

What is PLM?



“Product Lifecycle Management (PLM) is the business activity of managing a company's products all the way across the lifecycle in the most effective way.” *

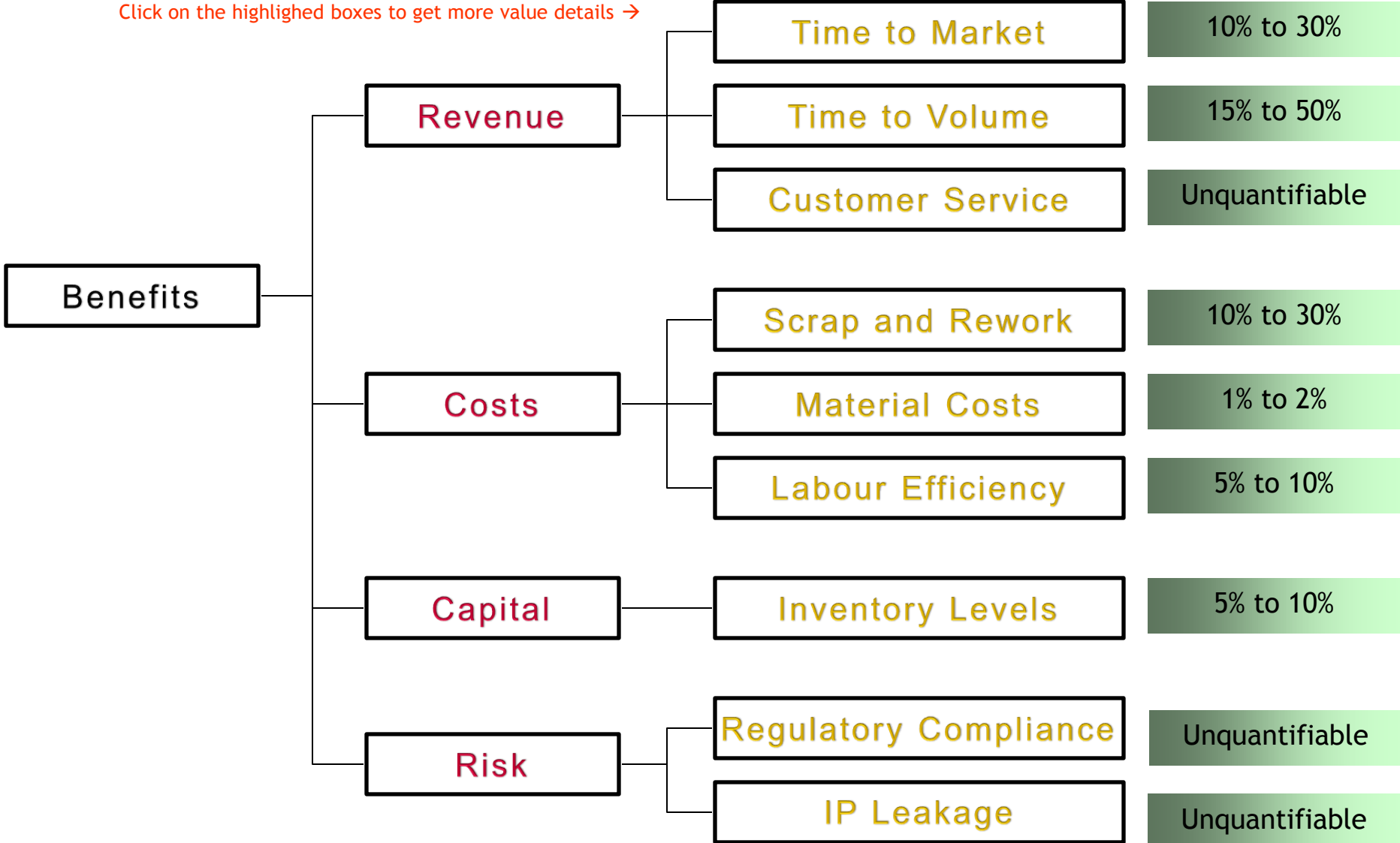
*2PLM - Product Lifecycle Management ezine

The PLM Value Framework



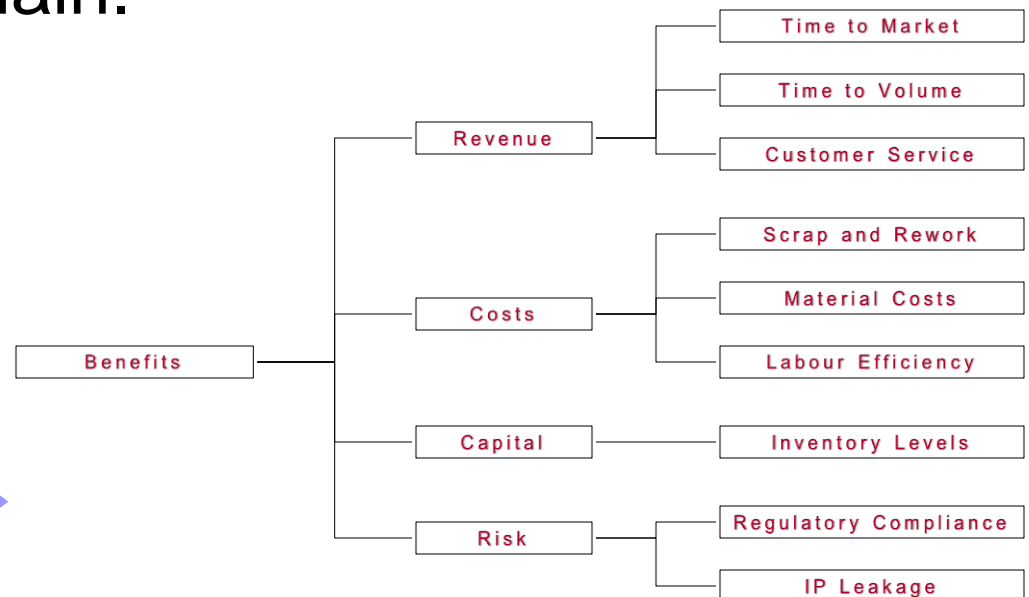
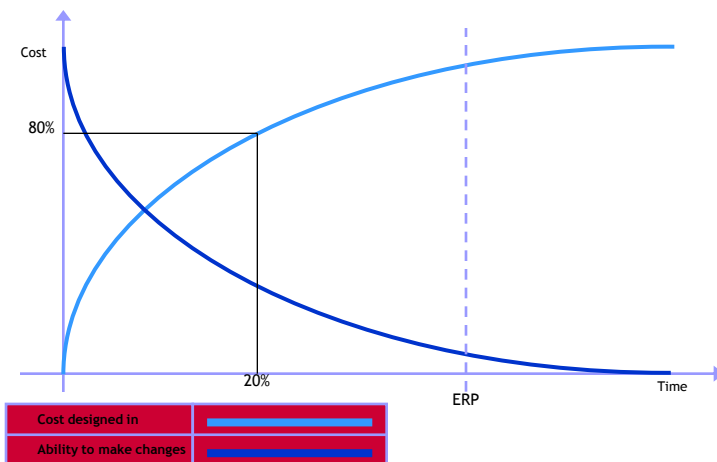
Potential Improvement

Click on the highlighted boxes to get more value details →



Summary

- PLM is an activity that can transform a business.
- PLM is not an ‘engineering-only’ initiative, it is about transparency and management across the whole value-chain.



Revenue - Time to Market



Symptoms

Re-inventing the wheel
Too many prototypes
Delays in starting production
Non-value add time
Not enough of the right kind of people
Lack of prioritization
Poor accountability
No visibility
Last minute schedule changes

PLM Capability

Centralised Product Data Repository
Improved downstream visibility
Elimination of paper processes
Resource Capacity Planning
Portfolio Management
Project Tracking
Task Ownership

Business Impact

First mover price advantage
Market mind share
Market reputation for innovation
Potential improvement of 10% to 30%



Revenue - Time to Volume



Symptoms

Late engineering changes
Lead-time constraints
Material shortages
Manufacturing capacity issues

PLM Capability

Centralised Product Data Repository
Capture manufacturing expertise early
Purchasing provided with clear visibility of early design data
Involvement of Contract Manufacturers during early design phases
Faster Engineering Change Order cycle time

Business Impact

Increased Revenue during high margin period of new product
Barrier to entry of competition
Revenue stream brought forward
Potential improvement of 15% to 50%



Revenue - Customer Service



Symptoms

Poor Product Quality

Time to respond to quality issues is too long

Examples of product being shipped with known issues

Engineers unaware of quality issues with existing product revisions

No visibility of past product fixes and revisions

No visibility of engineering change progress for customer service representatives

PLM Capability

Centralised Product Quality Data Repository

Product Quality data made obvious to engineering

Closed loop and transparent process from Problem Report through to Engineering Change

Faster problem to fix cycle through elimination of process delays.

Business Impact

Improved customer retention and repeat business

Lower days sales outstanding figures

Reputation in the marketplace for quality products and responsiveness is enhanced



Costs – Scrap and Rework



Symptoms

Production people working to old revisions of drawings

Production staff unaware of potential changes to existing drawings

Contract Manufacturers working to old revisions of drawings

PLM Capability

Centralised Product Data repository for all product related information

Visibility of pending/future changes

Web-based technology permitting secure access by third parties

Faster Engineering Change cycle times

Business Impact

Less scrap

Less rework

Higher yields

Potential improvement of 10% to 30%



Costs – Material Costs



Symptoms

Margin erosion
Product costs not competitive
Not hitting target costs for new products

PLM Capability

Early involvement of purchasing and supply chain in product design process
Centralised repository of product cost data – history and forecasts
Visibility of material costs and target cost for design engineers
Early involvement of key suppliers in the design process through web-based technologies
Faster Change cycle times

Business Impact

Lower material costs, typically from 1% to 2% reduction in material costs
Lower product costs, potentially up to 17.5% improvement



Costs - Labour Efficiency



Symptoms

People spending time looking for drawings, specifications, test protocols, etc.

Too much time spent chasing and expediting changes and projects

People keying data into spreadsheets and MS Access databases

People checking data in above systems

Responding to Contract Manufacturer questions

PLM Capability

Centralised Product Data repository for all product related information

Simple but powerful searching capabilities

Web-based technology permitting secure access by third parties

Business Impact

Do more with less or the same people

People spend more time on value add activities

Potential improvement of 5% to 10%



Capital Efficiency – Inventory Levels



Symptoms

Duplication of Part Numbers

Duplication of Material Specifications

Purchasing of materials that are not now needed

PLM Capability

Formalised global part number request process

Global specification management

Formalised global obsolescence process

Faster Engineering Change Order Cycle time

Business Impact

Reduced safety stock levels

Reduced obsolescence

Potential improvement of 5% to 10%



Risk – Compliance



Symptoms

Difficulty in passing regulatory audits

Loss of production due to audit findings

Expensive paper trail to be maintained

PLM Capability

Electronic signatures

Transparent Audit trails

Single repository for Device Master Records (DMR) and Design History Files (DHF)

Business Impact

Relatively Pain-free audits

Improved compliance

Lower risk of loss of production due to regulatory difficulties

Elimination of expense associated with maintaining compliance



Risk – Intellectual Property Leakage



Symptoms

Competitive products appearing on the market
Loss of technology lead

PLM Capability

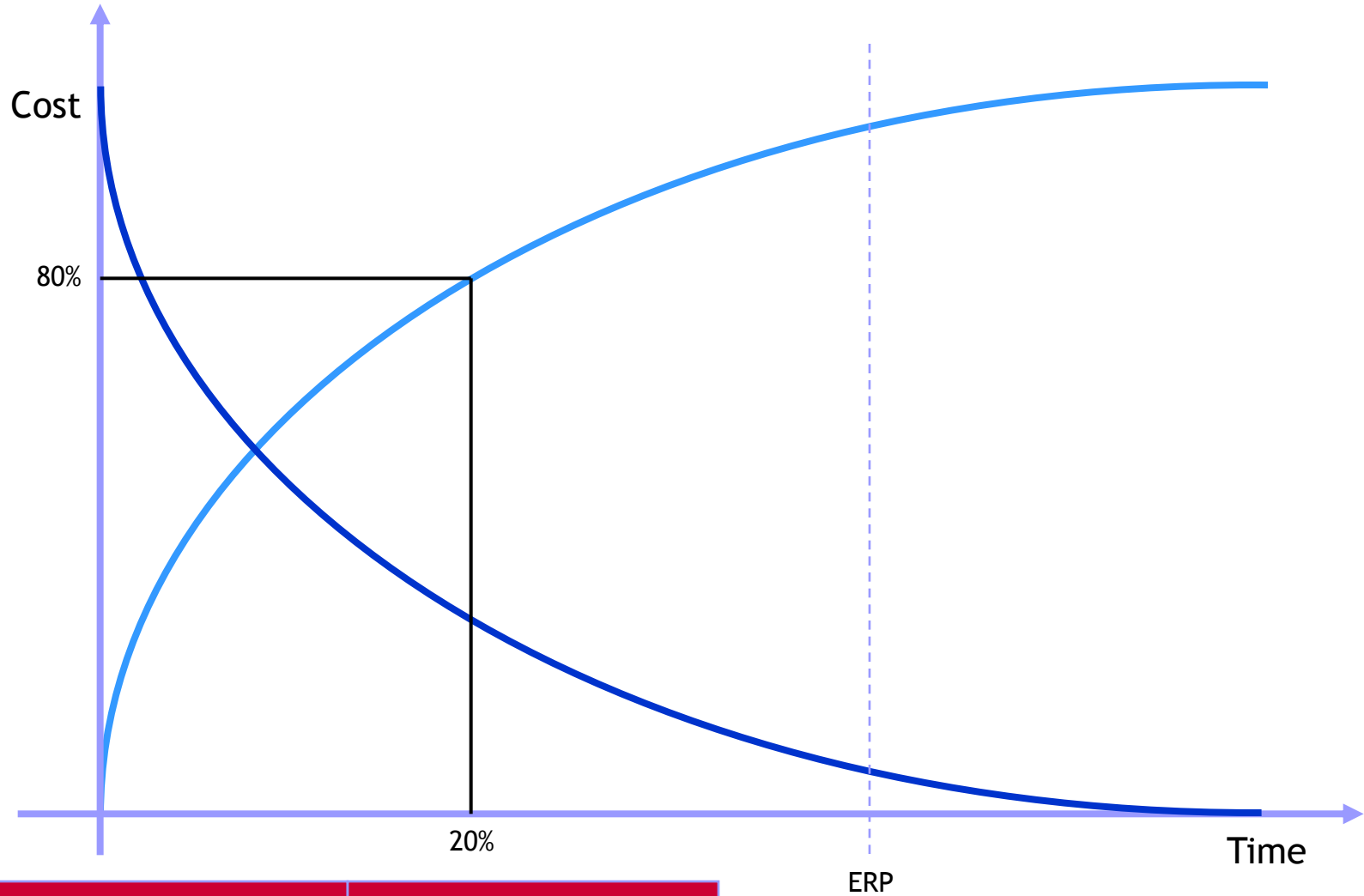
Secure and traceable sharing of product design data
Sharing only what is necessary

Business Impact

Maintaining barrier to entry of lower cost suppliers
Preservation of market share
Preservation of sales margin



PLM and Product Cost

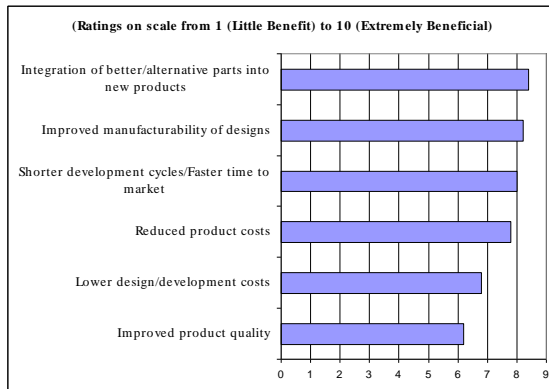


Cost designed in	_____
Ability to make changes	_____

Aberdeen Group: Benefits of Early Integration



Benefits of **early integration**: design, sourcing, suppliers



- Cut costs by 17.5%
- Improve quality 10% - 20%
- Cut design cycles by 20%
- Cut time-to-market cycles: by 10% - 15%

What does the Supply Chain do with Product Data?



- Bills of Material

- MRP - Purchasing
- Work Orders
- Supplier quotation
- Servicing

- Drawings

- Manufacture
- Supplier quotation
- Test
- Servicing

- Material Specifications

- Test
- Purchasing

- What is the cost of data accuracy?
- What is the cost of a slow change process?
- What is the cost of not providing visibility of pending change?