

Business Innovation for Enterprise Enviroment

# Collaborative Modelling Portal for a Virtual Organization

**BIVEE Mission Control Room as a Sample** 

## Scenario



Providing a collaborative Web Modelling Portal for a virtual organization, which is collection of legally independent enterprises that are active in furniture production and packaging industry in Spain



## Challenge



Is it possible to create a individual web modelling portal for this Virtual Organization based on ADOxx<sup>®</sup> New Platform ?







### **Central Authentication Key Performance Indicator Repository** Semantic Knowledge Repository Specific Modelling Language Cockpit **Collaborative Whiteboard** Look and Feel Alignment of Portal **Training and Process Stepping** Multi Language Support

### **Our Approach**



#### ADOxx Environment

- Integrating A Web-Modeller application as part of the portal
- Developing A Web-Assistant application that access to specific models in model repository
- Developing a Web-Monitor application that access to specific models in model repository and build a cockpit dynamically.
- Developing a domain specific modelling language
- Developing a Theming Package that provides look and feel alignment within the platform
- Utilizing a framework to provide Multi Language Support
- Utilizing a identity management system

#### External Environment

- Utilizing a KPI Repository as a web service
- Utilizing A Semantic Knowledge
   Repository as a web service
- Establish interaction between the Web-Modeller application and the KPI Repository
- Establish interaction between the Web-Modeller application and the Semantic Knowledge Repository
- Establish interaction between the Web-Assistant and the Semantic Knowledge Repository
- Utilizing A central authentication system



### **Mission Control Room**

### Conclusion







- Refinement of semantic partner search due to criteria such as reliability, quality, time and cost
- Refinement of semantic knowledge resource search, so the Web-Assistant can support all three scenario; training, testing and guidance
- Simplify semantic lifting with referencing concepts in notebooks with utilizing "interref"
- Integration of cooperative decision support with utilizing "Preference" concept and mathematical models
- Enrichment of collaborative workspace through the integration of "Wikis", "Track Changes", "Feedback" and "Ranking" mechanisms
- More intuitive visualization of modelling concepts



# Model – Based Industry 4.0

### **BIVEE Mission Control Room as a Sample**

#### **Product: Armchair Model 245**



Given that product "*Armchair Model 245*" consists of four different components "*Legs*", "*Seat*", "*Back*" and "*Skeleton*"



### **Production Unit Pool: Possible Partners**



Given that the Virtual Organization has a "**Production Unit Pool**" consists of six partners



#### **Production Process: Armchair Production Process**



According to given criteria "Production Quantity", "Cost pro Unit", "Production Lead Time" and Product Structure Model, the Production Process would be as following and executed just by one production unit from the pool





### Production Process: Armchair Production Process



The criterion "Production Quantity" is changed and automatically new partner is assigned to regarding process complying with new criterion





#### **Cockpit: Production Process**



The Cockpit monitors key performance indicators, which indicates the status of "Armchair Model 245 Production **Process**"

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### **Cockpit: Production Process**



The Cockpit monitors key performance indicators, which indicate the status of "Armchair Model 245 Production **Units**"

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# Thank you for your attention!