V5 Value Sales Examples, Ideas

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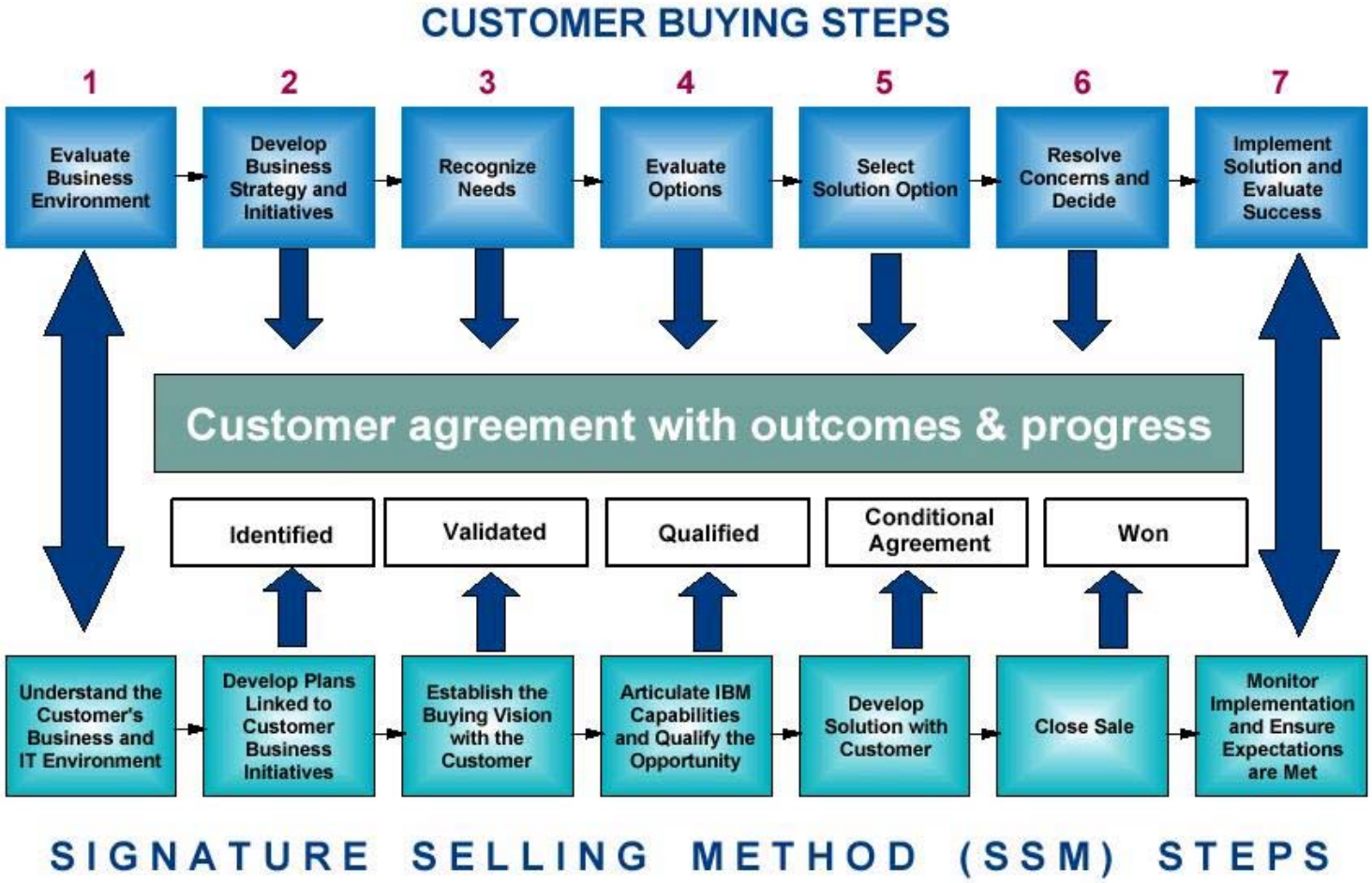
Prepared by Hans Wehnert
Global Sales Development
V5 Transition ww

SSM helps you create value by bridging from the buying to the selling steps



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CATIA V5 Deployment Successes

The central priority for us is to *think strategically into the future instead of waiting* and trying to catch up with the technology developments afterwards.

HOMAG

ALLGAIER

There is no doubt that the automotive industry generally will decide to switch from V4 to V5. At that point in time, when many competitors are just starting pilot projects, we already have collected experiences and we know in detail how to do our job best.

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Objective:

- ***How can we seed ideas to our customers to win additional business?***
- ***our business is PLM oriented***
- ***Why should the customer listen to us***
  - ✓ *'CATIA V4/competitor are doing the job'*
  - ✓ *'Why should I start on V5 now?'*
  - ✓ *'We are cost driven and will not invest now'*
  - ✓ *'My OEM is still asking for V4 data'*
  - ✓ *'too complex for my people'*
- ***Is there a compelling reason to change?***

No Pain..... No need to change

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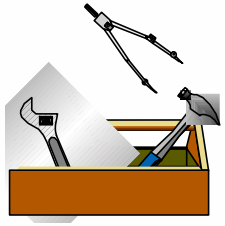
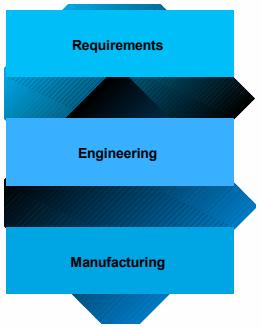
Evaluation Process



our technology offering

- industry processes
- business objectives
- business initiatives

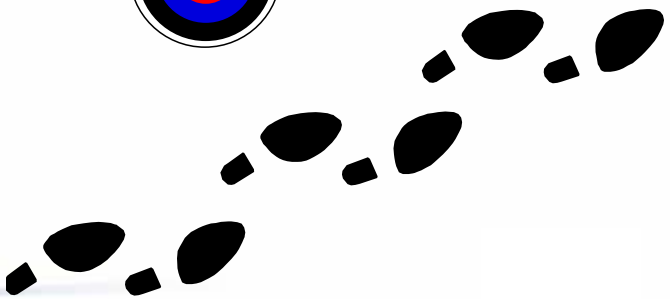


- Customer planning
- Identifying individual pains as a team

- buying vision
- future to be process to reduce the pain

- decider level
- strategic decision
- budget plan

Structured implementation following the vision



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Business Objectives

What's important to your customer?

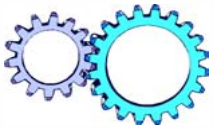
Sales and Marketing Objectives

Grow sales revenues at a target rate
Increase market share/market position
Compete more effectively
Enter new markets
- ✓New products
- ✓New geographies
- ✓New customer segments

Shorten the sales cycle

Operational Objectives

Shorter new product development time
Reduce manufacturing time or set up time
Respond faster to market changes and competitor actions
Improve distribution efficiency, shorten delivery times



Company Image Objectives

Become the vendor of choice for customers
Be viewed as total solution supplier
Achieve recognition as industry leader in …
- ✓Technology, Design superiority,Customer service, Product quality

Recognition as good community citizen or "environmentally friendly company
Recognition as employer of choice; recruit and retain talented employees

Financial Objectives

Maintain operating margins above target level
Improve profitability
Reduce costs in specific areas
Improve financial performance metrics
- ✓Return on assets (ROA)
- ✓Return on capital employed (ROCE)
- ✓Earnings per share (EPS)

Improve cash flow situation

Customer-Related Objectives

Improve customer satisfaction/quality of customer service
Better enable customers to reach their own business objectives
Develop ability to meet a broader range of customer needs
Be seen as "easy to do business with"

Solve Current Problems!

Customer satisfaction problems
Competitive problems
Product quality problems
Time-to-Market problems
Cost control problems
Supplier / Vendor problems
Etc.

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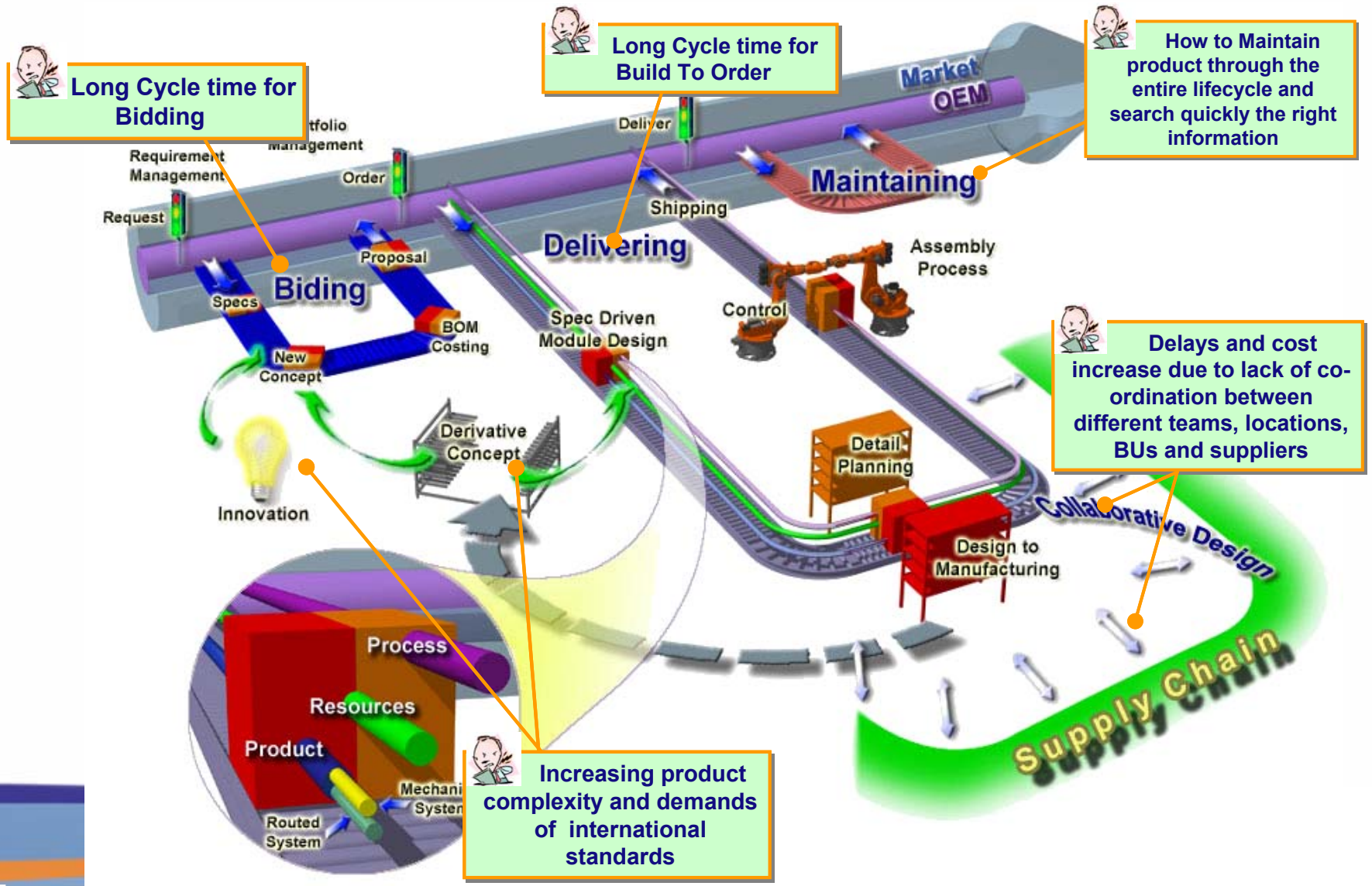
Machinery Process and Pains



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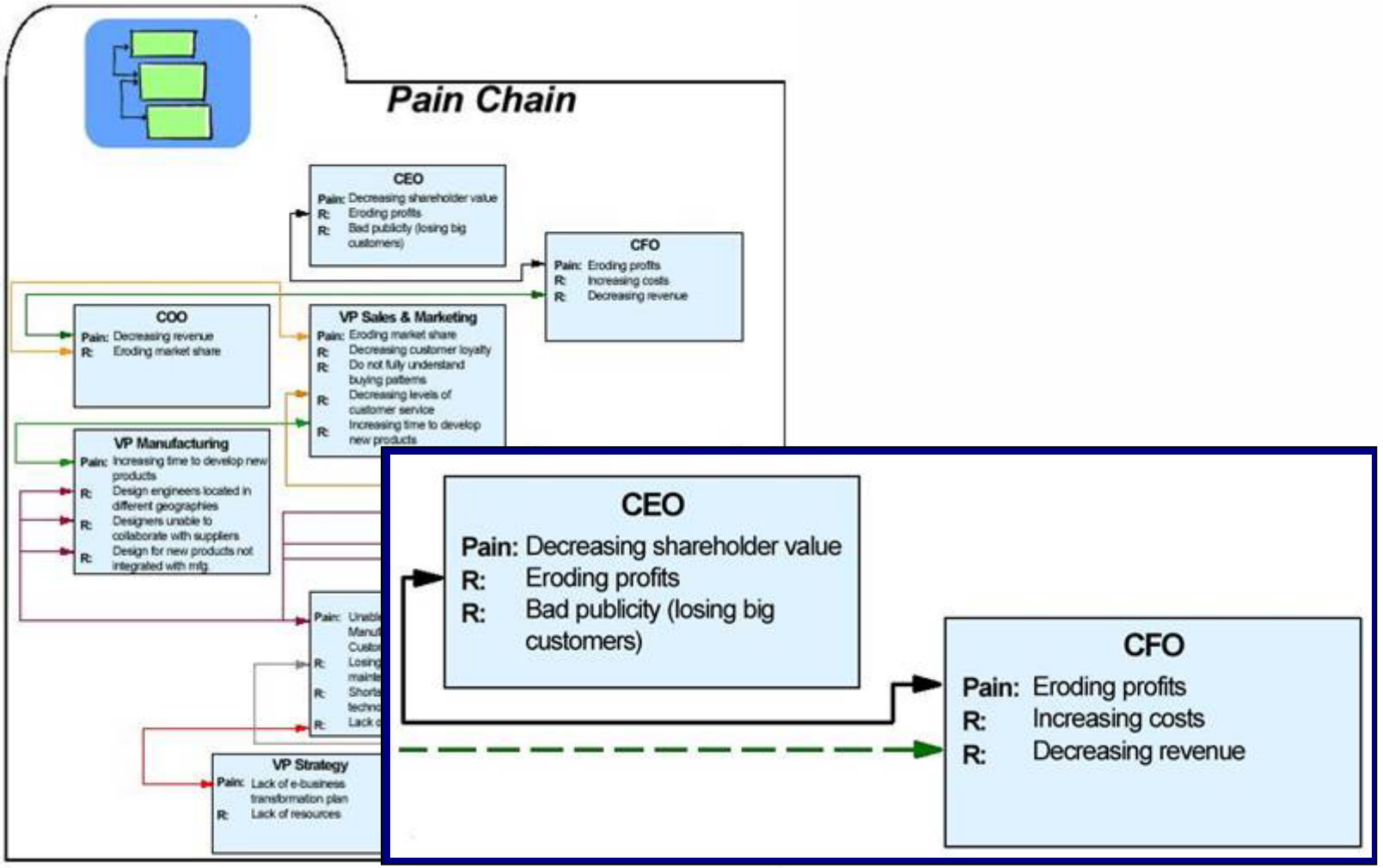
The Pain Chain



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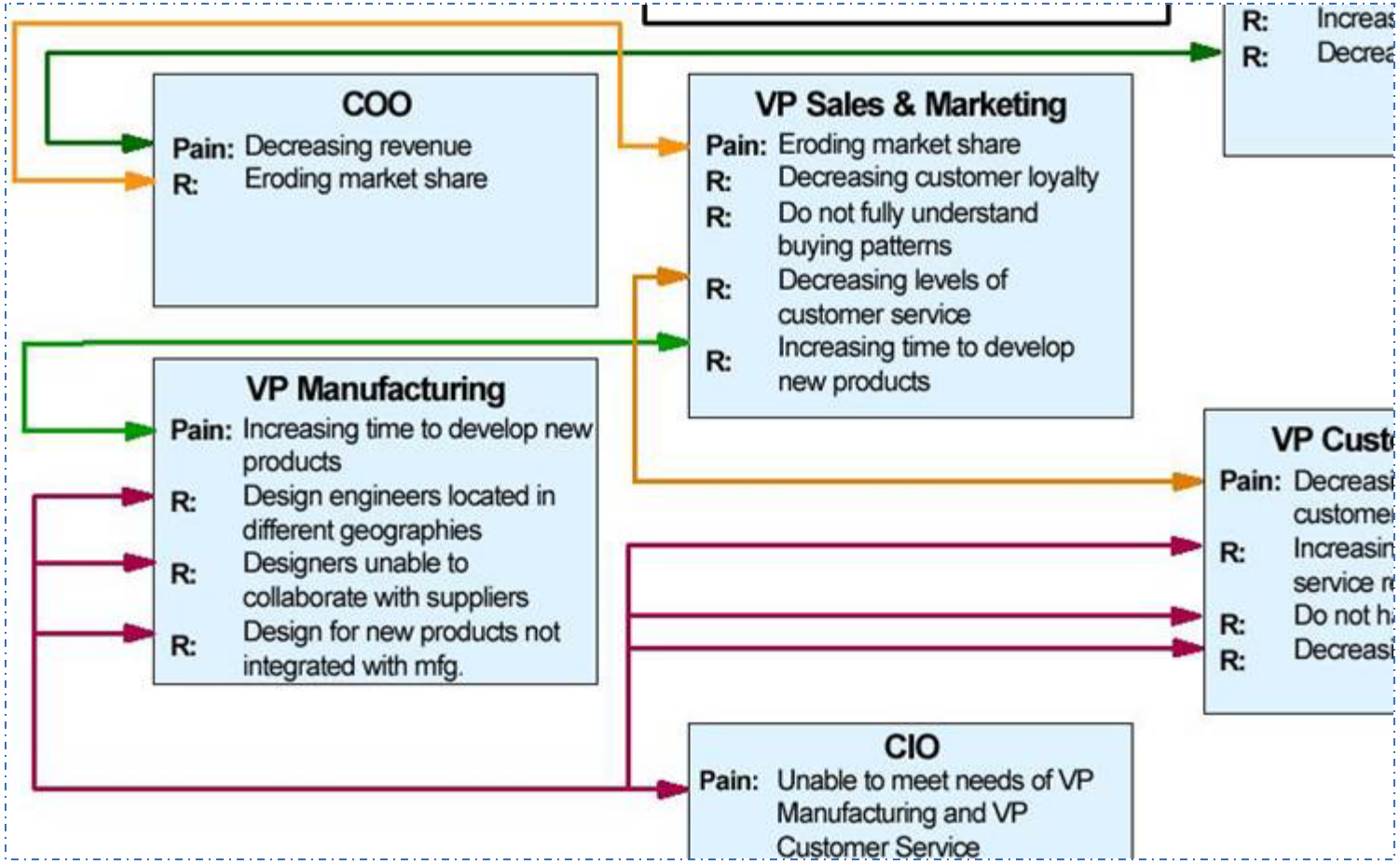
The Pain Chain



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Pain Chain

CEO: Eroding market share
R: missing product innovation

CFO: Revenue outlook decreasing
R: no flexibility in product adaptation

Mktg: Incorrect customer requirements/feedback or not in time
R: no feedback process implemented

Dev: inability to design right products on time
R: long development cycle

CAD: Manage variants complexity on time

Speed-up complex product design including know-how re-use,

associative from design to manufacturing

CAM: jigs and fixtures have to be designed in the last minute responding to late changes while supporting implemented procedures

To Be Situation
for product design

increasing product creation flexibility in order to deliver the right product in time

delivering product alternatives in shorter time frame and being open for new alternatives at the same time

Company-wide, consistent view on all project status information and all product-related data

define the product architecture, driven by a few specs and so winning time for evaluating new alternatives

evaluate a wide range of alternatives while the product architecture is not frozen and still can be adapted to new market requirements

create a description of your conceptional product architecture which still allows a variety of different instances within the open space of the concept. Imbedded knowledgeware will extend the capabilities, controle the compliance of company know-how and experience, and drive with rules and checks the execution of any instance

the system will control the proper link between designed geometry and associated cutting strategies to avoid manufacturing failures the system will control with knowledge based rules that the right cutting technology is deployed based on significant geometry changes

integrate assembly techniques into design validation and link product design to tooling defintion to finish tooling with product design

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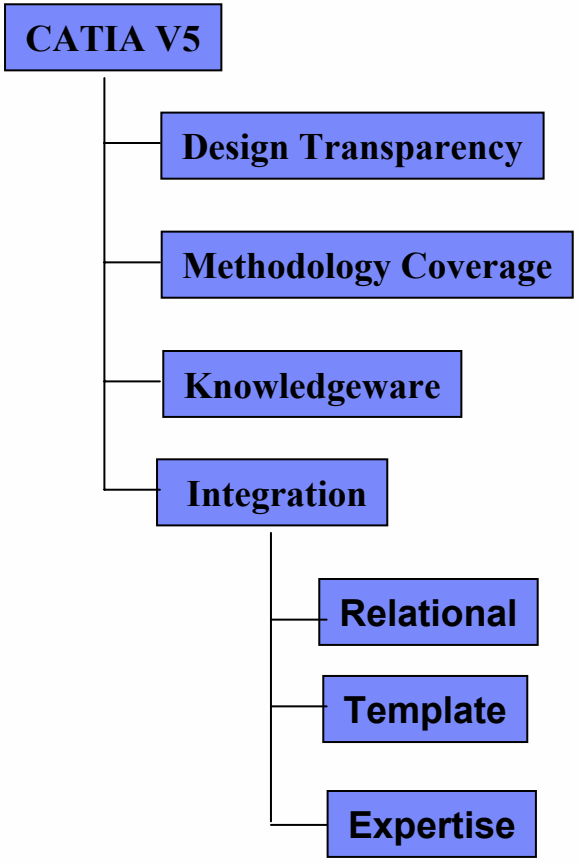
CATIA V5 Technologies and winners



history tree, product related names, parent/child, impact analysis...

design based on specification and not geo level

rules, checks, optimisation, reactive design,...

Level of Integration between Geometry, Part, Product and Process:

skeleton, power copy, UDF (ditto + parameters), catalogues, assembly templates, family tables

publication, link management, context management

Expert applications and customisation environment

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Customer Britax...*Transparency*

Situation:

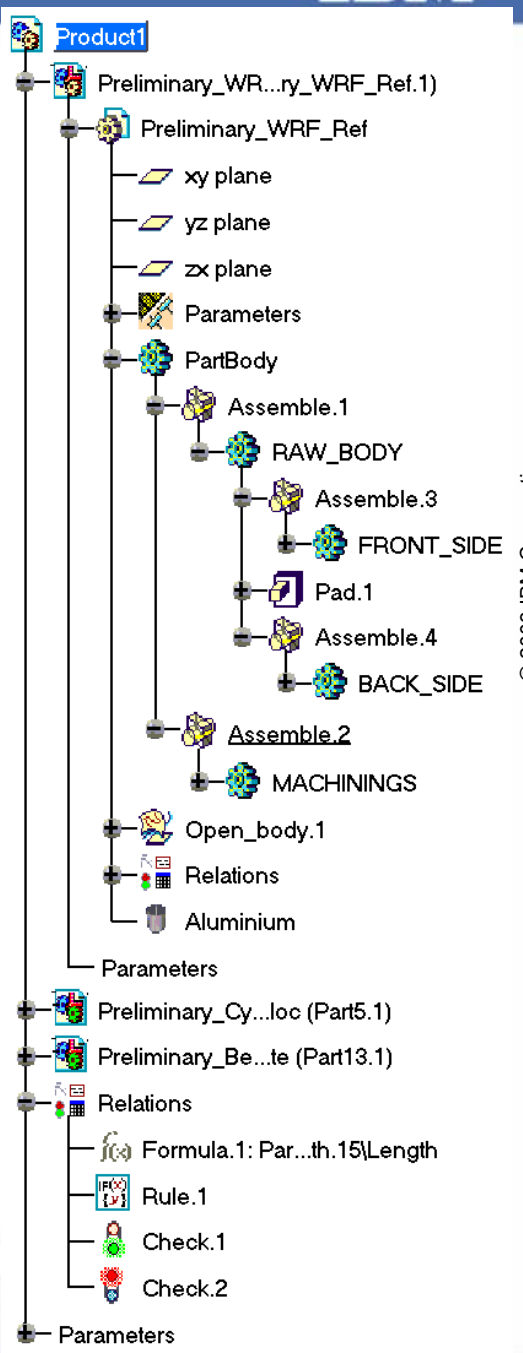
Britax delivers child safety seats with 2D design. The market is occupied by 5 or 6 brands and all seats are marketed by specialist stores. Britax needs key differentiators. The biggest competitor to a new seat is last years model of a seat being sold at a discount price.

Objective:

Be able to deliver innovation based on the old model. Getting early acceptance by the retail stores of a new model and negotiating the sale price early to develop the correct product with the correct initial sales price to allow for year on year price reductions.

Achievement:

Re-use of features and concepts, but allowing innovation for a new product by supporting current legislation. Creating detailed concept model for evaluation, early management decisions for investment. Speeding up the design process linked to styling, product validation and manufacturing. Keeping flexibility for late design changes and evolution Increasing the intellectual capital vault at the end of the project.



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Integral Powertrain...*Methodology Coverage*

Situation:

Integral Powertrain is an engineering company working in the area of engine, powertrain and tooling design mainly in the motorsport market.
It is a very competitive and demanding market.

Objective:

To speed up the design process productivity, quality and efficiency and to develop in CATIA V5 a unique design methodology for all design aereas to reduce process time, to increase design robustness and to get advantage over competitors.

Achievement:

Integral Powertrain is able to design a 12 cylinder engine in less than 5 weeks from concept to design creation.

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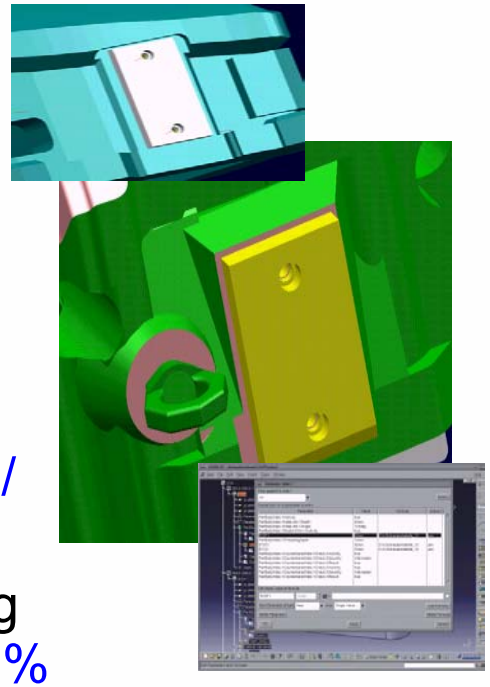
Intelligent Tooling at AUDI...Knowledgeware

- **Technical Innovation**
  - Intelligent Master for Tooling Flange Heels.
  - Rules Generate Design and Propogate Changes
  - Automated Validation Process with embedded Checks
  - An Interactive and Easy to use system



- **Business Impact**
  - Mr Mueller estimates that through the ability to integrate standards , Knowledgeware will help identify/eliminate automatically 150 000 errors / year.
  - Goals included a 10%-20% time savings during the initial design process and a further 30%-50% time savings during the inevitable design changes

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N Schlumberger, France…Integration

Situation:

Spinning Machines for long fibers in textile industry, 700 employees, Turnover 70MEuro. Characteristic is that there are considerable changes in the volume of activities year over year, no integrated packaging and no co-development with other plants to define complementary product lines. Component design was done in 2D with high customized SW and a PDM system for data exchange to layout and production with manual interactions.

Objective:

We had to automate the process from conception to finished products,
to modularize and to define building blocks for our products to better manage the design,
to integrate parts design, sheet metal and casted part design in one system
to create a virtual prototype of our products and
to visiualize the complete product early which we intent to market

Result:

"Without **CATIA V5** we would not have built the same product. Because CATIA V5 gives us the overview of the total project. **SmarTeam** provides the right data at the right time. Now we can integrate packaging and do codevelopment with other plants to create complementary product lines."

Jean Louis Dumas, Directeur General Adjoint, Gerard Brugger, CAD CAM Manager

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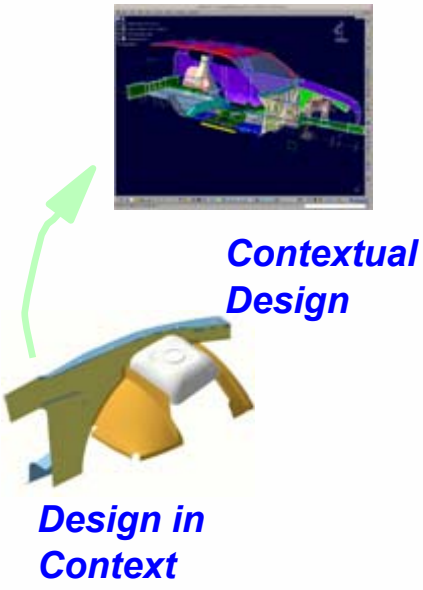
Customer Examples...*Relational Design*

Situation:
Only few customers confident of working at this extended level. The ongoing projects are not public cases to be referenced. For internal usage only. Customers like Toyota and BMW are exploring this technique for concept definition before using a more structured template approach.

Objective:
To increase design productivity and decrease the concept time without losing quality and design expertise. This will give room for investigating new design ideas and incorporate them into the standard processes

Result:
Toyota has done an excellent job in structuring their processes and the component design. They have created many templates which are connected. BMW is continuously exploring the strategy to move to a parametric car. The departmental work processes have to be integrated as well as the cooperation with suppliers.



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Aerospace Tooling...*Template Design*

Situation:

In aerospace, when you're doing the tooling of a project you're at the end of the process chain. Traditionally, you have had to wait for all of the designs to be finalized and released for you to design the tooling.

Objective:

Manage better short cycle times, getting more flexibility and reduce the pressure on the tooling manufacturer execution.

Achievement:

CATIA V5 allows to make designs and make assumptions based on similar kinds of template techniques, and those designs can be adjusted at the last minute based on the latest information. The data can even come in via Microsoft Excel, from an engineer who cannot run CATIA, and the whole CATIA system will adjust everything that needs to be adjusted to the new data.

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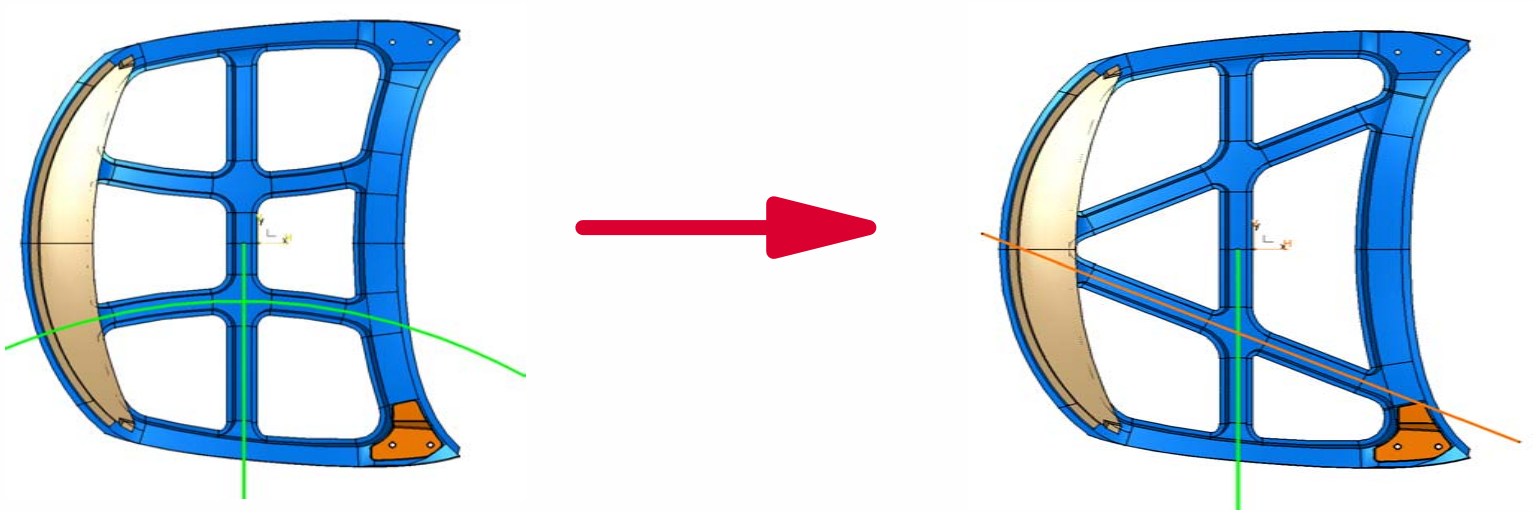
Example for Benefit Aspects



The time needed to execute the necessary change in

CATIA V4 is about 4 days and in

CATIA V5 is about 5 minutes

BMW, Hr. P. Reindl, April 2003 in Frankfurt

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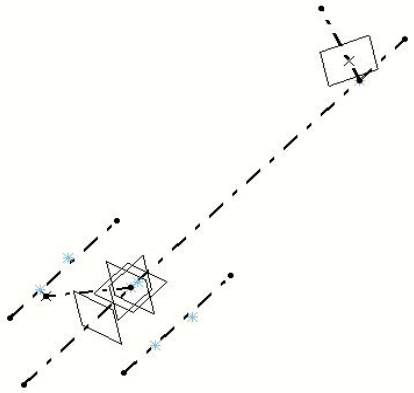
Template Example

Skeleton Model



Structured Tree with seperate Parameter List

Final Instance Imbedded Know-how

Any new design is automaticly imbedded into the engine design and is driven by published driving parameters of its context to ensure perfect fit without additional adaptations

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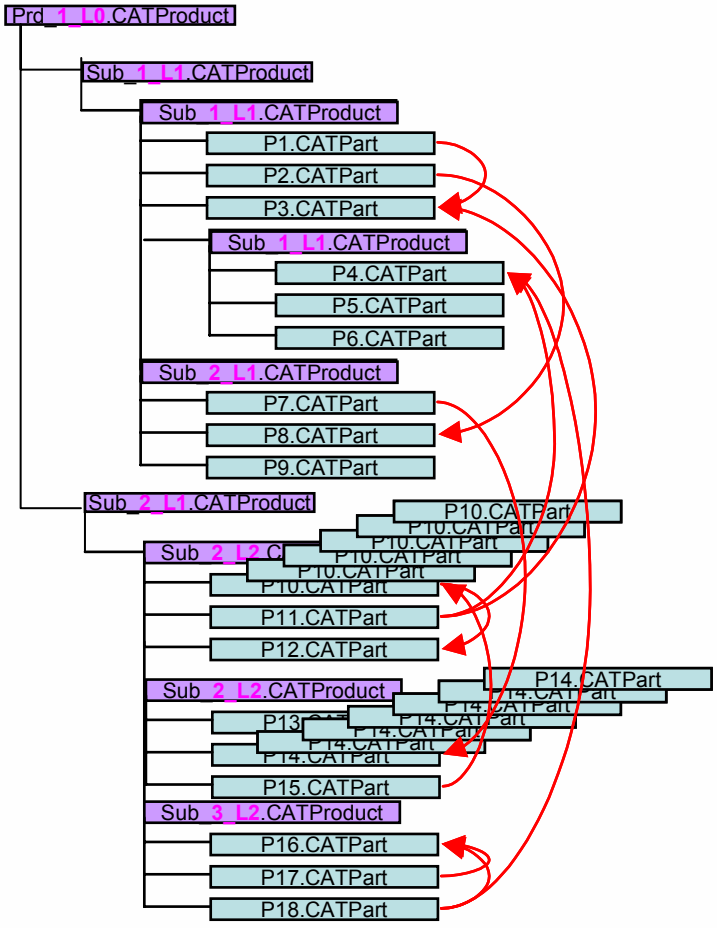
Challenges in Collaboration

Collaboration



- the flow of the links must be controllable and understandable afterwards
- linked structures must be easily loadable in their context

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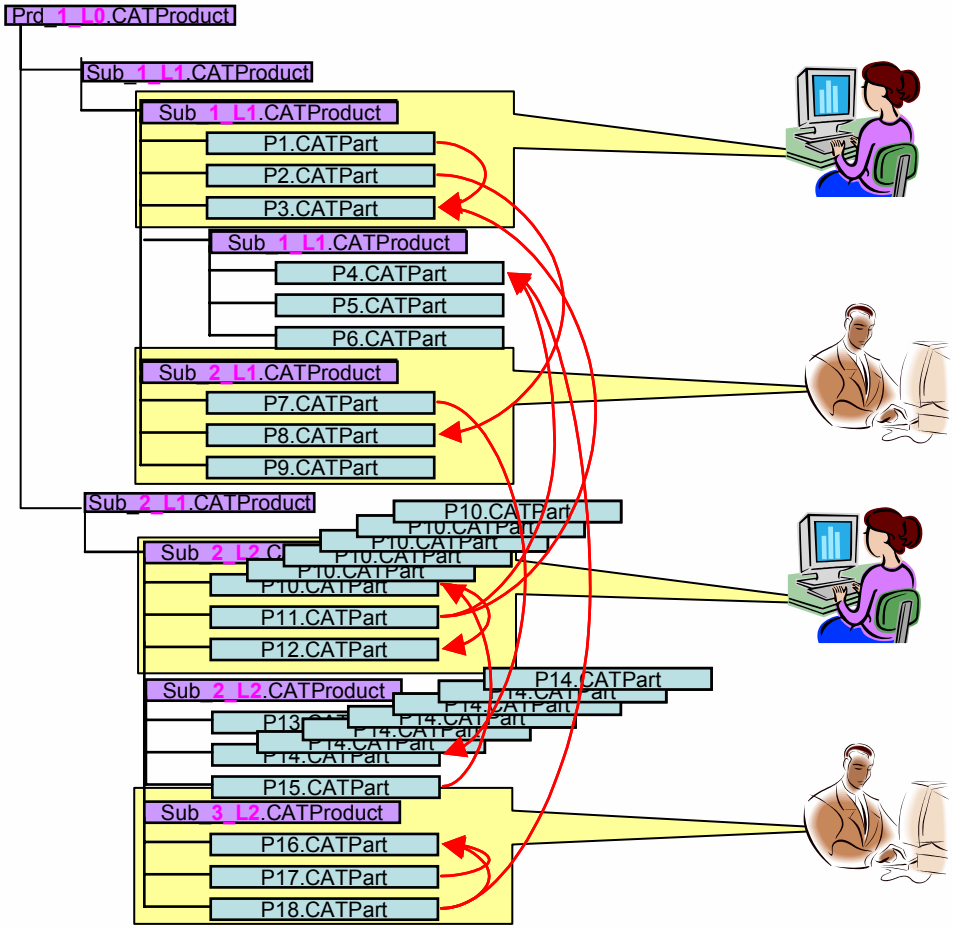
Challenges in Collaboration

Collaboration



- the flow of the links must be controllable and understandable afterwards
- linked structures must be easily loadable in their context
- distributed ownership for modules and components
- design progress documentation by versioning

Methodology for design, data management and communication is needed

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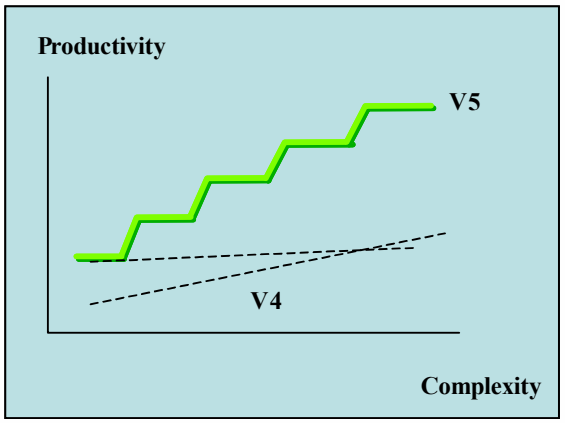
Roadmap of Implementation and Automation



Step 1: ISO-Part

Create parts in correct orientation and size.

Positioned using spatial positions

No part to part relationships maintained

Step 2:ISO -Product

Crea
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Step 3:Product -Context

Uses automation to

Step 4:Skeleton -Management

Define project strategy suitable for multi-user design.

Prepare for template

Step 5:Template -Design

Define project strategy suitable for multi-user design.

Prepare for template approach.

Strategy to lead a

increasing need for - data management - collaboration

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Value Statement

"We believe our customers will be able to
find much better support for their business initiatives or business objectives in the product lifecycle management in the extended enterprise
by increasing the design process productivity by factors
(valued at many manufacturing customers such as KREBS ENGINEERS)
through the ability to
enable management of modular product variants through a robust "product configuration definition" and "variability control", "Relational / Adapting design" to ajust the existing rule and spec driven design to the new market specifications and defining rules and checks to capture company knowledge and experience
as a result of implementing an IBM accelerated product development capability including data mangement and mechanical design components ."

Quote of Mark Holmberg, Engineering Manager at KREBS Engineers:

"No other CAD system could provide the same increase in productivity as CATIA V5. Its knowledgeware products give us specification-driven advantages, instead of merely an ability to parameterize geometry"

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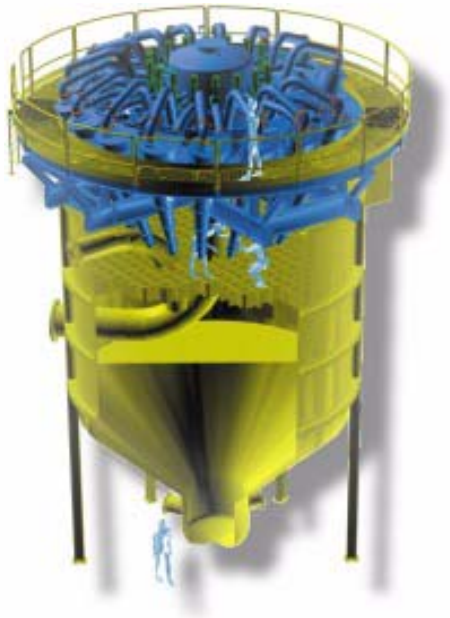
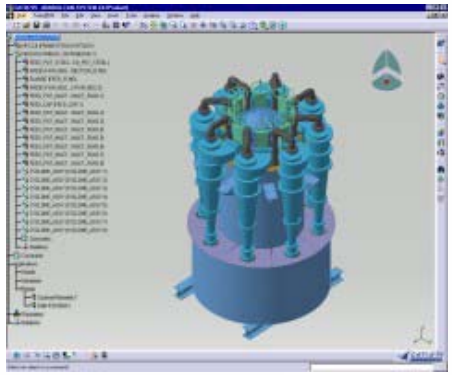
Example – Krebs Engineers

- ***Situation***
  - *The organisation was under competitive pressure to deliver customised products*
- ***Critical Issue***
  - *Increasing Costs of Developing New Products*
- ***Reasons***
  - *Time taken to develop new products.*
- ***Capabilities Needed***
  - *Design driven automatically by input from Sales Engineers working directly with his customer.*
- ***IBM PLM Provided***
  - *Catia Knowledgeware with PLM Services, Creation of a master model with embedded knowledge and checks.*
- ***Result - Benefits***
  - *Productivity - Entire system created in under 1 hour. "15 times faster than previous methods".*





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Thank You……..

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