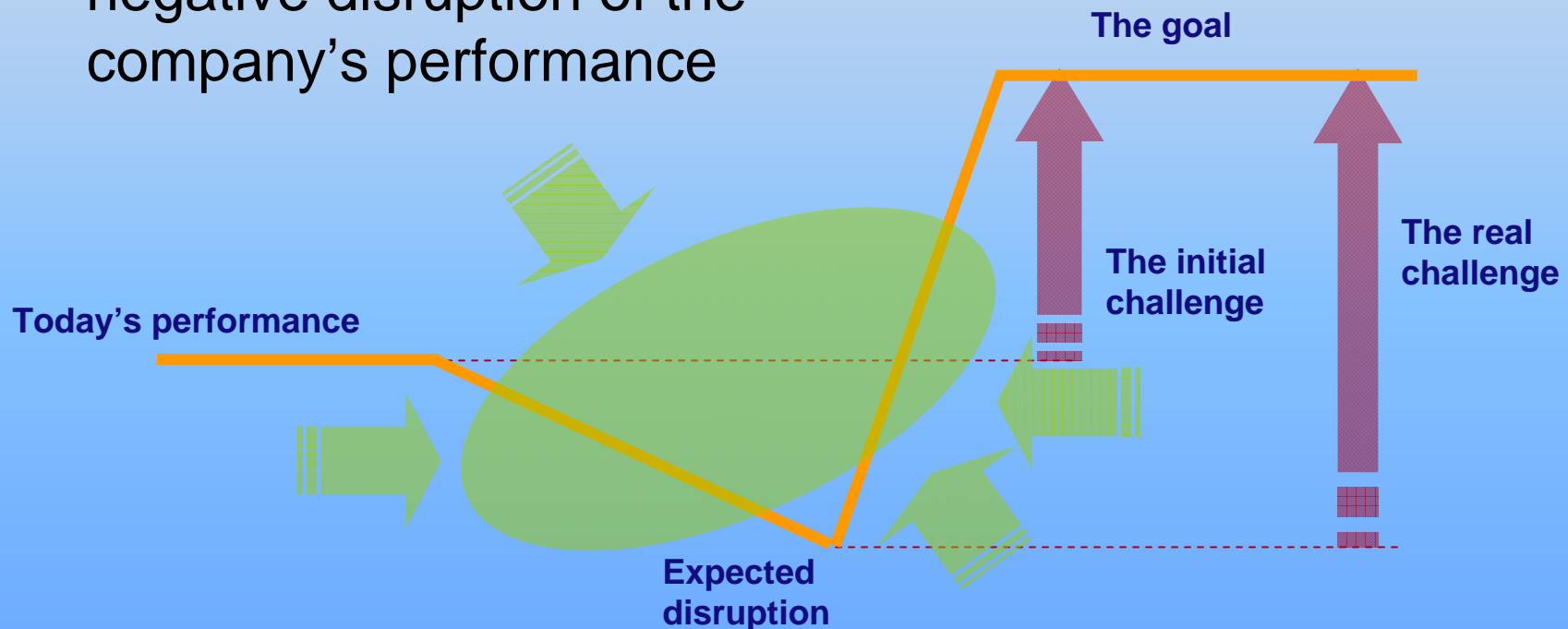
**the Roadmap**



*The **Roadmap** reinforces your **vision**, it is the tool that you need to **communicate** effectively, you will need it to monitor **SUCCESS**.*

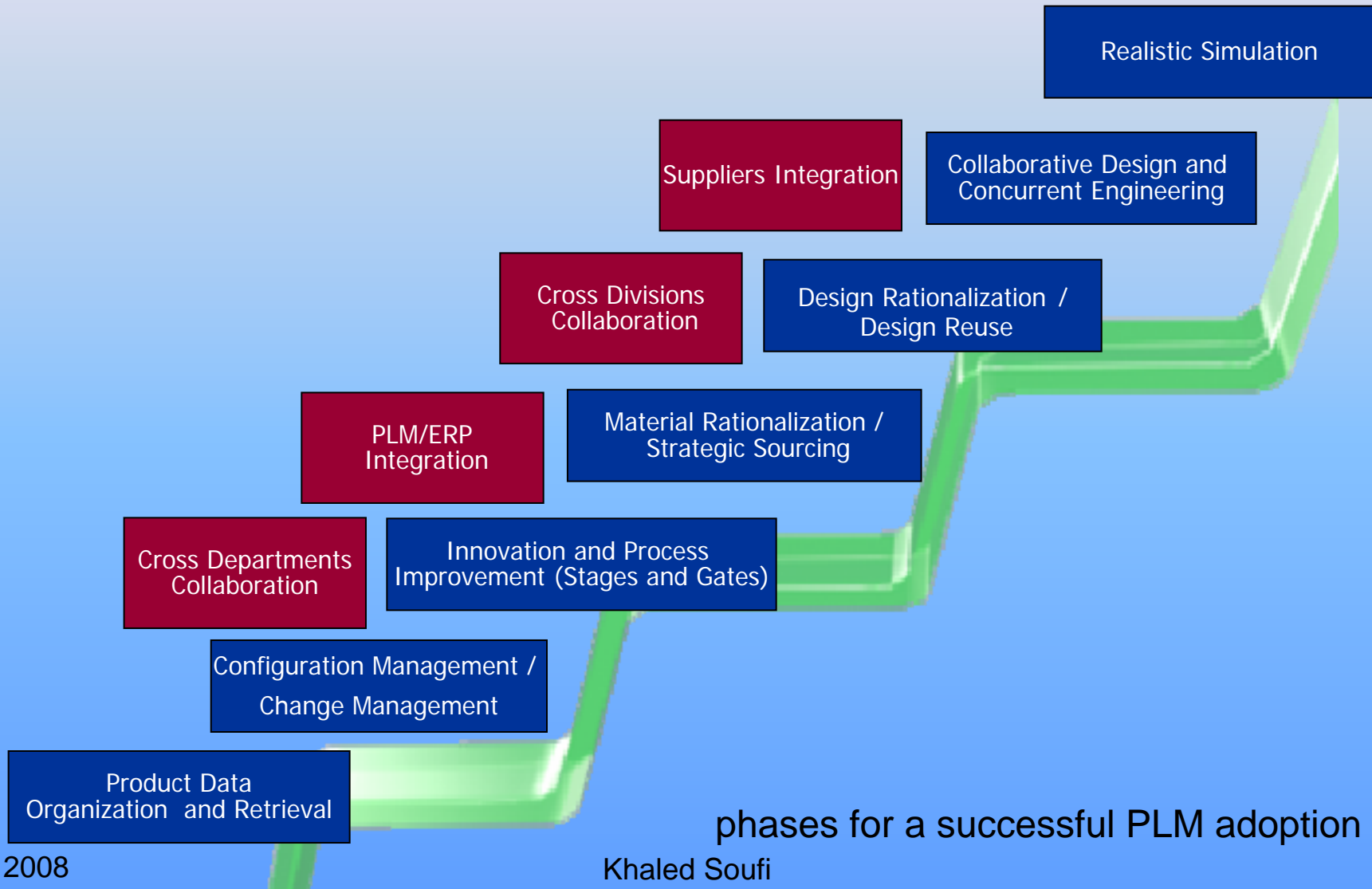
# Companies and Individuals Experience Change when They Reach for Higher Goals

- Reaching for a higher goal inevitably creates a temporary negative disruption of the company's performance



***The challenge is to minimize the size – and the duration – of this impact.***

# PLM Roadmap



# PLM Roadmap

- *Product Data Organization and Retrieval*
  - The first improvement opportunity that we will look at is organization, control and accessibility of product and design information.
  - Sometimes referred to as “*Product Data Management*” or “*PDM*,” this focus on product knowledge is a fundamental requirement of PLM.
  - A base level of control is required for product data, and simply understanding product structures and Computer Aided Design (CAD) data can be a tremendous challenge for some companies.
  - Without this control, companies don’t have a foundation on which to layer more advanced PLM business processes.
  - In addition to large or complex art libraries, the use of 3D CAD makes better data management more necessary due to the complexity of the file structures and interrelationships.
- *Configuration Management / Change Management*
  - Another key area of focus for PLM Programs can be better management of product configurations and engineering change processes.
  - This process frequently provides an opportunity for improving cycle times, reducing obsolete inventory and improving product quality.
  - This area is often a good starting project for a PLM Program, or followup project to product data management.
  - This project typically involves establishing standardized routing and approval processes, usually implemented through workflow and alert capabilities.
  - The project will sometimes leverage industry standards like CMII, which provides a robust methodology for planning, approving and communicating changes.

# PLM Roadmap

- *Innovation and Process Improvement (Stages and Gates)*

- Another potential area for initial investment is providing much-needed focus to the product innovation process.
- Many companies suffer from attempting to execute more product innovation projects at one time than their capacity will allow. One approach to solving this problem is to reduce the number of projects by focusing on the ones that will provide the best value to the business.
- Another way to improve the problem of capacity overload is to improve the throughput of the product innovation process itself.
- Project management automation helps ensure that projects run efficiently and participants are aware of expected deadlines and deliverables. Improved project planning and control can help companies complete projects on time and consume less resources.
- Project management tools and best business practices that incorporate periodic review and approval, or gates, can also provide the company with the ability to better control their innovation projects so they run more efficiently, achieve the intended goals and have significant reductions in rework.

- *Material Rationalization / Strategic Sourcing*

- Another problem that many companies suffer from is lack of control of material definitions.
- Many companies have significant redundancies in the raw materials that they buy because designers don't have an easy way of finding an existing material definition that will work.
- Specification management and product data management tools with parametric search capabilities can be implemented to allow designers to search existing items before creating new ones.
- Strategic sourcing initiatives can leverage these common material definitions to take advantage of larger volume purchases for a smaller number of items.

# PLM Roadmap

- *Design Rationalization / Design Reuse*

- Another project that takes advantage of the common material definitions from rationalizing materials is a systematic review of existing designs to determine whether duplicate designs can be rationalized and find opportunities to replace materials with less expensive alternatives.
- In addition, standardization of designs enables more rapid development of similar designs when designing new products.

- *Collaborative Design and Concurrent Engineering*

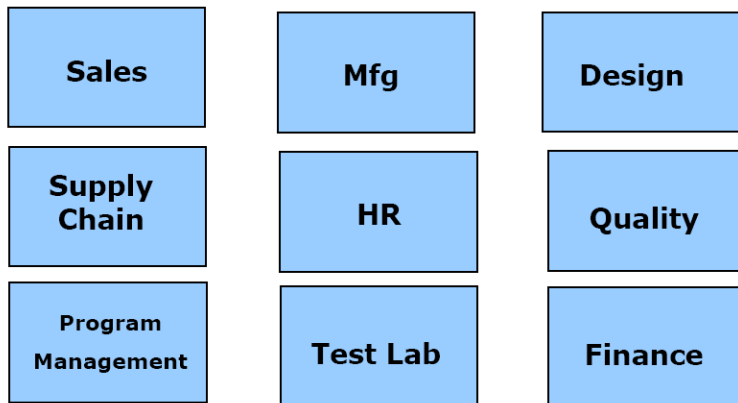
- Another potential PLM initiative is reducing time to market by improving the effectiveness of the design process.
- Some of the potential projects above will likely reduce new product introduction lead-times.
- Products can be brought to market more rapidly when projects are run efficiently, project leaders don't have to compete with too many other projects for resources, team members can easily access needed data and repeatable processes are in place.

# PLM Roadmap

- *Potential PLM Projects – Phasing by Organization*
  - Another approach to phasing a PLM Program is rolling out the implementation by functional area, geography or business unit. This approach allows for lessons learned in one area to be applied to future projects, in addition to the benefits already discussed for phased implementations.

# PLM Roadmap

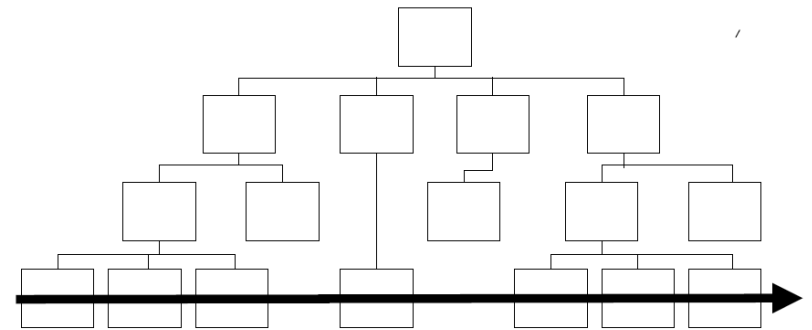
## CURRENT PERCEPTION



**We think functionally, but...**

**Mais ...**

## THE REALITY



**The way work is really done!**

# Sélection d'une solution PLM

1. Prioritisation des processus a traiter
2. Préparation des besoins
3. Préparation des critères de sélection
4. Consultation des vendeurs
5. Benchmark des solutions et évaluation des offres
6. Autres critères
7. Choix d'une solution

# Exemples de projets

1. Choix d'une solution PLM pour un sous-traitant travaillant pour plusieurs donneurs d'ordre (OEM)
2. Projets d'intégration des systèmes d'entreprises
3. Projets de migration
4. Projets de connexion à un PLM OEM

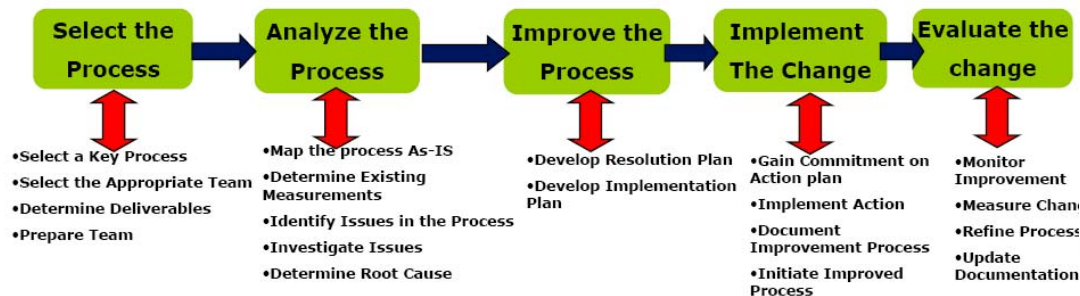
# Exemples de projets

- Étapes d'un projet (vue fournisseur):
  - Avant projet :
    - Prévente
    - critères de sélection du fournisseur Sw & Services
    - Prototypes, preuve de concept, Benchmark
  - Développement et Déploiement
    - Analyse des besoins d'affaires
    - Développement de la solution (customisation , règles d'affaires ..)
  - Maintenance de la solution

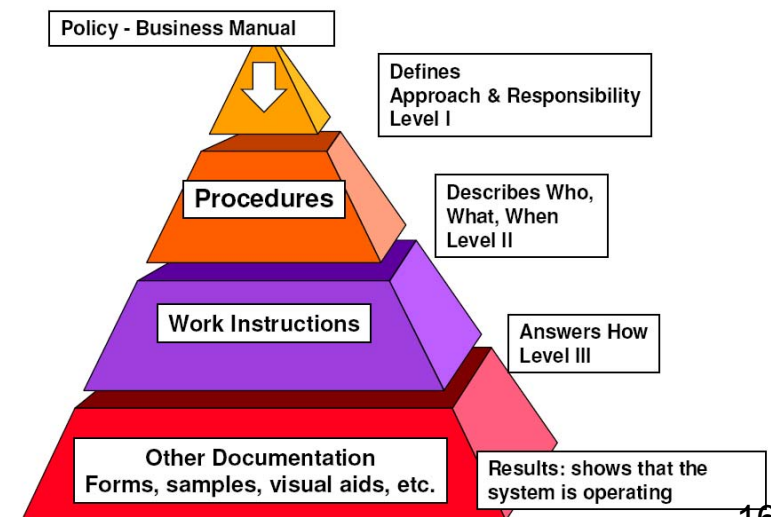
# De l'analyse à la formation

## PROCESS ANALYSIS

### Process Improvement Methodology



## DOCUMENTATION STRUCTURE



- The training material is prepared and customized based on the business process
- The training should be structured based on “Role within a process”



# Coûts des projets PLM

1. Composition des coûts:
  - a) Software
  - b) Services d'implémentation et de développement
  - c) Maintenance
2. Le TCO
3. Les couts cachés
4. Dépassement des coûts
5. Ordre de grandeur des budgets des projets PLM
  - a) Par industrie
  - b) Par taille de la compagnie

Merci

Des questions ?