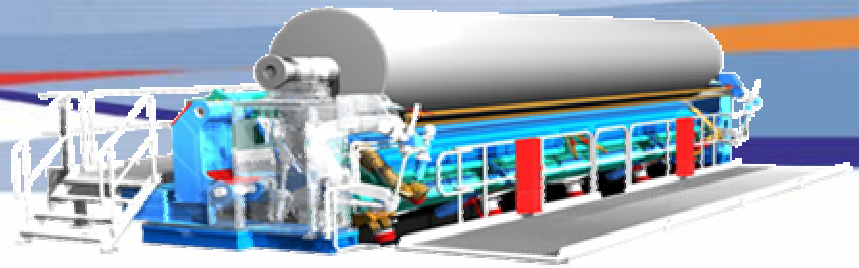
Industrial & Mobile Machinery

Pains Highlights



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Macro Process

1

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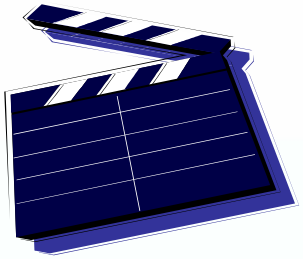
Heavy Machinery & Mobile Equipment Macro Process



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Main Pains / Value Proposition

2

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Main Pains

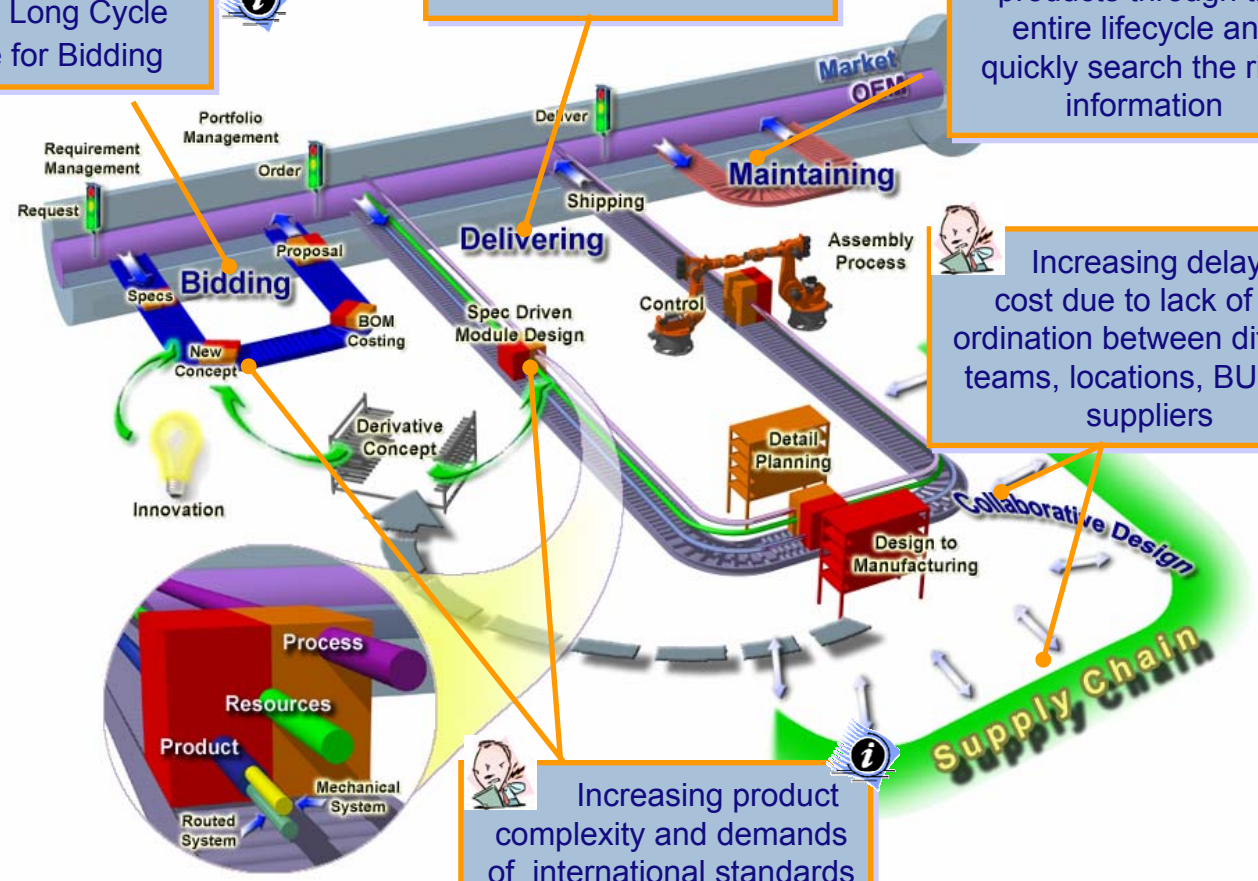
Long Cycle time for Bidding

Long Cycle time for Build To Order

Maintain the products through the entire lifecycle and quickly search the right information

Increasing delays and cost due to lack of co-ordination between different teams, locations, BUs and suppliers

Increasing product complexity and demands of international standards



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Solutions / Benefits

3

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Solutions / Benefits

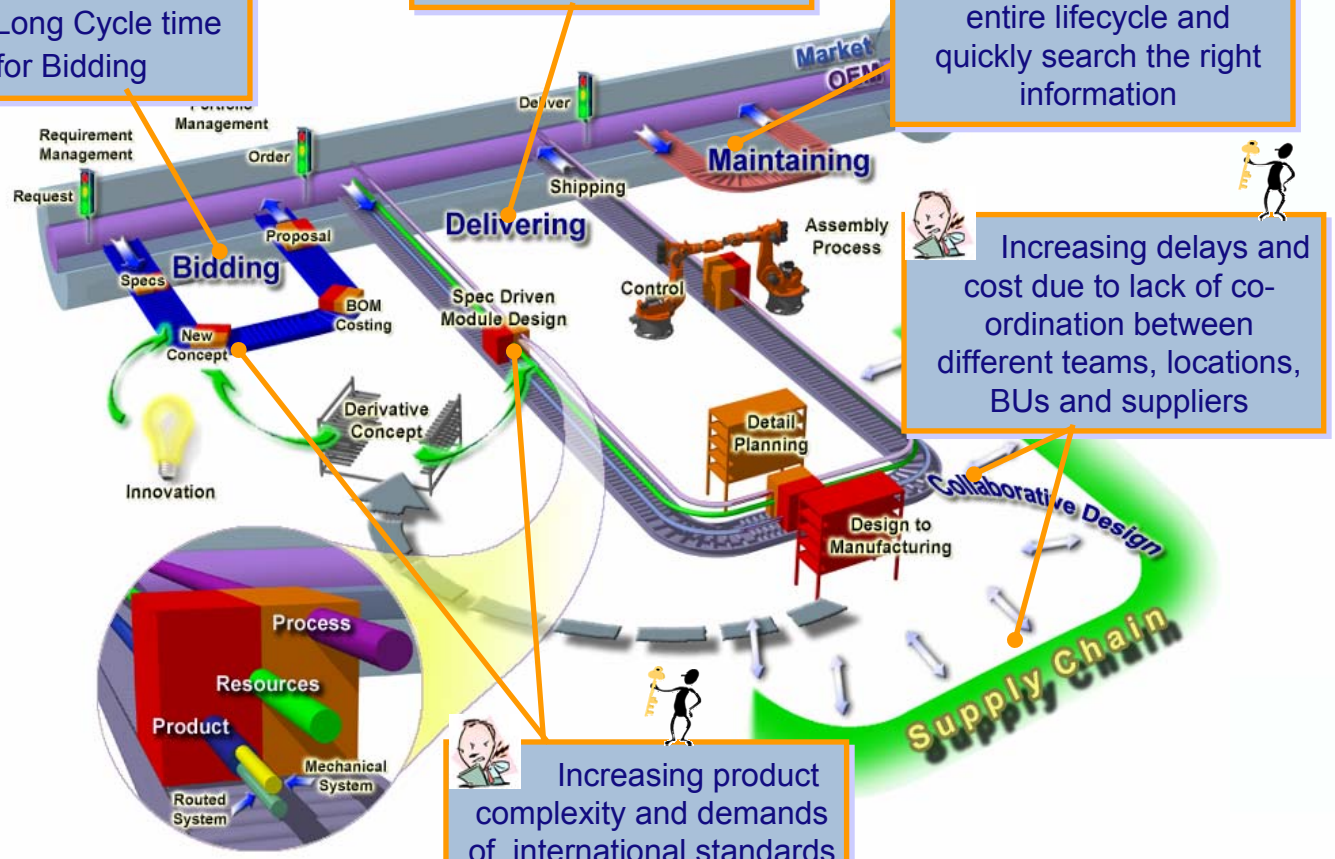
Long Cycle time for Bidding

Long Cycle time for Build To Order

Maintain the products through the entire lifecycle and quickly search the right information

Increasing delays and cost due to lack of co-ordination between different teams, locations, BUs and suppliers

Increasing product complexity and demands of international standards



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Customer References

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Customer References

For more details see References Presentation …

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Customer Testimonials

5

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Customer Testimonials

GASPARDO

"We've been using 3D design here at Gaspardo Ltd for some time. However, we were really impressed by CATIA 5. The software is so user friendly. It can be used by people with or without experience in Computer aided design."

N.S.C. schlumberger

"If we didn't have that tool, we wouldn't have built the same machine. This new tool gives us a new way of working and of getting ahead in a project because we always have an overview of the whole project ... SMARTEAM will soon be extended in the workshop so people will have access to the right data at the right time."

MÄGERLE

"The major advantage of CATIA V5 over Helix is that it enables us to spot parts position trouble much faster. Thanks to its 3D visualization, the customer is rapidly involved in the production process. Its clear Data Management tools give us instant information retrieval at any time."

MOTOMAN a YASKAWA company

"Use CATIA without training class, No problem to move from 2D to 3D, Faster in Design, Work with our customers in early product stages, We collaborate better with our customers, Our customers are in CATIA V4 and we design in CATIA V5, Design Quality is improved, Reduced cost, right the first time, Standardize and optimize again with knowledgeware, Full process coverage."

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Thank You

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Backup Slides 1

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Customer Pain n º1

- *Pain:* ***Long Cycle time for Bidding***

	Reason	Value Proposition	Capabilities
1	Restart from scratch each time	Manage families of machine where new project are derived from previous	Capitalize each project (and each BOM) into a single environment managed by an intelligent database using specific queries
2	Long feasibility studies on customer specific requirements	Enable fast customization for conceptual studies and their integration into the machine mock-up	Flexibility and freedom in design methods with easy mixing of parametric and unconstraint design approach
3	Estimation of the machine performances based on several specialist studies	Enable DMU synthesis (kinematics) and analysis (fatigue, dynamics…) through the entire Lifecycle	Integrated DMU and FEA into the design environment Capitalization of studies and results for further similar analysis
4	Difficult to estimate the new machine cost	Maximize the use of standard components and corporate rules Easy BOM extraction for cost analysis	Standard part catalogs, knowledge ware for embedding design rules BOM management with easy customization

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Customer Pain n º2

- *Pain:* ***Long Cycle time for Build to Order***

	Reason	Value Proposition	Capabilities
1	To many customized components	Capitalize pre-approved standard components and enable fast access to designers	Templates, catalogs Knowledge ware to validate corporate rules during the design phase or validation
2	Long and late Iterations on validation of the machine	Concurrent engineering of design and DMU validation Quick virtual mock-up analysis for detecting errors earlier	Integrated Kinematics, space analysis review Clash management Integrated Digital Manufacturing validation
3	Time spent for late engineering design change	Manage design changes and propagate modification to the complete product avoiding human interactions	Design in context of the assembly linked with associative DMU verification tools Associative environment for downstream operations (drawings / NC/ Analysis)

more …

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Customer Pain n º2

- *Pain:* ***Long Cycle time for Build to Order***

	Reason	Value Proposition	Capabilities
4	Too many customer changes due to their expectations	Use standard family of machine as much as possible to integrate the customer expectation into the engineering cycle Focus engineering resource on specific requirements	Customer management of the evolution of the project by accessing the data whenever needed Associative standard corporate assemblies and project databases
5	Linear vertical processes during the design phase	Concurrent engineering of 3D Design, electrical tubing, assembly and validation (inspection).	Integrated platform for design and simulation (kinematics, NC, inspection) based on the same unique data
6	Duplication of studies for the Resources and Processes	Consistent definition of the product, the resources and the manufacturing processes early in the planning definition	Product / Process / Resources management in an associative context

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Customer Pain n º3

- *Pain:* ***Increasing product complexity and demands of international standards***

	Reason	Value Proposition	Capabilities
1	Implement quality standards	Reduce cost on product audit trails Integrate product Development across organization	Standard part catalogs, knowledge ware for embedding design rules BOM management with easy customization
2	Rigid product generally not or poorly reusable	Reduce test and prototype evaluation costs by enhancing product modularity	Generative scalable analysis synthesis solution Integrated management of test and maintenance information
3	Difficult to ensure the quality	Achieve product certification and compliance requirements at the very first time in order to support testing and certification process	Requirements management & certification processes control Collaborative process and design re-use management

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Customer Pain n º4

- *Pain:* ***Increasing delays and cost due to lack of co-ordination between different teams, locations, BUs and suppliers***

	Reason	Value Proposition	Capabilities
1	De-located teams generating a lack of communication and much more iterations	Share the same information platform and planning Reduce technical re-work and minimize risks	Design publishing enabling concurrent engineering Coordinate product development through change management Multi-discipline (ECAD, SW, CAD) Collaborative Workspace
2	Bad integration of the Supply Chain	Ease access to the suppliers data Integrate the suppliers into the OEM planning	De-located collaborative environment Skeleton methodology made possible by the publication of accurate elements

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Customer Pain n º5

- *Pain:* ***Maintain the products through the entire lifecycle and quickly search the right information***

	Reason	Value Proposition	Capabilities
1	Late availability of the production documentation	Ease technical publication process	Intuitive access to data from non-engineering community and occasional users
2	Too high Maintenance costs	Minimize number of references to be manage at shop floor Configured BOM Management	Use of knowledgeware and catalogs of pre-approved components Manage BOM for each machine
3	No capitalization of the maintenance procedures	Enhance maintenance documentation with mounting/unmounting process videos of the machine mock-up	Create video on DMU operations like fitting Annotation management and screen captures within various scenes OLE links to corporate documentation

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Backup Slides 2

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Customer Challenge n º1

- *Pain:* ***Long Cycle time for Bidding***

	Reason	Product / Offering
1	Restart from scratch each time	CATIA V5 and Smarteam / Vault / BOM
2	Long feasibility studies on customer specific requirements	CATIA, Tolerancing, Knowledgeware, Kinematics, CAA V5 Partners
3	Estimation of the machine performances based on several specialists	GPS Analysis, DMU and CAA Partners
4	Difficult to estimate the new machine cost	Knowledgeware, Smarteam / BOM, Components Catalogs

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Customer Challenge n º2

- *Pain:* ***Long Cycle time for Build to Order***

	Reason	Product / Offering
1	To many customized components	CATIA Knowledgeware, Catalogs
2	Long and late Iterations for validation of the machine	DMU Synthesis, DELMIA, CAA V5 Partners
3	Time spent for late engineering design change	CATIA, DMU Synthesis

more …

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Customer Challenge n º2

- *Pain:* ***Long Cycle time for Build to Order***

	Reason	Product / Offering
4	Too many customer changes due to their expectations	3d com, Smarteam / BOM, WebSphere
5	Linear vertical processes during the design phase	CATIA, DELMIA, CAA V5 Partners
6	Duplication of studies for the Resources and Processes	DELMIA Planning Process, Smarteam

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Customer Challenge n º3

- *Pain:* ***Increasing product complexity and demands of international standards***

	Reason	Product / Offering
1	Implement quality standard	DELMIA inspection, 3d com, Smarteam, WebSphere
2	Rigid product generally not or poorly reusable	GPS Analysis, DMU and CAA Partners
3	Difficult to ensure the quality	DELMIA planning process, Knowledgeware, Smarteam

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Customer Challenge n º4

- *Pain:* ***Increasing delays and cost due to lack of co-ordination between different teams, locations, BUs and suppliers***

	Reason	Product / Offering
1	De-located teams generating a lack of communication and much more iterations	**Smarteam / Vault / Gateway / BOM / Community Workspace, 3d com**
2	Bad integration of the Supply Chain	**Smarteam / BOM / Community Workspace, 3d com**

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Customer Challenge n º5

- *Pain:* ***Maintain the products through the entire lifecycle and quickly search the right information***

	Reason	Product / Offering
1	Late availability of the production documentation	Smarteam / Web Editor / Community Workspace, 3d com
2	Too high Maintenance costs	Standard Components Catalogs, Knowledgeware, Smarteam / BOM / Vault
3	No capitalization of the maintenance procedures	Smarteam, DMU, Kinematics, Fitting

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Backup Slides 3

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Customer benefits

EISENMANN

Eisenmann Grenoble

"To launch our new subsidiary in Grenoble, we selected the CAD/CAM/CAE system with solutions tailored to our needs. CATIA V5 and especially its CATIA Team PDM product will enable us to share our product data more efficiently, which facilitates all aspects of our product development processes and helps us optimize our processes throughout our entire enterprise."

Joses Rodrigues, research director, Eisenmann Grenoble

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Customer benefits

Kalmar Industries

"We know that we will save money, become more effective and reach the market faster with CATIA V5 "

"It creates greater efficiency within the whole group because we now have a common platform"

"We could only work in 2D, with CATIA V5, we are able to work in 3D throughout the entire organization"

Mats Karlsson, project leader , Kalmar Industries

"CATIA V5 supports the whole process of an engineering company, including design, computations, manufacture, information management and simulations"

Pär Nobring, project manager, Semcon

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Customer benefits

MDS SCIEX

"With the implementation of CATIA V5 our product development teams can get back to working on efficient design solutions and others within the company can take advantage of the capabilities offered.

- *Designers and engineers need to spend their creativity and energies solving technical problems.*
- *Tap into extensive CATIA V5 product family to further enhance the efficiency of our entire product development process.*
- *CATIA V5 is putting "Focus and Enjoyment" back into design at MDS SCIEX today."*

George Valaitis, COE News Net

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Customer benefits

NSC Schlumberger

"The results were beyond what we had hoped for"

"Our goal is to achieve similar results across our other four subsidiaries, using collaborative work processes and managing the product lifecycle from the bidding"

"With the help of IBM, we are exploiting powerful PLM solutions and methodologies, essential to growing our market share"

Gerard Gaire, director of Research and Development, NSC Schlumberger.

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Customer benefits

TOYOTA INDUSTRIES Corp.

"Our high-level product development know-how combined with IBM and Dassault Systemes' pioneering PLM solutions have brought tremendous synergies to the development of the High Pick Lift"

"We achieved our original targets both by shortening the High Pick Lift development period from 18 to 10 months and by reducing development costs by 53%. In addition, this product won the 'Japan Society of Industrial Machinery Manufacturer's Award' for its gentle curved design which was achieved thanks to CATIA V5's 3D design functionalities"

Kimpei Mitsuya, director and member of the board, Global IT Division, TICO

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Customer benefits

Daewoo Heavy Ind. & Machinery Ltd.

"The biggest objective of the project is to improve product competitiveness and establish a digital collaborative environment. We will be able not only to reduce the product life cycle but also cut costs drastically because of enhanced cooperation between departments and partners facilitated by the PLM solutions from IBM and Dassault Systemes"

JaeGon Kim, Director, Central R&D Division, DHIM.

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Customer benefits

Maegerle AG

"Since implementing the IBM solution, Mägerle has been able to more effectively reuse existing data while shortening the time required for product development… Maegerle has improved the quality of its products… Now able to recognize potential design-related challenges earlier in the development stage, which minimizes re-works over the product development cycle. Overall key benefits include:

- Successful migration of other CAD data
- Ease of use of CATIA and SMARTEAM
- Powerful and easy-to-use data management system
- User-friendly solution that allows for a quick learning curve
- Strong support from IBM and Dassault Systemes."

JaeGon Kim, Director, Central R&D Division, DHIM.

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Dedicated Partner Softwares

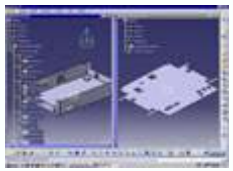
- Partners for your industry

cenit

Fully integrated and interoperable inside NC Manufacturing Workshop

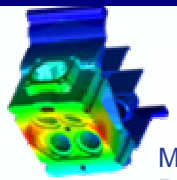
Process/strategy on a CATIA standard geometry to get the tool path for wire EDM machining operations

METALSOFT, INC.



Complementary to CATIA Sheetmetal product

Provide access to a fully automated sheetmetal manufacturing solution for generating NC code for all type of machines

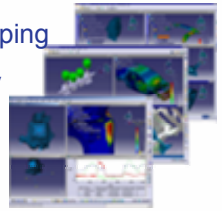


MSC SOFTWARE

MSC.Software develops its PLM integrated new generation simulation solutions on top of V5 infrastructure (CAA)

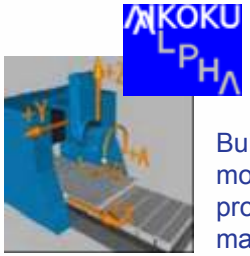
A Single Environment for Multidisciplinary Virtual Prototyping

Design & Analysis associativity



LMS INTERNATIONAL

Empowering Engineering Innovation

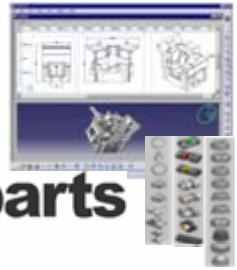


KOKU ALPHA

Build and run-time modules for post processor for up to 5 axis machines

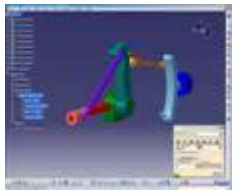
Extensive library of international standard CATIA-native 3D parts

Real time 3D preview



traceparts

Mechanical Dynamics



Extend V5 capabilities to system level dynamic simulation

Rapidly evaluate alternative designs and packaging by simulating motion dedicated for suspension sub-system

océ

Enhances printing connectivity

Provides for centralized processing and queuing

Improved productivity and printing control

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