

# *“V5R18 empowers Enterprise Collaborative Innovation”*



# *V5R18 empowers Enterprise Collaborative Innovation*

- 1. V5R18 accelerates PLM adoption with new industry and role-based solutions**
- 2. V5R18 empowers on-line collaborative intelligence**
- 3. V5R18 brings unrivalled engineering and enterprise business process collaboration**
- 4. V5R18 delivers additional IP modeling and protection**
- 5. V5R18 leverages and extends V5SOA openness**

# 1

**V5R18 accelerates PLM  
adoption with new  
industry and role-based  
solutions**



# 1 - V5R18 accelerates PLM adoption with new industry and role-based solutions – 1/8

➔ Leveraging V5R18 technologies, Express packages are DS PLM offerings tailored for the mid-market

**EXPRESS** - industry-tailored solutions, role-based offerings, simple to deploy, easy to use, affordable and very powerful

## CATIA PLM Express

### 6 cross-industry predefined roles

- 👤 Layout engineer
- 👤 Styled product engineer
- 👤 Mechanical product engineer
- 👤 Equipment product engineer
- 👤 Review and optimize engineer
- 👤 Manufacture engineer

### One common base configuration

- 👤 Ultra fast knowledge based modeling
- 👤 Combination of CATIA, DELMIA and ENOVIA SmartTeam core collaboration services
- 👤 Scalable platform

## DELMIA PLM Express

### 5 cross-industry predefined roles

- 👤 Resource Planner
- 👤 Robotics Programmer
- 👤 Ergonomics Engineer
- 👤 Process Planner
- 👤 Controls Engineer



## SMARTTEAM Engineering Express

### Engineering collaboration scenario deployed in just a few days, providing:

- 👤 Pre-packaged software and database
- 👤 Pre-configured engineering processes
- 👤 Robust and tailored data model
- 👤 Methodology, implementation plan and training material

### Extensible with Program Management, Gateway and other capabilities

## SMARTTEAM Design Express

**VALUE:** Accelerates PLM adoption and benefits

# 1 - V5R18 accelerates PLM adoption with new industry and role-based solutions – 2/8

➔ **CATIA VPLM PowerPack is a new ENOVIA VPLM Offering to Unleash the power of Relational Design in complex products engineering environments**

## 1 Robust, Proven, Advanced Solutions

- 👤 Package of 10 seats with built-in discounts

## 2 Fast Track Services (Up and running in 15 days)

- 👤 Installation / Administration = 5 days
- 👤 Basic user training = 10 days

## 3 Business Process Accelerator

- 👤 Set of data with industry specific samples
- 👤 Industry specific predefined Data Model customization, P&O, Lifecycle, masks and settings
- 👤 Quick set-up and start kit
- 👤 Design process support (Relational Design, Design in Context, DMU, ...)
- 👤 Basic life cycle management implementation

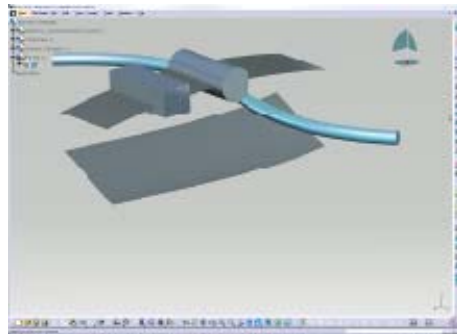


**VALUE:** Increase the ROI of existing CATIA investments; Robust, proven, advanced solutions and methodologies; Out-of-the-box package at an attractive price for fast Time-to-Value

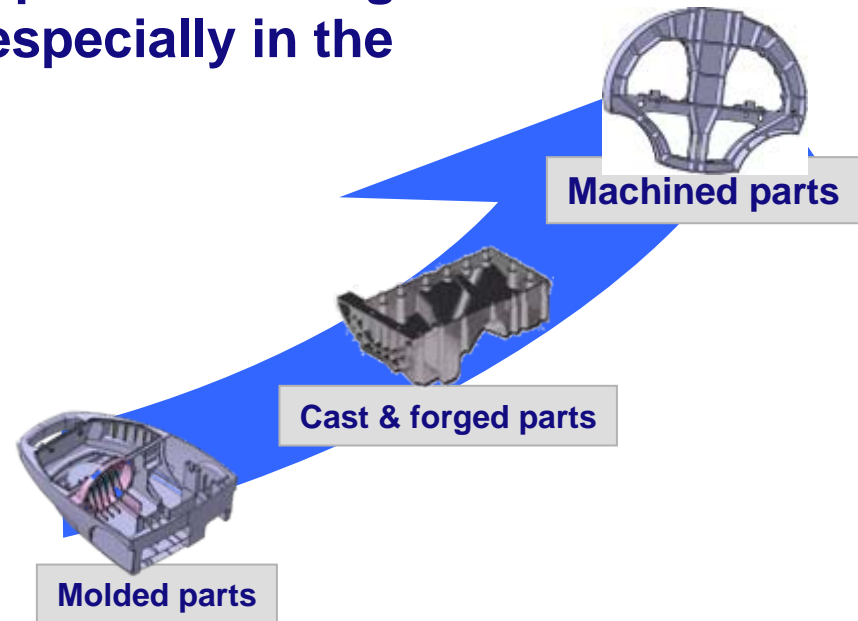
# 1 - V5R18 accelerates PLM adoption with new industry and role-based solutions – 3/8

➔ V5R18 continues the revolution in modeling with its V5 breakthrough Functional Modeling technology

- Initially delivered to design thin parts, Functional modeling now supports the design of complex machined parts, especially in the aerospace industry



- ✓ 35% faster for initial design
- ✓ 70% faster in design re-use



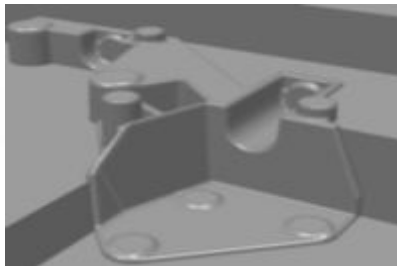
**VALUE:** Reach new productivity levels when designing and modifying complex aerospace parts.

# 1 - V5R18 accelerates PLM adoption with new industry and role-based solutions – 4/8

➔ V5R18 continues the revolution in modeling with ground-breaking automatic detailing features (after auto-filleting in V5R17)

## Empowers cast and forged parts designers with Auto-draft capability

- 👤 Super productive: All drafts in one single operation
- 👤 Flexible: user can specify faces that shouldn't be drafted.



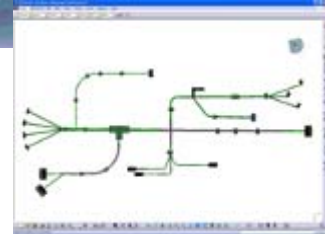
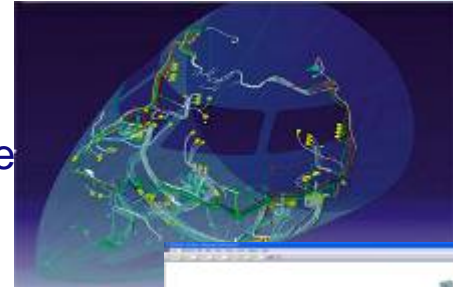
**VALUE:** Unmatched productivity in forged and casted parts detailing for all industries, including automotive powertrain and chassis.

# 1 - V5R18 accelerates PLM adoption with new industry and role-based solutions – 5/8

➔ V5R18 delivers major improvements in the Electrical and Systems domain.

## Wider coverage of the Electrical process

- ✎ Electrical Harness Design performance is taken one step further by integrating early in the design process Manufacturing behaviors
  - ✎ *Generative Harness covering placement rules,*
  - ✎ *Generative electrical parts connections rules,*
  - ✎ *Additional electrical design checks*
- ✎ Full integration of electrical harness design & documentation for automotive & aerospace industries



## Greatly enhanced Printed Circuit Board design process

- ✎ For all industries where mechatronics integration is critical
- ✎ Support of IDF format pad patterns (import), complex shapes to IDF (export)
- ✎ For better 3D realism, and higher fidelity



**VALUE:** Higher fidelity in Systems design and more productive electromechanical integration.

# 1 - V5R18 accelerates PLM adoption with new industry and role-based solutions – 6/8

➔ V5R18 confirms DS leadership in Composites design, simulation and manufacturing

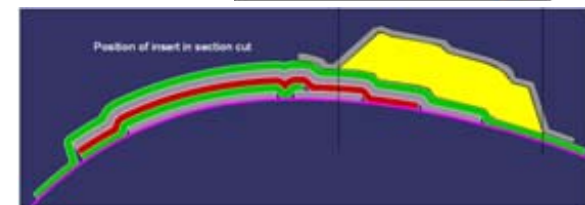
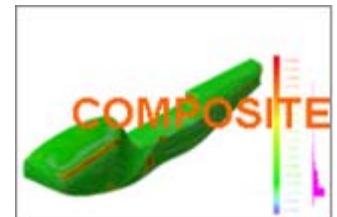
➔ The only end-to-end design to manufacturing process, fully-integrated composites solution on the market:

👤 Ecosystem of market-leading partners delivering composites parts manufacturing applications

➔ V5R18 Extended Composite process coverage

👤 First time post-processing analysis on composite part

👤 Ease supply chain collaborative design on composite part with review product (CPR)



**VALUE:** Better composites parts engineering across the entire value chain

# 1 - V5R18 accelerates PLM adoption with new industry and role-based solutions – 7/8

➔ V5R18 extends seamless end-to-end Final Assembly Solution for the Automotive BiW Domain

## Assembly Specification Tree

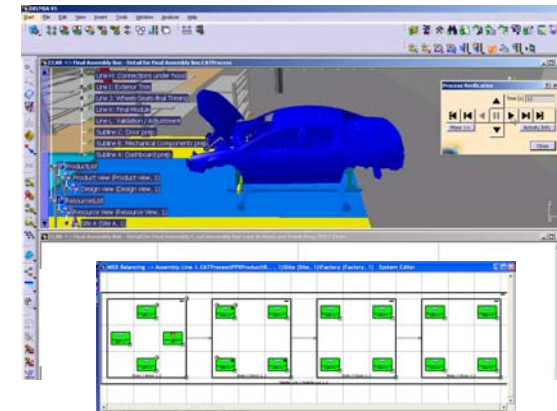
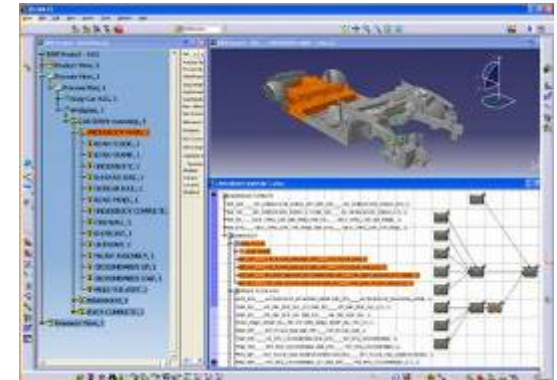
- 👤 full support for MBOMs derived from process plan with linkage to the E- BOM
- 👤 Familiar user experience for planners

## 2D Manufacturing Line Concepts

- 👤 2D concepts of manufacturing lines in a single environment, including station inputs and outputs
- 👤 What-if scenarios

## Simulation Roll-Up

- 👤 Combined simulations from multiple stations
- 👤 Enables collaboration among planners and help evaluate impact on the overall process plan.



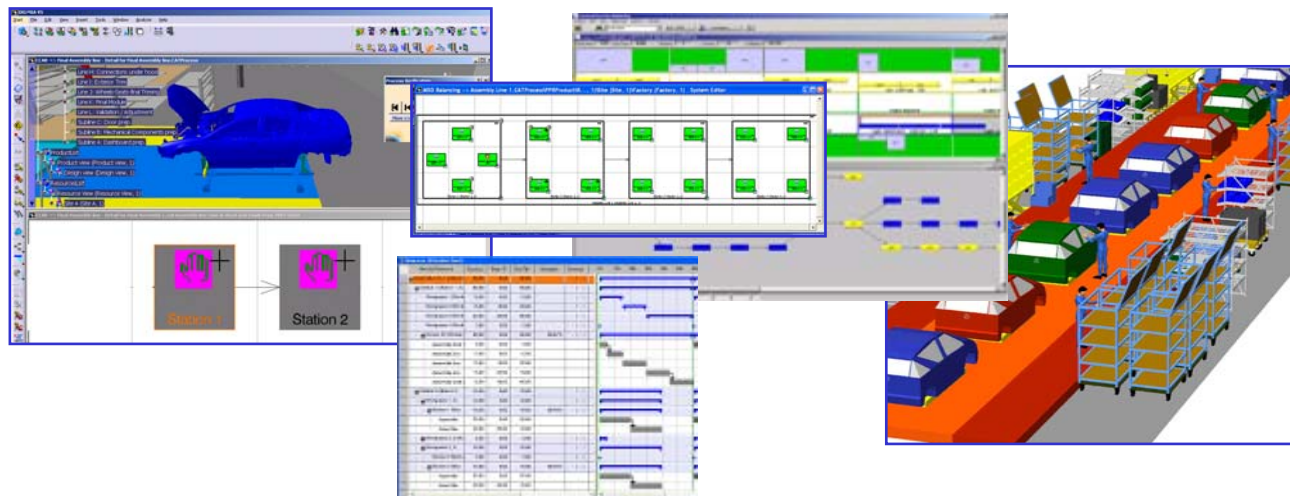
**VALUE:** Production ready suite of tools for the BiW planner tailored to the Automotive industry

# 1 - V5R18 accelerates mission critical processes with new and improved industry solutions – 8/8

➤ V5R18 provides the process planner with new, powerful tools for balancing and optimizing the assembly line.

➤ Extends seamless end to end Final Assembly Process Planning Solution: Automatic Line Balancing in 3D for analysis, simulation, and validation

- ✎ Manufacturing System Definition (MSD) allows users to refine balancing and optimization interactively and visually in 3D
- ✎ Line Balancing now supports both “Green Field” and “Brown Field” scenarios, thereby allowing the seamless addition of new programs to existing lines



**VALUE:** Extends the power of line balancing and optimization through 3D visualization, and maximize the use of existing lines

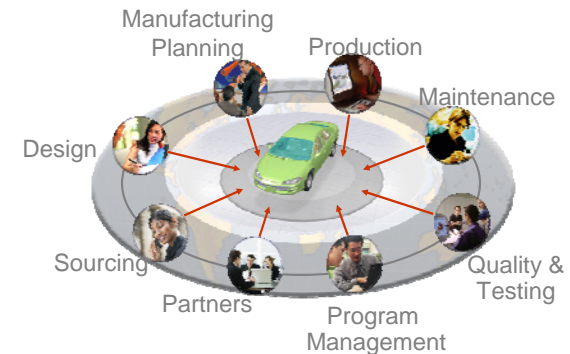
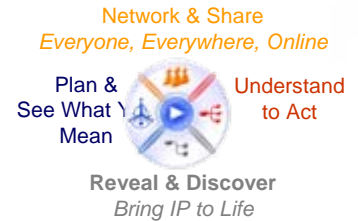
# 2

**V5R18 empowers  
on-line  
collaborative  
intelligence**

# 2 –V5R18 Empowers On-line Collaborative Intelligence

➔ Leverages 3D as the universal language to deliver design and PLM data to all NPDI collaborators, enabling them to see and participate in the product lifecycle

- ➔ **Leverages and extends V5 PLM investments by accessing ENOVIA, DELMIA and CATIA IP**
  - ➔ ENOVIA VPLM, and now ENOVIA MatrixOne, ENOVIA ST
- ➔ **Online: 3D and PLM Online**
  - ➔ Connect from anywhere to live 3D and PLM data, including manufacturing processes
  - ➔ Lightweight application downloadable online
  - ➔ Online communities can form and share on an ad-hoc basis
- ➔ **Experience: 3DLive offers a unique user experience**
  - ➔ One single environment to Search, Navigate, Collaborate
  - ➔ Through intuitive, 3D-based, and powerful navigation that brings your IP to 'life'
- ➔ **All Users: 3DLive benefits all enterprise users**
  - ➔ Non-CAD/DMU users within and outside of engineering
  - ➔ All DS industry verticals
- ➔ **Specialized Live Business Applications for :**
  - ➔ ENOVIA Live Collaborative Review for measurement and sectioning
  - ➔ CATIA Live Functional Tolerancing and Annotations
  - ➔ DELMIA Live Shop Floor Review for advanced 3D work instructions



**VALUE:** Improves decision making and accelerate innovation with on-line 3D collaborative intelligence

# 3

**V5R18 brings  
unrivalled engineering  
and enterprise  
business process  
collaboration**

# 3 –V5R18 brings unrivalled engineering and enterprise business process collaboration – 1/3

➔ 1 year after MatrixOne's acquisition, combined ENOVIA solution delivers powerful Engineering/Enterprise business process collaboration

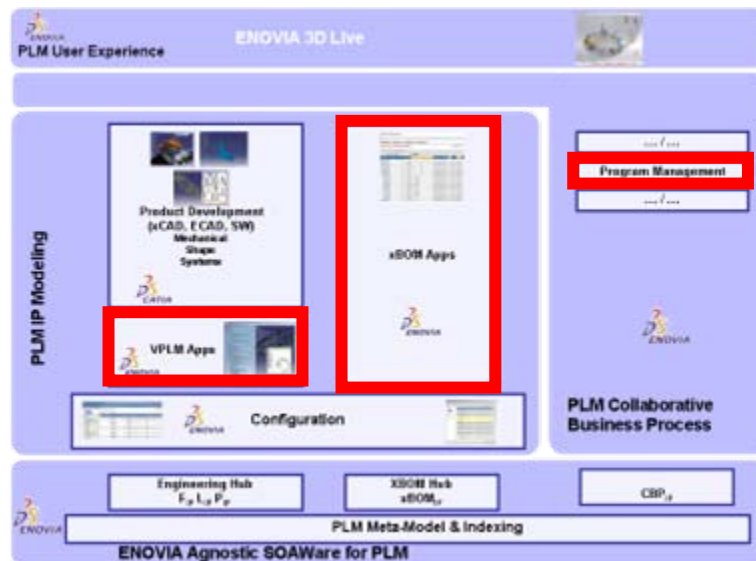
## Management of program deliverables

- Selection of VPLM objects as program deliverables in the CBP Program Mgt application

## Engineering WIP / Enterprise Release Collaboration

- Enterprise configuration access for VPLM users
- Bi-directional BOM synchronization (VPLM product structure / CBP BOM)
- Collaborative change management: CBP Task / VPLM Action synchronization

Based on ENOVIA PLM SOA framework: ENOVIA VPLM connected to ENOVIA PLM SOA delivering direct access the EM1 CBP apps



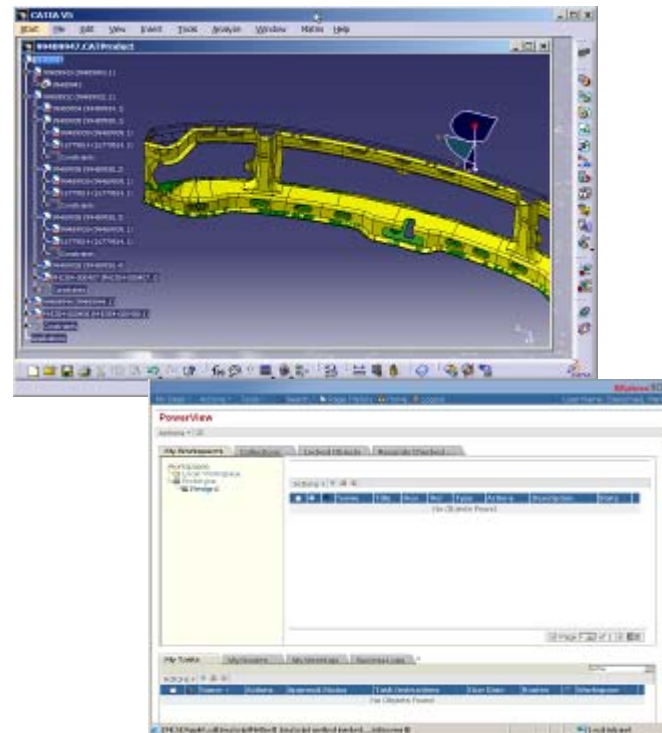
**VALUE:** Enhanced collaboration between engineers and enterprise users. Brings the power of ENOVIA MatrixOne CBP applications to ENOVIA VPLM communities.

# *VPLM Program Management Integration*

# 3 –V5R18 brings unrivalled engineering and enterprise business process collaboration – 2/3

➔ ENOVIA MatrixOne Designer Central for CATIA V5 provides a multi-site CATIA V5 design data management solution for the extended enterprise

- ➔ CATIA Product structure Navigation within ENOVIA MatrixOne
- ➔ CATIA Product Structure initialization within ENOVIA MatrixOne
- ➔ LifeCycle
  - ➔ Check-In/Out
  - ➔ Lock/UnLock
  - ➔ Revisioning / Versioning
  - ➔ Bi-directional Attribute Sync
  - ➔ Save As
  - ➔ Rename, Purge
- ➔ EBOM Synchronization
- ➔ Automated File Generation Upon Check-In (CGR, CGM, IGES, STEP, JPEG, etc.)



**VALUE:** Offers a collaborative environment for companies designing products with CATIA and using ENOVIA MatrixOne for CBP Management.





# 4

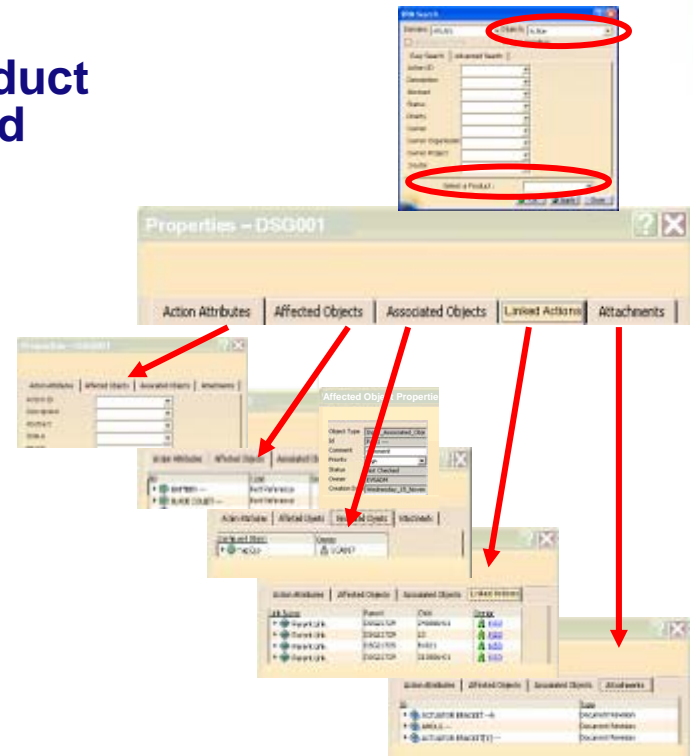
**V5R18 delivers  
additional IP modeling  
and protection**

# 4 - V5R18 delivers additional IP modeling and protection - 1/2

➔ V5R18 further extends the scope of the single desktop for product designers (VPM Navigator)

## VPM Navigator reveals important product information to designers when needed

- Where-Used query
- Action edition
- Insert existing part from ENOVIA VPLM
- Delete part version / document revision
- Subscribe new action/part version
- Store queries and session context
- Associate design tables
- Session refresh ...



**VALUE:** One unified environment for designers, hence enhancing their productivity , helping early resolution of issues, faster alternative studies, and better decision making.

## 4 - V5R18 delivers additional IP modeling and protection – 2/2

➔ V5R18 Digital Product Rights Management offers IP protection

- Protects intellectual property while sharing V5 documents within the entire value chain
- Controls the online and offline access and usages of V5 documents
- Microsoft DRM technology to define rights on users

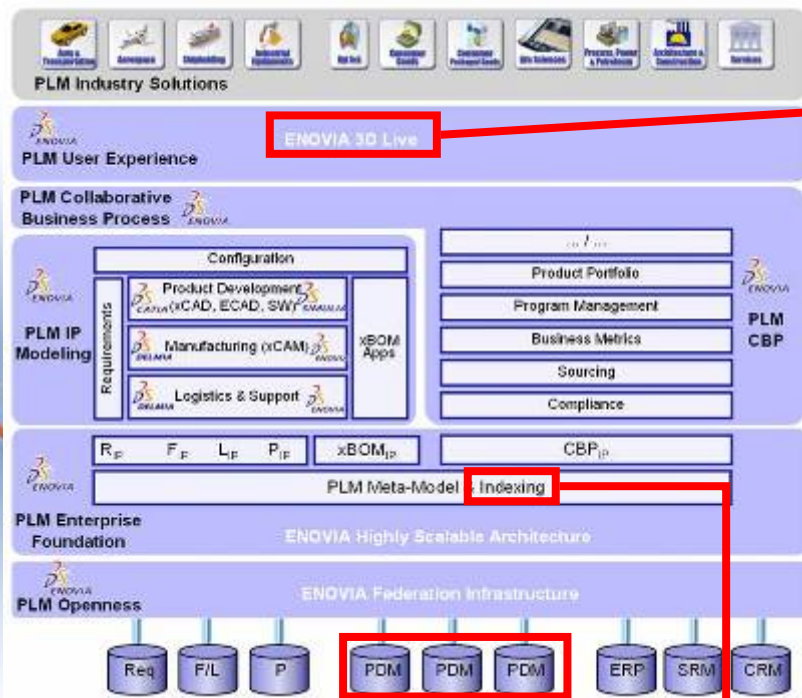


# 5

**V5R18 leverages and  
extends V5 SOA  
openness**

# 5 - V5R18 leverages and extends V5 SOA openness – 1/2

## ➔ V5R18 leverages and extends the PLM SOA architecture and middleware



### 3DLive leverages and extends the PLM SOA architecture

- Delivers V5 SOA Indexing Services for ENOVIA VPLM
- Leverages V5SOA Web Services and web standard protocols to Connect, Search, Navigate and Collaborate on PLM IP from CATIA, ENOVIA, DELMIA
- Fully leverages Dassault Systèmes' 3DXML open format

### V5 SOA Middleware

- Comprehensive PLM data model
- Business process customization tools
- Indexing and Search (Endeca)
- Web services Adaplets: real time connectivity with existing legacy or enterprise systems

### Partnerships extending the PLM SOA Enterprise Datawarehouse :

- Autonomy for Powerful Indexing capabilities delivered within the PLM SOA middleware/datawarehouse**
  - PLM aware index and Real Time semantic search with directed navigation
- ProSTEP**
  - PROSTEP CAAV5 ENOVIA PLM SOA OpenPDM Connector to market data sources such as SAP PLM, Teamcenter, Windchill, Agile.

**VALUE:** Extends the reach and facilitates exchange of rich 3D PLM information across the whole enterprise with a SOA architecture

# 5 - V5R18 leverages and extends V5 SOA openness – 2/2

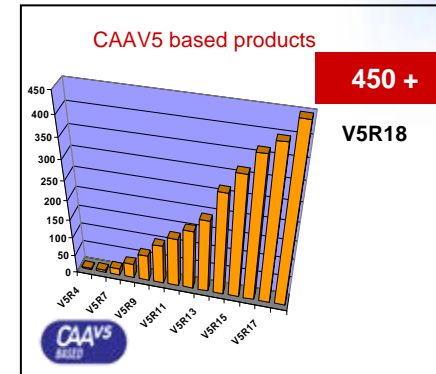
➔ New CAA V5 partners and products continue to demonstrate the richness of the V5 platform and to augment the DS based PLM footprint.

➔ Partner program includes more than 160 industry-leading partners in all PLM domains

👤 58 CAAV5 Software Partners , 69 CAAV5 Adopters, 35 CAA V5 Development Service Providers

➔ 450+ CAAV5 applications to extend the reach of all V5 PLM Brands

- 👤 Autonomy - Search & Navigation (ENOVIA)
- 👤 ProSTEP – Federation connectors (ENOVIA)
- 👤 Productivity Engineering – EDA integration (ENOVIA)
- 👤 Creaform – digitizing, reverse engineering (CATIA)
- 👤 CENIT – robotic painting (DELMIA)
- 👤 Visiprise – MES & Shop Floor Integration (DELMIA)
- 👤 CD-Adapco – CFD (SIMULIA)
- 👤 Allegorithmic - Lifelike Textures to 3D (3DVIA)
- 👤 Realviz – Backdrop Real environment for (3DVIA)
- 👤 And the latest DS acquisition: ICEM - Styling & High Quality Surface Modeling (Class A) & Rendering



**VALUE:** Offers breadth and depth of process coverage, provides customers with freedom of choice

# 6

## Conclusion



# “V5R18 empowers enterprise collaborative innovation”

- **V5R18 is a key release in the V5 life cycle**
  - ✚ it keeps delivering key technologies and solutions supporting customers' **innovation**
  - ✚ while enabling deeper **enterprise** integration - especially with the ENOVIA MatrixOne integrations to VPLM and CATIA
  - ✚ and greater **collaboration** among communities

*Thank You*