



# ADaptive Virtual ENterprise ManufacTURING Environment

## An Overview

Technology	Science	Users		
				 European Commission Virtual Factories and Enterprises

# ADVENTURE –

## ADaptive Virtual ENterprise ManufacTURING Environment

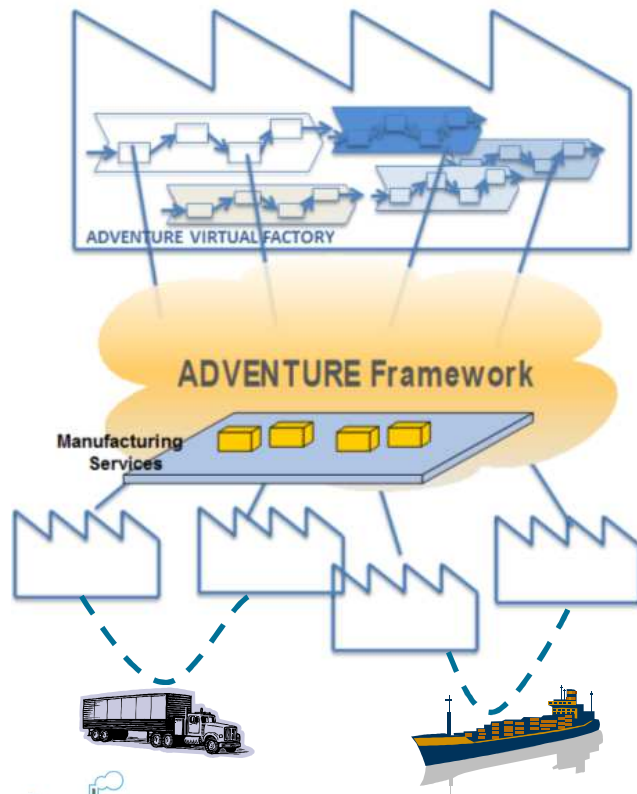


### Plug and Play Virtual Factory

Factories **provide** semantically enriched information

Factories **model and execute** manufacturing processes

Multiple real factories form a virtual factory with **integrated ICT**



### Competitive advantages

#### Increased flexibility:

- **Dynamic adaptation** of business processes
- Dynamic factory selection achieving on-the-fly collaboration

#### Enhanced Innovation:

- Creation of manufacturing processes based on (required) functionalities/capabilities

#### Improved efficiency:

- **Optimizing** manufacturing processes by proposing best partner factories & services
- Simulation of manufacturing processes providing forecasted information

#### Facilitated collaboration:

- Integration of ICT-systems
- **Real-time monitoring** of whole supply chain combined with tracking of goods

# ADVENTURE Features/Building Blocks

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## What can ADVENTURE do for me

### ▪ Partner Finding

- Specify your manufacturing capabilities, products, services
  - ADVENTURE will register and make your manufacturing profile visible
- Specify your required manufacturing capabilities, products, services
  - ADVENTURE will identify and propose corresponding partner services

### ▪ Manufacturing Process Optimization

- Model your manufacturing processes
  - ADVENTURE will provide you with a browser-based graphical process model editor
  - ADVENTURE will enable you to model your processes based on skill and technical requirements
- Specify needs and preferences
  - ADVENTURE will propose you an optimized selection of partner services
  - ADVENTURE will propose you an optimized process structure
  - ADVENTURE will simulate your modeled manufacturing process

# ADVENTURE Features/Building Blocks

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## What can ADVENTURE do for me (cont.)

### ▪ ICT Integration

- Configure a gateway to your custom ERP/CRM/etc. system
  - ADVENTURE will take care on data format conversion and message routing
  - ADVENTURE will enable your custom system to access manufacturing information provided through ADVENTURE

### ▪ Holistic Monitoring

- Configure a gateway to your custom ERP/CRM/etc. system
  - ADVENTURE will take care on data format conversion and message routing
  - ADVENTURE will provide your custom system with real-time monitoring information on your (cross-organizational) manufacturing processes

### ▪ Dynamic Adaptation

- Control your manufacturing processes
  - ADVENTURE will trigger alerts in case of unexpected events on your (cross-organizational) manufacturing processes
  - ADVENTURE will support you to dynamically adapt your process models (in case of events)

# Membership

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## Passive Member

- You can describe your manufacturing capabilities, products, and services, which increases visibility
- You can be found and identified as a partner
- You can be involved in cross-organizational manufacturing processes – if you agree

## Active Member

- You can describe your manufacturing capabilities, products, and services, which increases visibility
- You can be found and identified as a partner
- You can be involved in cross-organizational manufacturing processes – if you agree
- You can model (own) manufacturing processes
- You can search for partners
- You can run a Virtual Factory

# Requirements

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## Passive Member

- Resources
  - You need to have a browser
- Skills
  - You need to register
  - You need to describe the manufacturing capabilities, products, and services you would like to offer

## Active Member

- Resources
  - You need to have a browser
  - You need to configure a gateway to connect to your (custom) ERP/CRM system
- Skills
  - You need to register
  - You need to describe the manufacturing capabilities, products, and services you would like to offer
  - You potentially need an engineer to configure the gateway

## In brief...

### ADVENTURE

- Provides tools and methods for
  - Partner finding
  - Process modeling
  - Process simulation and optimization
- Integrates ICT systems
- Provides holistic monitoring
- Increases the visibility of companies

**Enhances collaboration**

ADVENTURE assists in achieving optimized,  
collaborative, cross-organizational  
manufacturing processes