

# Process Designer

## Powerful 3D environment for manufacturing process planning

### Benefits

- Facilitate enterprise authoring of manufacturing processes
- Reduce manufacturing planning efforts and duration
- Increase process quality, commonality and consistency
- Reduce cost of change
- Improve manufacturing engineering productivity with improved ease of use and automation
- Support industry workflows, e.g. automotive BIW, FA, T1 quoting and assembly planning in aerospace

### Features

- Process modeling and verification:
  - Pert and Gantt charts, schematic and table views
  - Time estimation
  - Cost estimation and tracking
  - Line design
  - Alternative planning
  - Process variants management
  - Documentation authoring
  - Application customizations
- Integrations with time standards systems
- Automatic generation of assembly structure or assembly process

### Summary

Process Designer is a digital manufacturing solution for manufacturing process planning in a 3D environment. Process Designer is a major enabler of speed-to-market by allowing manufacturing organizations to bridge product and process design with integrated authoring capabilities that leverage digital product development resulting in faster launch and higher production quality.

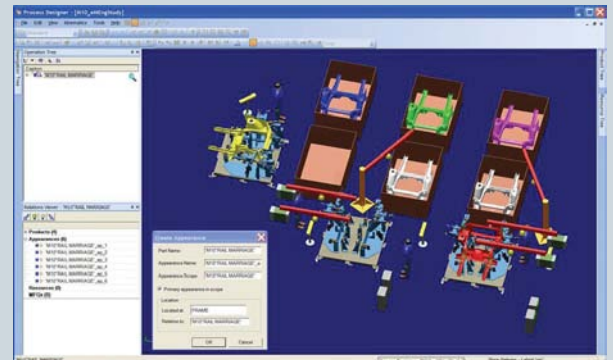
### Business value

Bringing innovative products to market and meeting demand fulfillment obligations are among the top priorities of most manufacturing organizations. Traditionally, product and process design were two distinct and segregated activities. With shorter product lifecycles and increased end-user customization, it is no longer feasible to have product and process efforts isolated from each other. A major PLM initiative now bridges product and process design to enable manufacturers to start process engineering

efforts sooner to meet market commitments, as well as to provide design feedback about product manufacturability – with the end-result of higher quality products.

Process Designer facilitates the authoring and

validation of manufacturing processes from concept and detailed engineering through production planning. Process Designer enables manufacturers to develop, capture and re-use process plans. Furthermore, process design teams can compare alternatives to develop and select best manufacturing strategies that meet specific business requirements. In a 3D virtual environment, Process Designer is a collaborative platform that enables distributed enterprise teams to evaluate process plans and alternatives, optimize and estimate throughput and costs, plan for variants and changes and coordinate production resources.



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## Features *continued*

- Line balancing
- Tasks management and collaboration
- 2D\3D system integrations
- Natively supported JT™ visualization standard
- Quotation
- Manufacturing features management
- Container packing solution

## System requirements

Process Designer:

- MS Windows XP SP2, Windows 7
- Processor 3 GHz or higher
- Memory 4 GB (recommended)
- Graphic card 512 MB (recommended)
- Disk free space 2 GB

Process Designer directly impacts speed-to-market by facilitating concurrent engineering between product and process design. It also can act as a major business enabler by allowing companies to develop best manufacturing practices and workflows that can be re-used throughout the enterprise.

## Powerful virtual environment for manufacturing process planning

By leveraging 2D/3D data and capturing and maintaining manufacturing process knowledge, Process Designer provides the means for manufacturers to develop and validate best manufacturing strategies within a 3D virtual environment.

## Line design, process modeling and line balancing

Complete line design and process modeling capabilities are available in Process Designer. Process engineers are able to model the process based on manufacturing resources that are captured in classified libraries. Required resources are dragged into the plan, and the sequence of manufacturing events can be checked for process bottlenecks and compared against actual throughput goals. Line balancing is also performed in this 3D environment by virtually aligning operations and stations to achieve an optimal production plan.

## Change management and alternative planning

Engineering change notifications can be seamlessly introduced, and process consequences can be easily identified and handled. Furthermore, the level of process integration allows users to compare alternative process plans to achieve the best manufacturing practices against desired business goals and resource constraints.

## Business support with upfront cost estimation

Process Designer associates costs with resources and operations, allowing upfront cost analysis of process plans. For suppliers, this upfront cost estimation capability enables greater accuracy and evaluative decision making when bidding and quoting manufacturing contracts. For OEMs, the ability to assess costs within the process plan allows economics to be considered as a variable when selecting production strategies.

## Support customer and industry workflows

Process Designer supports the development of unique customer workflows against industry-specific requirements, such as automotive body-in-white, final assembly, supplier quoting and assembly planning for aerospace and defense. Workflow support enables manufacturing organizations to standardize their process planning efforts with the development of a logical sequence of events.

## Capture and re-use best organizational practices

Process Designer is a platform for developing, capturing and re-using best practices for process planning. A knowledge repository of best practices can be re-used when introducing new projects, thereby enabling process engineers to leverage organizational knowledge and accelerate production launch.

## Improved efficiency of time analysis

Using Process Designer, you can perform advanced time analysis and get a clear visibility to valued-added and nonvalue-added activities. Perform roll up of activity time at any level of process nodes. Process Designer is integrated with time standard systems like TiCon.

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