

# ***ENOVIA PLM Solutions***

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***Chief Technology Officer***

***ENOVIA SmarTeam***

# What we are going to talk about?

- **ENOVIA SmarTeam Concept to Manufacturing**
- **ENOVIA SmarTeam and 3DLive**

# ***ENOVIA SmarTeam Concept to Manufacturing***

Because...

# Concept to Manufacturing was never easier to reach

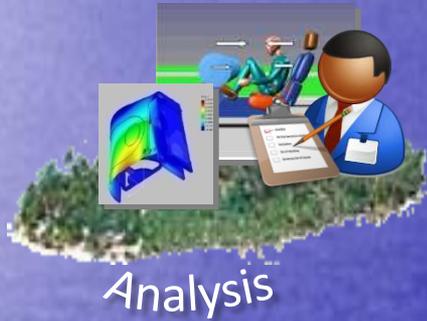


# Islands of Information



Mechanical

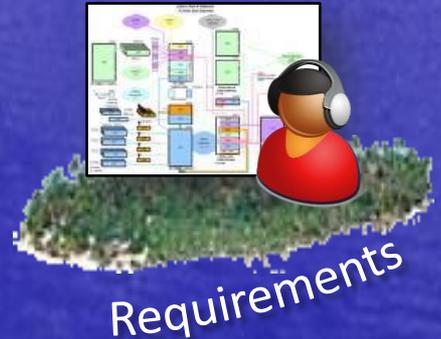
# Islands of Information



Analysis



Mechanical



Requirements



Quality

Little or No Connectivity 🤔



Tools & Manufacturing

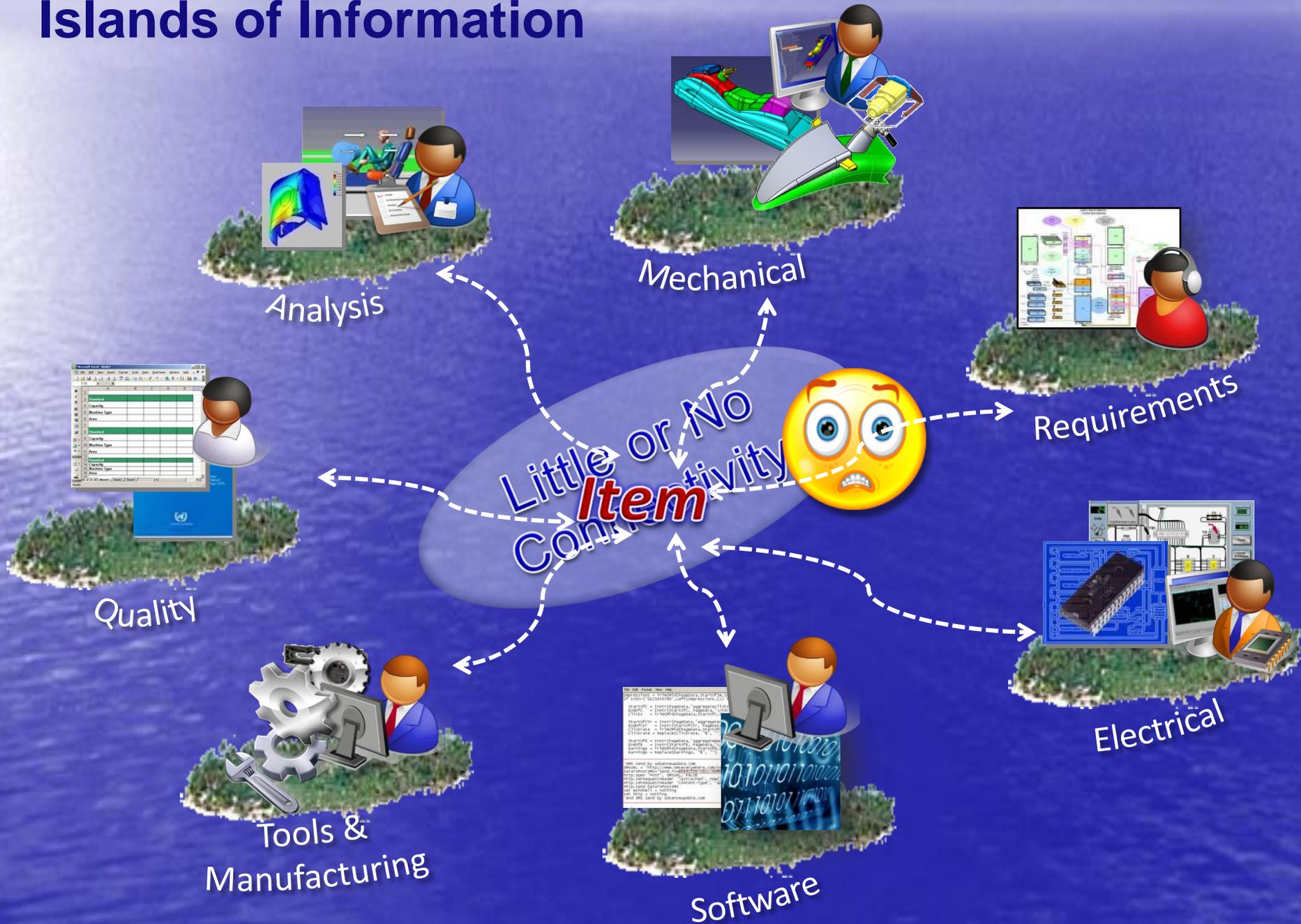


Software



Electrical

# Islands of Information

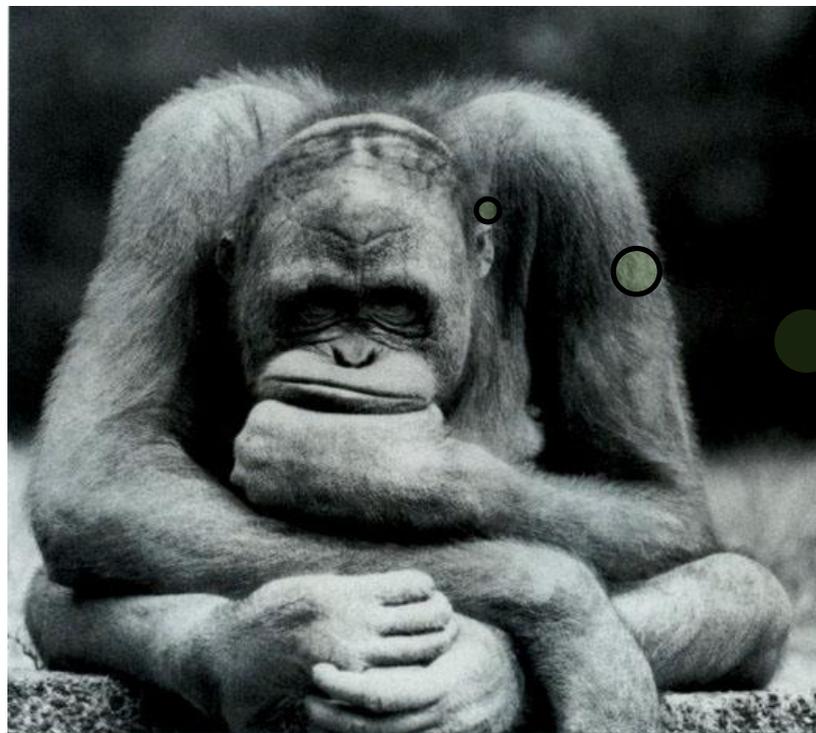


# BOM = Bill of Materials – which BOM ?

**The materials needed to manufacture a product**  
**MBOM**

**79 %**

**Some  
kind of a  
Tree?**



Thinking about the BOM ?



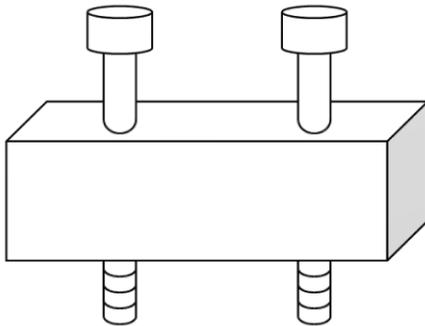
**20 %**

**Part List**

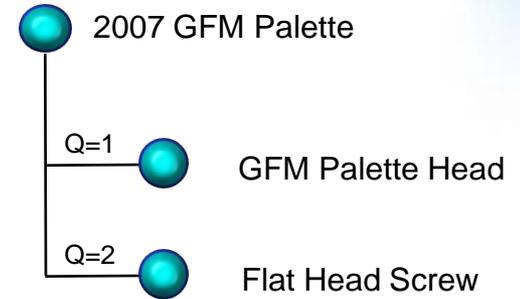
**The components needed to define a product**

# The “Virtual” & “Physical” Products

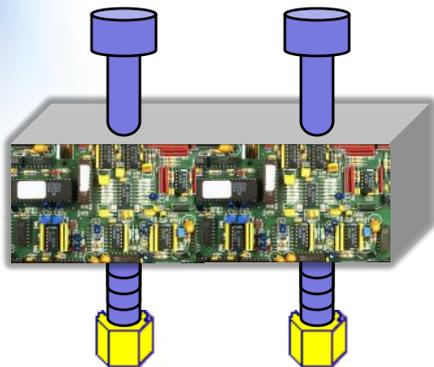
## VIRTUAL



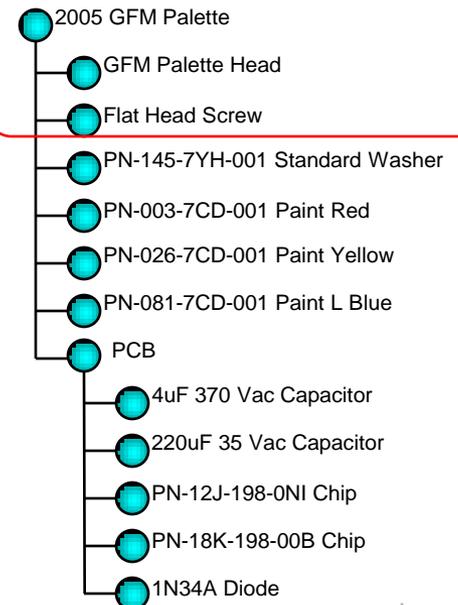
This is what my company designs:  
**A palette with two screws**



## PHYSICAL

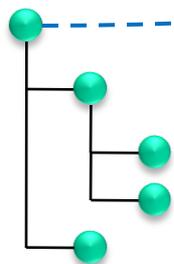


This is what my company sells to the market:  
**A movement detector to identify earthquakes**

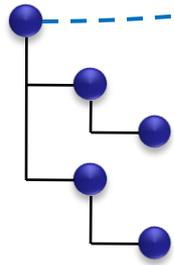


# Design structure and E-BOM

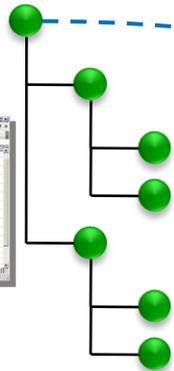
CATIA



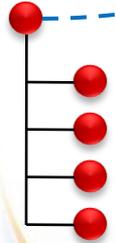
Solidworks



Excel



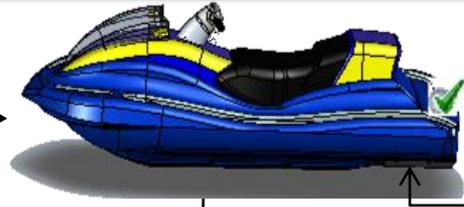
Mentor G.



# Top Down Engineering

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Jet-ski ready for manufacturing

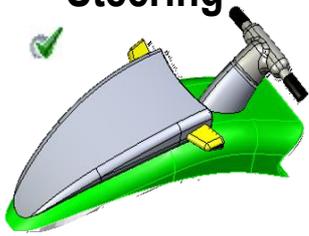


Top-down planning down to the module level

Body



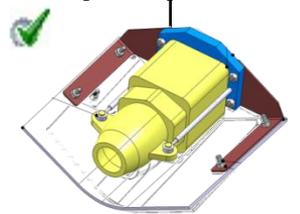
Steering



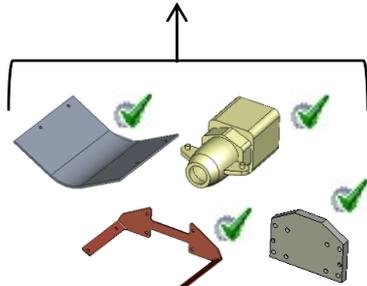
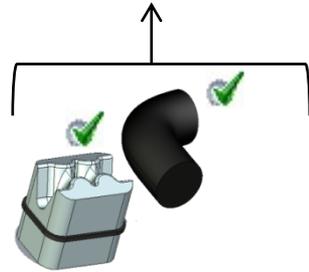
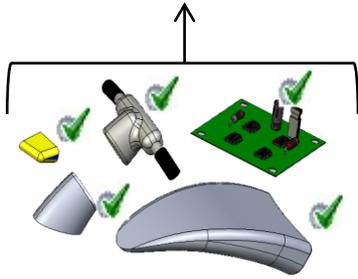
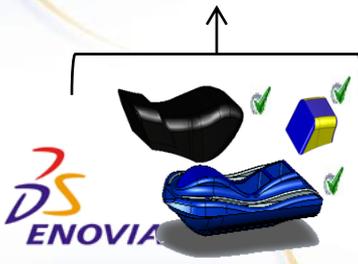
Engine



Jet-pump

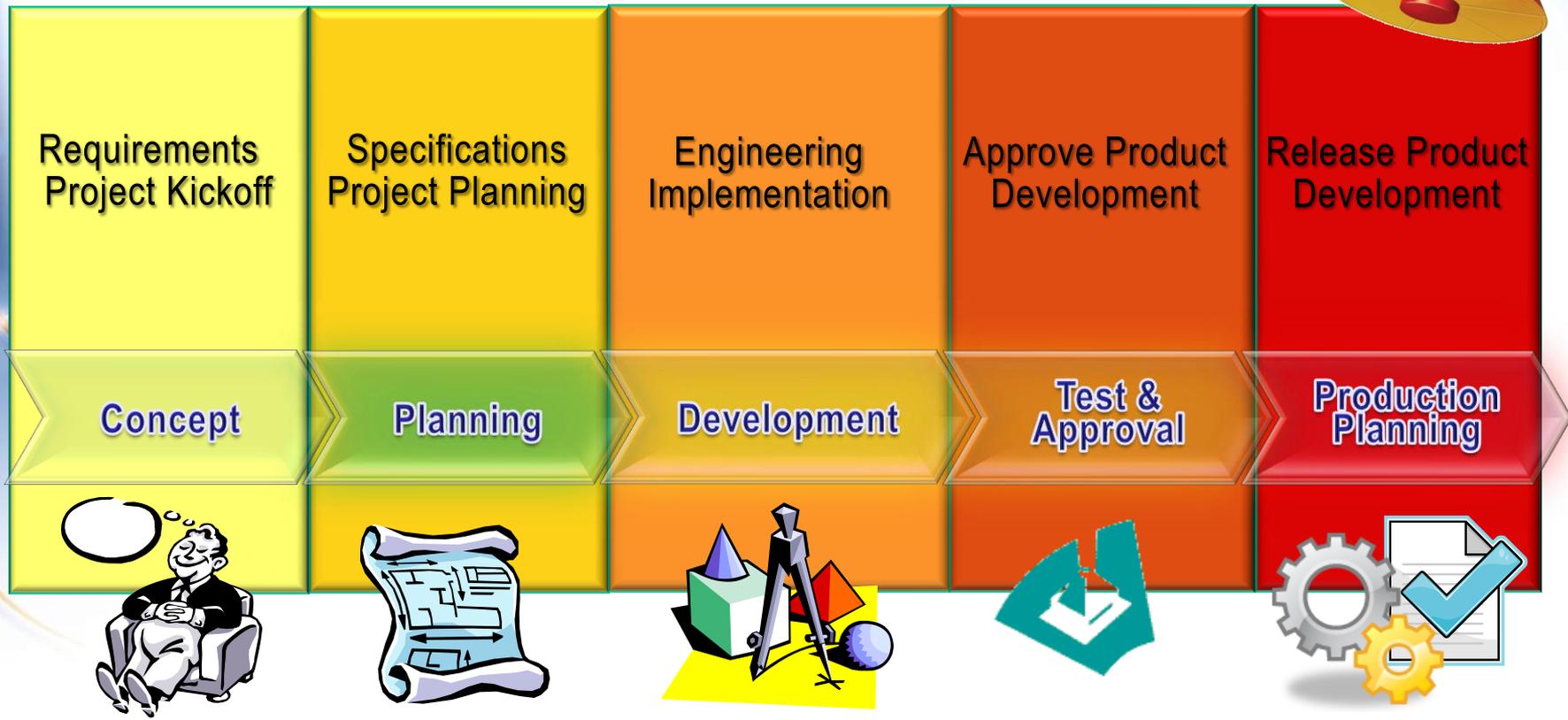


Bottom up development



ENOVIA SmarTeam

# From Concept to Manufacturing



# Capture and Analyze Customer Requirements

The screenshot displays the ENOVIA SmarTeam application window. The interface is divided into several sections:

- Top Menu:** Session, Edit, Actions, Find, Tools, PLM, View, Window, Help.
- Toolbar:** Contains various icons for navigation and editing, including a plus sign, a magnifying glass, and a printer icon.
- Projects Tree (Left):** A hierarchical list of projects:
  - PRJ-000001 Jet Ski (selected)
  - PRJ-000003 CATIA - Jet Ski 2008
  - PRJ-000004 Inventor - Two Seater Jet Ski
  - PRJ-000005 SolidWorks - Personal Watercraft V
  - PRJ-000006 Solid Edge - Waterscooter
  - PRJ-000008 AutoCAD - 2D data
  - PRJ-000002 Company Standards
  - PRJ-000011 New Jet Ski
- Profile Card (Center):** Displays details for the selected project:
  - ID:** PRJ-000001
  - Description:** Jet Ski
  - Start Date:** 10/08/2007
  - End Date:** (empty)
  - Project Manager:** Lead Engineer
  - Customer:** Yamaha
  - Comments:** (empty text area)
- System Info (Right):** A sidebar with tabs for General and System Info.
- Bottom Status Bar:** Shows user information: Login: leadeng, ST-Classic, and a timestamp: 01:26 27/01/2008.

# Design and Update Engineering BOM

The screenshot displays the ENOVIA SmarTeam application window. The title bar reads "ENOVIA SmarTeam". The menu bar includes "Session", "Edit", "Actions", "Find", "Tools", "PLM", "View", "Reports", "Window", and "Help". Below the menu bar are tabs for "Main", "PLM", and "Add-Ins". A toolbar contains various icons for file operations and navigation. The main workspace is divided into three sections:

- Left Panel (Tree View):** Shows a hierarchy of folders under "Documents". The folder "FLD-000062 Standard Items Classification" is selected and highlighted in yellow. Other folders include "Templates", "Standard Design", "CATIA Standard Parts", "Inventor Standard Parts", "SolidWorks Standard Parts", "Solid Edge Standard Parts", "PRO/Engineer Standard Parts", "Mechanical", and "Electrics".
- Right Panel (Profile Card):** Displays the "Profile Card" for the selected folder. It includes tabs for "Profile Card", "Links", "Notes", "Revision", and "Viewer". The "Profile Card" tab is active, showing:
  - Folder:** ENOVIA logo
  - ID:** \* FLD-000062
  - Description:** Standard Items Classification
  - Comments:** A large empty text area with a search icon.
- Bottom Panel:** Shows a "Projects:" dropdown menu with "Documents related to : PRJ-000..." selected. It also displays "Login: compeng", "ST-Classic", and the date "16:35 01/06/2008".

The Windows taskbar at the bottom shows the "start" button, several application icons, and the system tray with the time "4:35 PM" and "27%" battery level. The text "©2001 DASSAULT SYSTEMES S.R.L." is visible on the far left edge of the image.

# Create and Modify Manufacturing BOM

The screenshot displays the ENOVIA SmarTeam application window. The title bar reads "ENOVIA SmarTeam". The menu bar includes "Session", "Edit", "Actions", "Find", "Tools", "PLM", "Admin", "View", "Window", and "Help". The toolbar contains various icons for file operations and navigation. The main workspace is divided into two panes. The left pane shows a hierarchical BOM tree for a project named "Jet1185-L A 2 seater jet ski 2008x". The tree includes components such as "BL-44-090-88S A back ladder", "FP-98-098-78F A Front panel", "Jet109-887-99T A Water jet pump with high thr...", "CC188-99-12FT A JetCoverConnection", "Cover188-09F A Cover shields jet pump", "H109-99-08 A Jet Holder", "Jet109-879-07D A Water jet pump with high...", "SB15x310 A Steering Bar 15x310", "ISO 4014 BOLT M16x65 A ISO 4014 BOLT", "ISO 4032 NUT M16 A ISO 4032 NUT M16", "ISO 7089 WASHER A ISO 7089 WASHER", "JetBE-4444-C A Main Body", "M109-887-99 A Motor109.1", "C109-998-01A A Engine Cover 109A", "En99-887-09W A Engine En99", "Ex-109-887-99A A Engine Exhaust", "OT109-778-98 A Oil Tank", "P108-100-99T A Engine Pip 108T", "P120-99-44D A Engine Pipe 120", "M109-887-99\_44c A Two stroke twin cylinder c...", "C109-998-01A\_44c A Cover 109A", "En99-887-09W\_44c A Engine109w", "Ex-109-887-99A\_44c A Exhaust 109A", "OT109-778-98\_44c A Oil Tank", "P108-100-99T\_44c A Pipe 108T", "P120-99-44D\_44c A Pipe 120", "M98-09-45ABL A Mirror x98 Left", "M98-09-45ABR A Mirror x98 Right", "PCB-SR500CJ A Panel PCB", "BR-SQ-50.8 A Square Board 50.8x50.8", "C-80525 A Capacitor C-80525", "JM-010-N A Jumper", and "R500.MM.GH A Resistor R500". The right pane shows a "Profile Card" with tabs for "Links", "Notes", and "Revision". The status bar at the bottom indicates "Projects: Object(s) found for entered cr...", "Items" (with a close icon), "Login: admin", "ST-Classic", and "15:13 28/01/2008". The Windows taskbar at the bottom shows the "start" button, several open applications, and the system clock "3:13 PM".

# ***ENOVIA SmarTeam and 3DLive***



# Challenge #1 – Manage and Control

- How to manage, monitor and control the large volume of isolated information in complex business situations



The management is **measured** by taking the **right decisions** in **highly complex** Business environment !!!

## Challenge #2 – Complex Business Processes

- Cross- discipline, cross-organization and involving affiliates
- Based on information created by the various systems



The business environment is **dynamic** and the **pressure** (internal and external) is **high** (competition, cost reduction, etc)

# PLM is where it all starts , but...

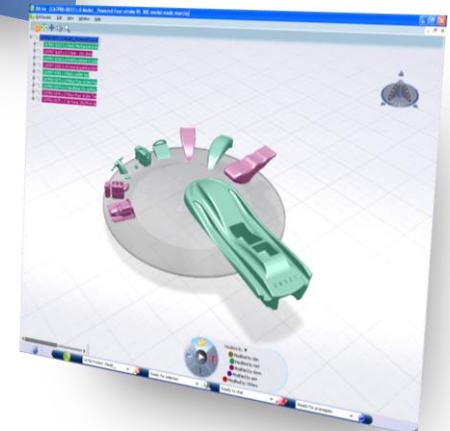
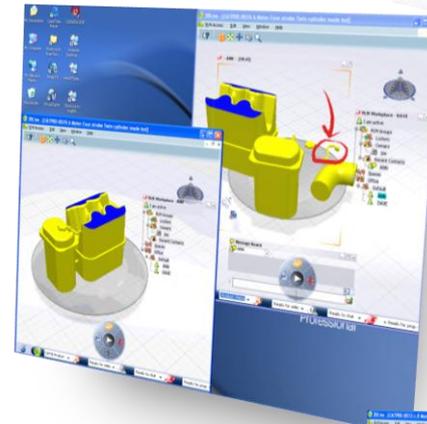
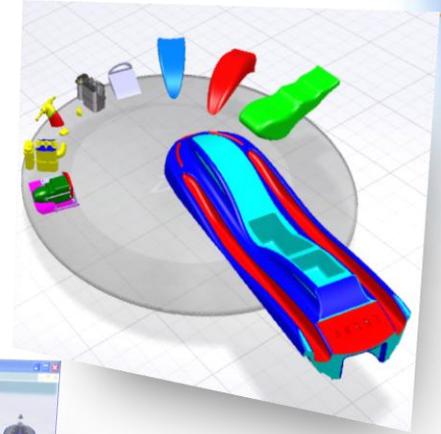
## The management needs:

- A high-level management view
- A central access point
- An easy, intuitive user interface
- **Decision Making Support**
  - Quick Search & Retrieve
  - Visual representation of Information
  - Information sorting & filtering
  - A “unified” format

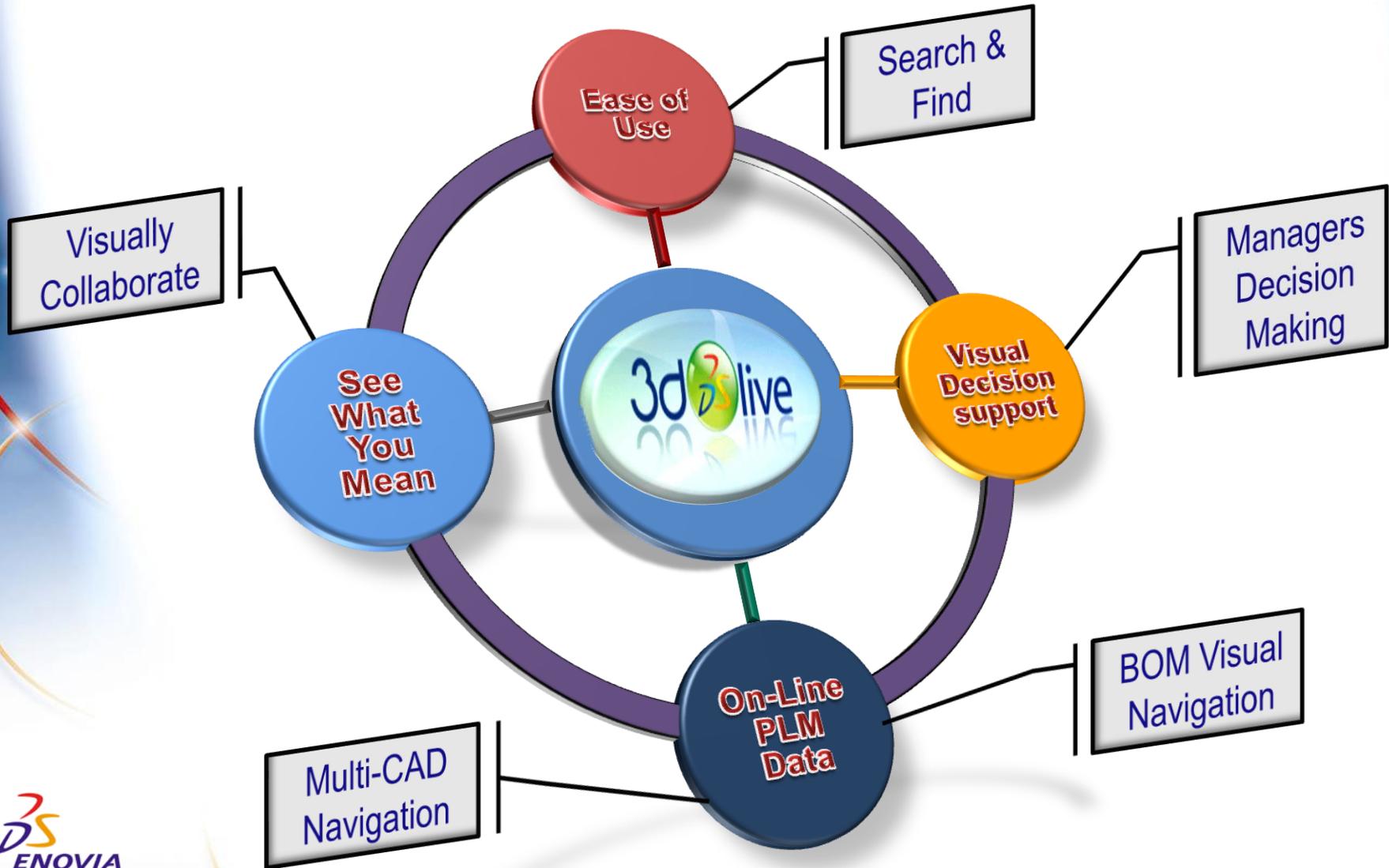
..... See what you mean !!!

# 3DLive Brings a New Level of Visual Collaboration

- Easy to use and intuitive
- 3D visualization
  - Search and navigate on 3D representations
- Live Collaboration
  - Chat, co-review
- Live Product Information
  - In-context information
  - Decision support
  - Unified format

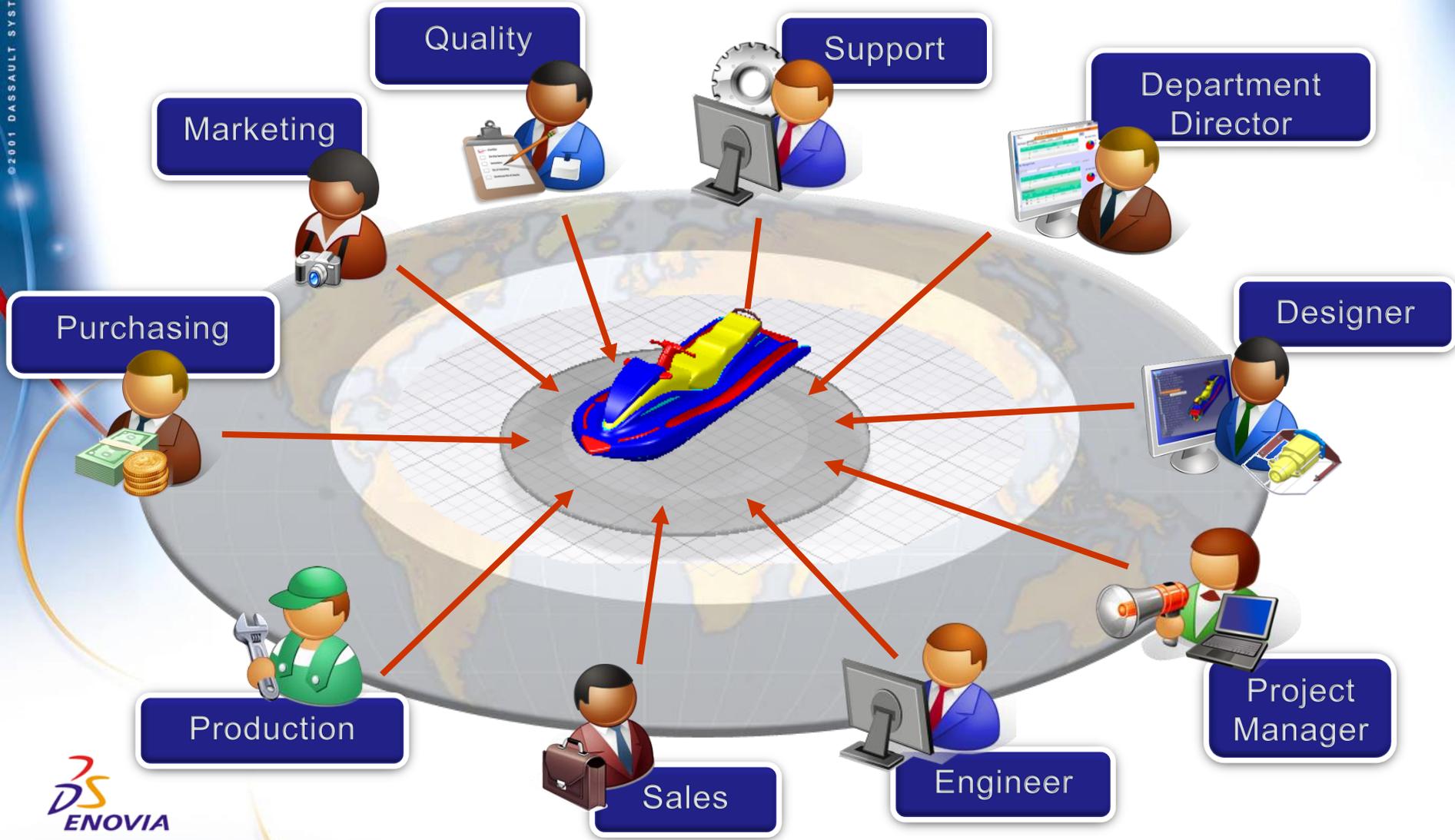


# 3DLive Benefits



# In addition....

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# Examples



Sales /  
Marketing

- Access latest data when “on the road”
- “Live demo” of the product
- Navigate on actual product models
- Visually explain the marketing needs



Purchasing

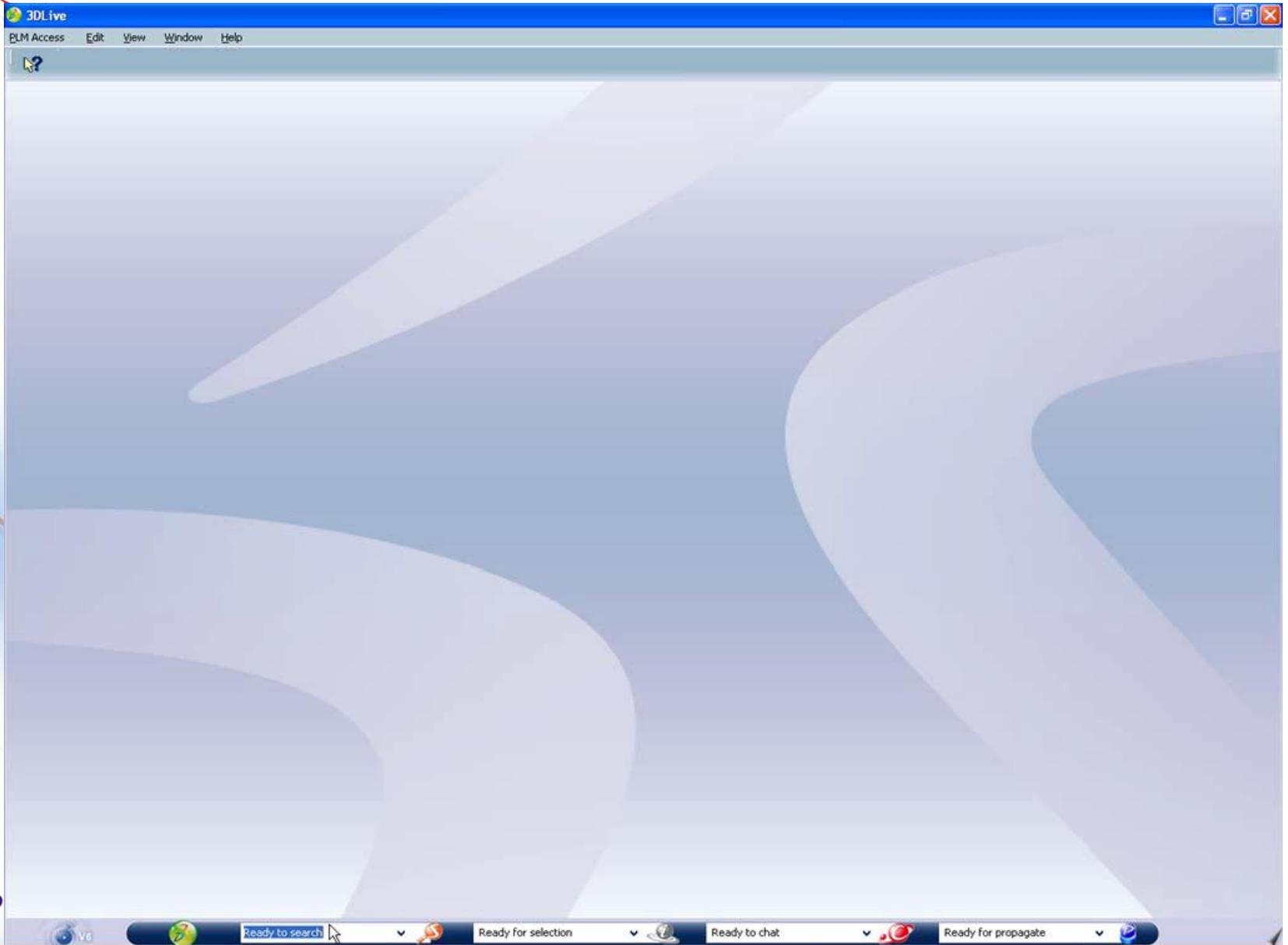
- Collaborate with supplier on the actual assembly where sourcing is needed



Support

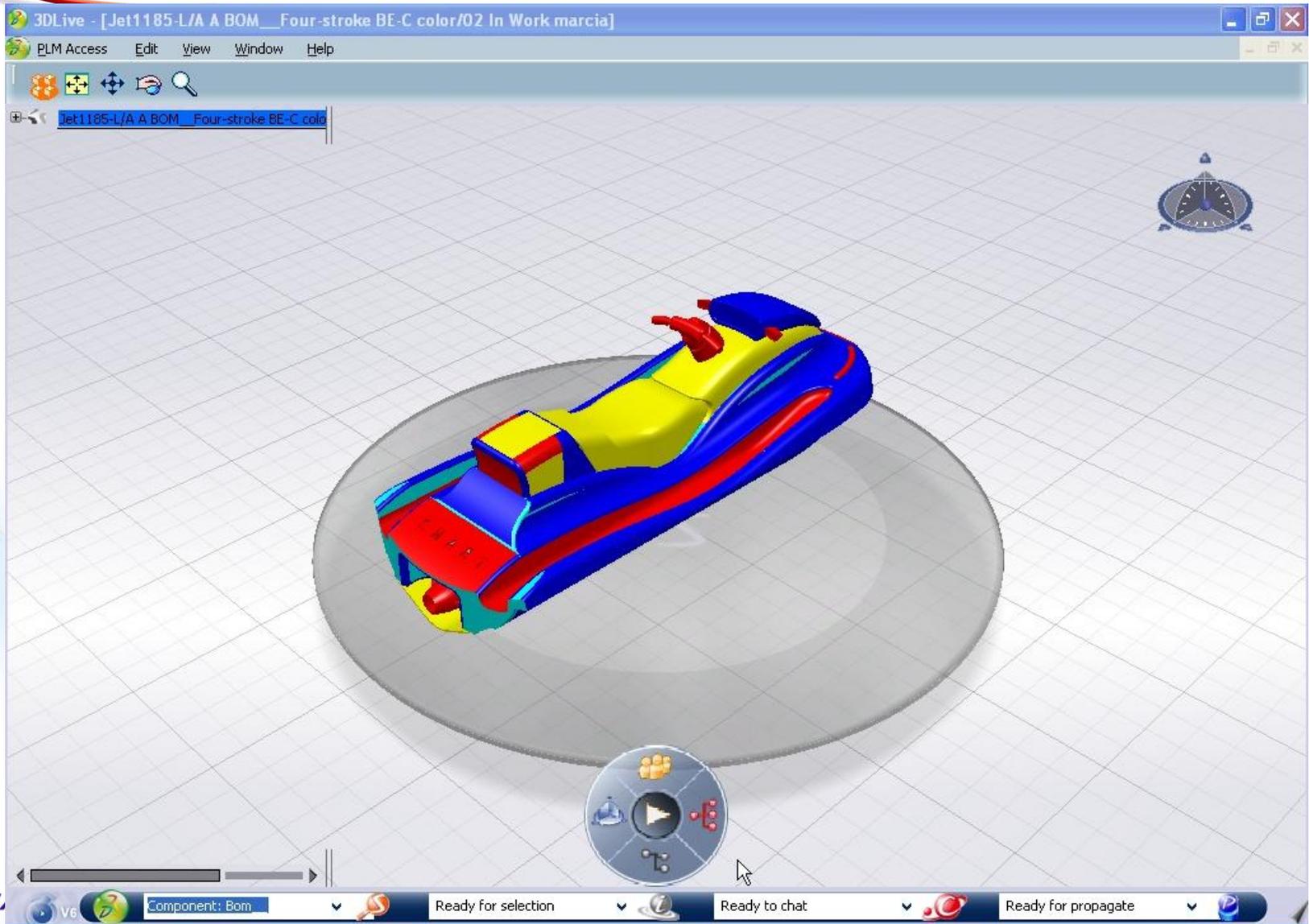
- » Collaborate with customer on Product Model to better understand customers issues
- » Easier to explain internally to relevant roles

# 3DLive in Action



**ENOVIA SmarTeam**

# 3DLive Collaborate



*Questions?*