VFF – Apresentação Geral do Projecto

Sara Silvestre

Projecto VFF

27th September 2011, Palmela

Holistic, extensible, scalable and standard Virtual Factory Framework

VIRTUAL FACTORY FRAMEWORK

Projecto VFF

VIRTUAL FACTORY FRAMEWORK

Principais Objectivos:

Pesquisa e desenvolvimento de ferramentas, modelos de referência e metodologias que serão a base da nova geração da Fábrica Virtual e interacção com a Fábrica Real (Virtual Factory V.s. Real Factory).

STRATEGIC OBJECTIVE: Theme 4 – NMP – Nanosciences, Nanotechnologies, Materials and new Production Technologies

DURAÇÃO PROJECTO: 3,5 anos

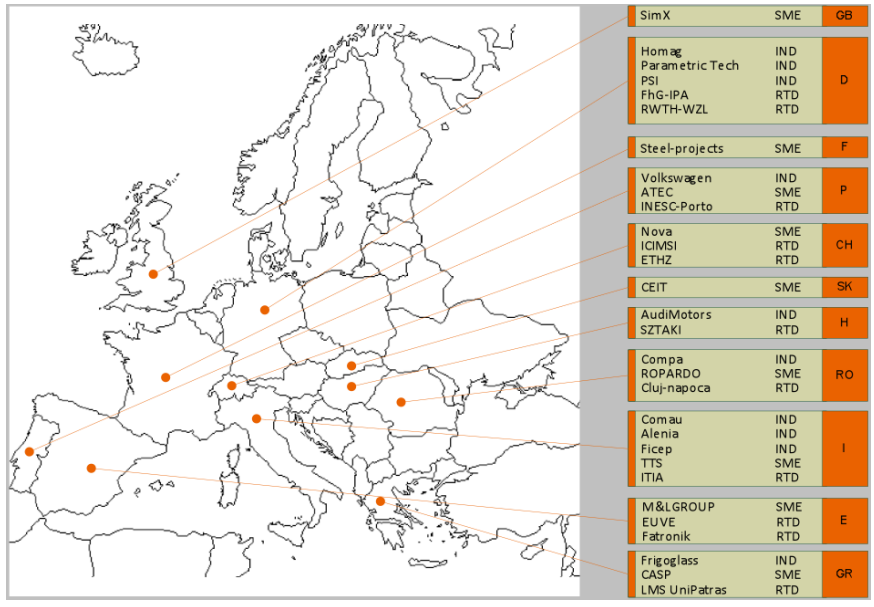
DATA INÍCIO: 1 Setembro 2009

PROJECTO N°: FP7-NMP-2008-3.4-1; 228595

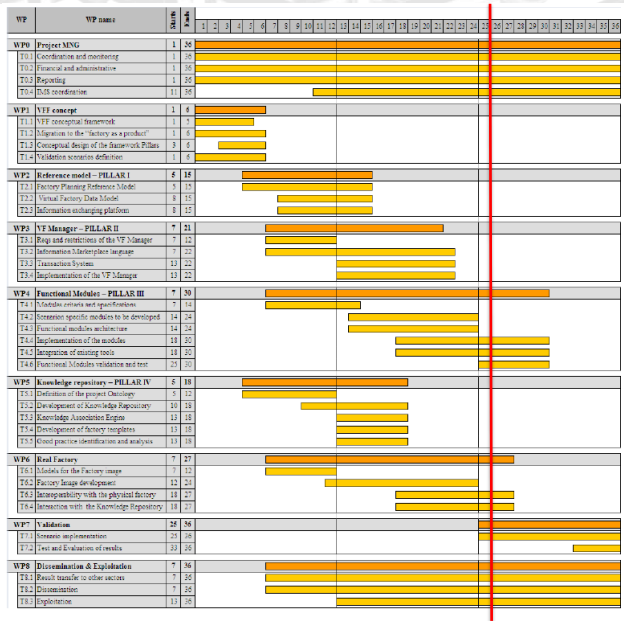
BUDGET: 12.075.455€

Istituto di Tecnologie Industriali e Automazione
Consiglio Nazionale delle Ricerche

Consórcio – 30 parceiros

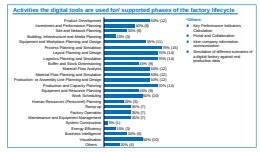


Cronograma

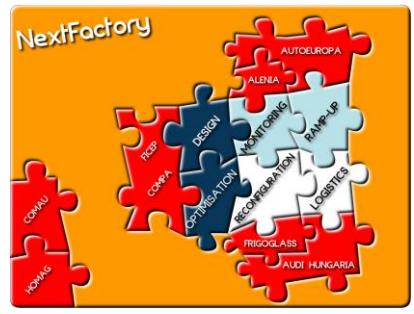


… no início …

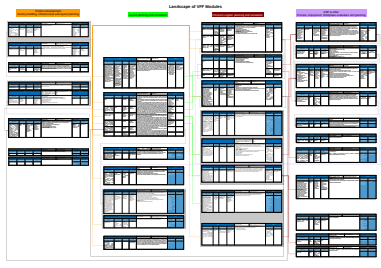
expectativas e especificações…
definição de domínios, tarefas e módulos



… até à definição do Use Case …



VFF WP1



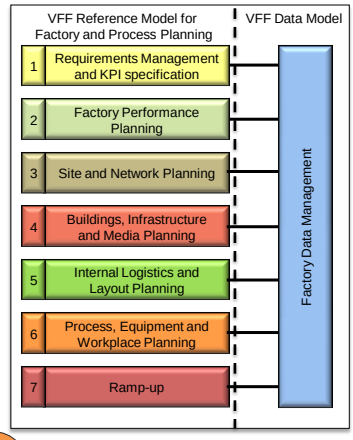
… e indicadores mensuráveis.

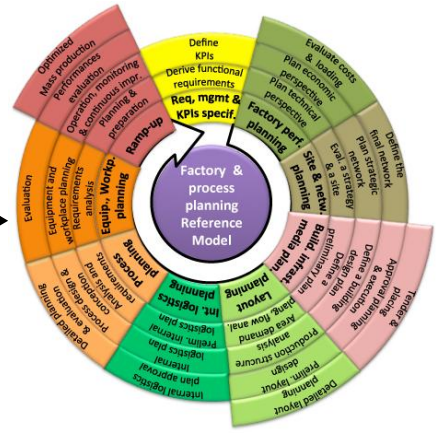
FACTORY PERFORMANCE INDICATORS

Name	Acronym	Definition	Unit	Formula	Source of data	value "as-is"	value "to-be"
Performance Efficiency	E	Measure of how a machine (or system) performs compared to the expected (designed) performance.	%		MES, SAP	-	5% increase
Transport Time	TT	Time spent in physically transporting the product in the production site	seconds	-	Excel, manual data collection	~40	~35

PLANNING PROCESS INDICATORS

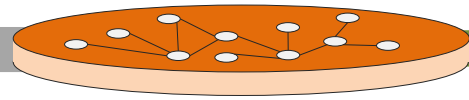
Name	Acronym	Definition	Unit	Formula	Source of data	value "as-is"	value "to-be"
Lead time	T_L	The lead time should be decreased about 20% after using the VFF tool. T_L is the time of shipment, while T_D is the time of order release	hours	$T_L=T_E-T_D$	SAP		20% decrease



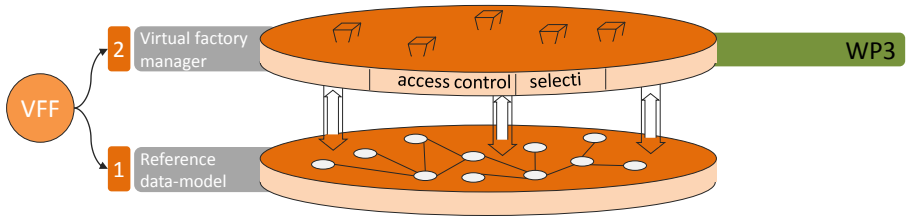


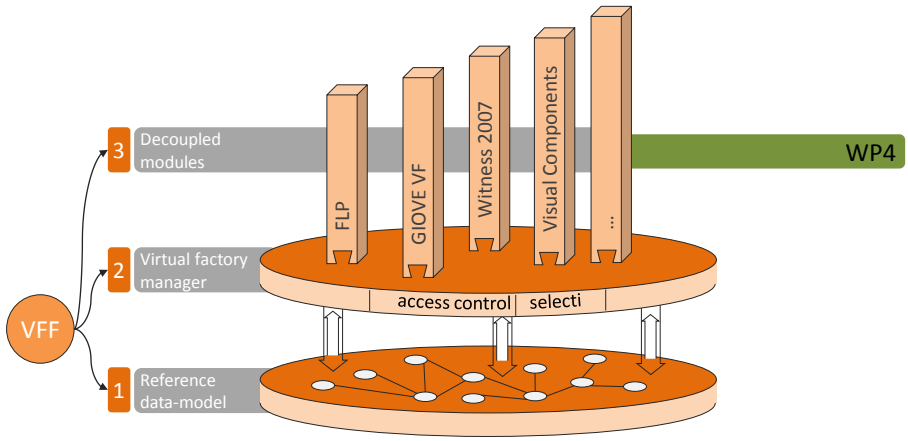
VFF

1 Reference data-model



WP2


2
Virtual factory manager
VFF
1
Reference data-model
access control
selecti
WP3


3
Decoupled modules
2
Virtual factory manager
VFF
1
Reference data-model
FLP
GIOVE VF
Witness 2007
Visual Components
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access control
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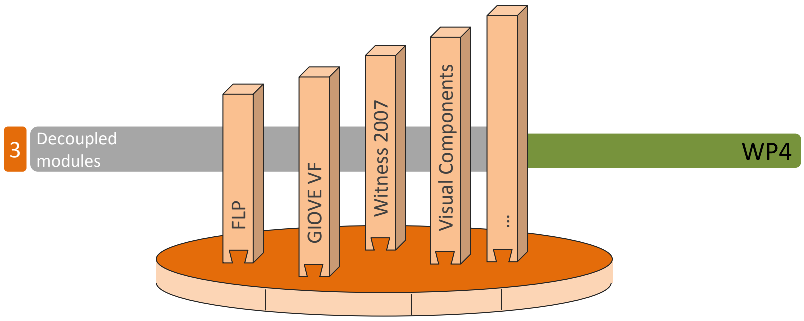
WP4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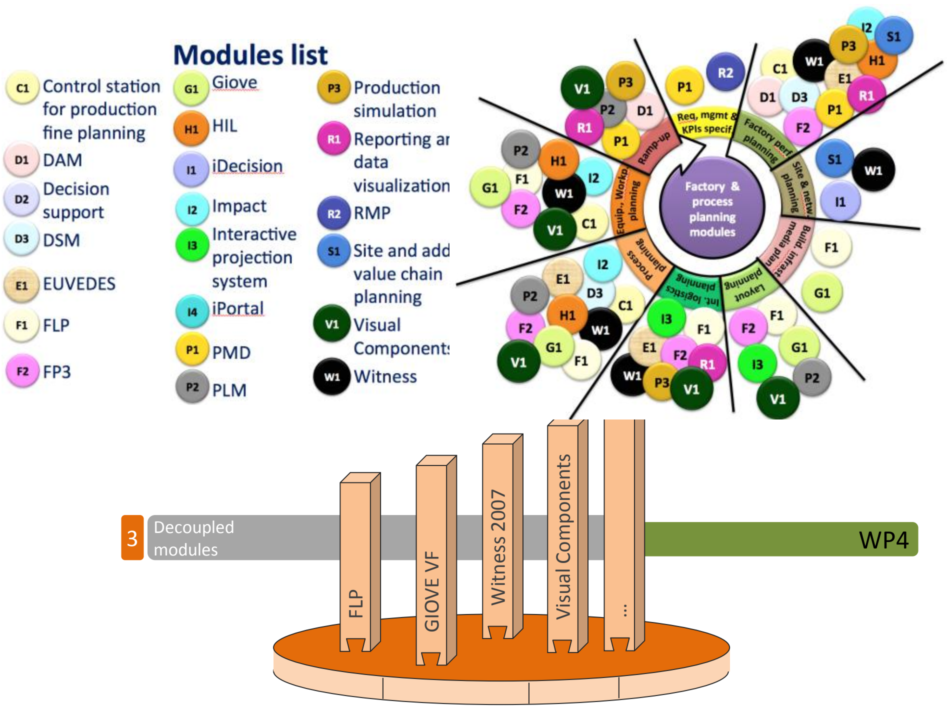
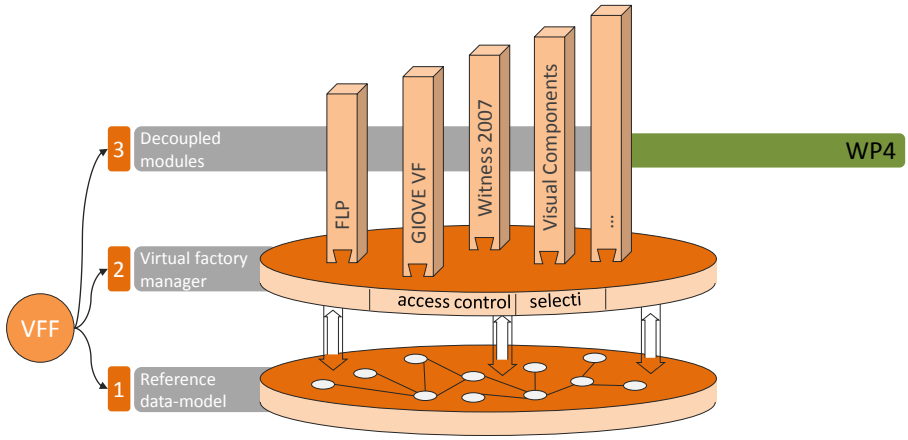
WP4


Modules list
Control station for production fine planning
DAM
Decision support
DSM
EUVEDES
FLP
FP3
Giove
HIL
iDecision
Impact
Interactive projection system
iPortal
PMD
PLM
Production simulation
Reporting ar data visualization
RMP
Site and add value chain planning
Visual Component
Witness
Factory & process planning modules
Req. mgmt & KPIs specif.
Factory perf. planning
Site & netw. planning
Build. infrast. media plan
Layout planning
Int. logistics planning
Process planning
Equip., Worksp. planning
Ramp-up
3
Decoupled modules
FLP
GIOVE VF
Witness 2007
Visual Components
…
WP4


3
Decoupled modules
2
Virtual factory manager
1
Reference data-model
VFF
FLP
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Witness 2007
Visual Components
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access control
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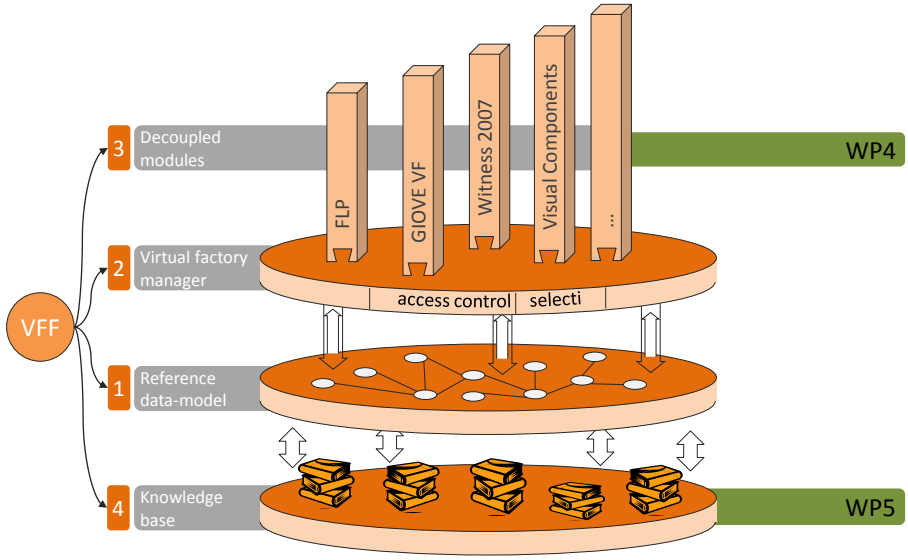
WP4


3
Decoupled modules
2
Virtual factory manager
1
Reference data-model
4
Knowledge base
VFF
FLP
GIOVE VF
Witness 2007
Visual Components
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access control
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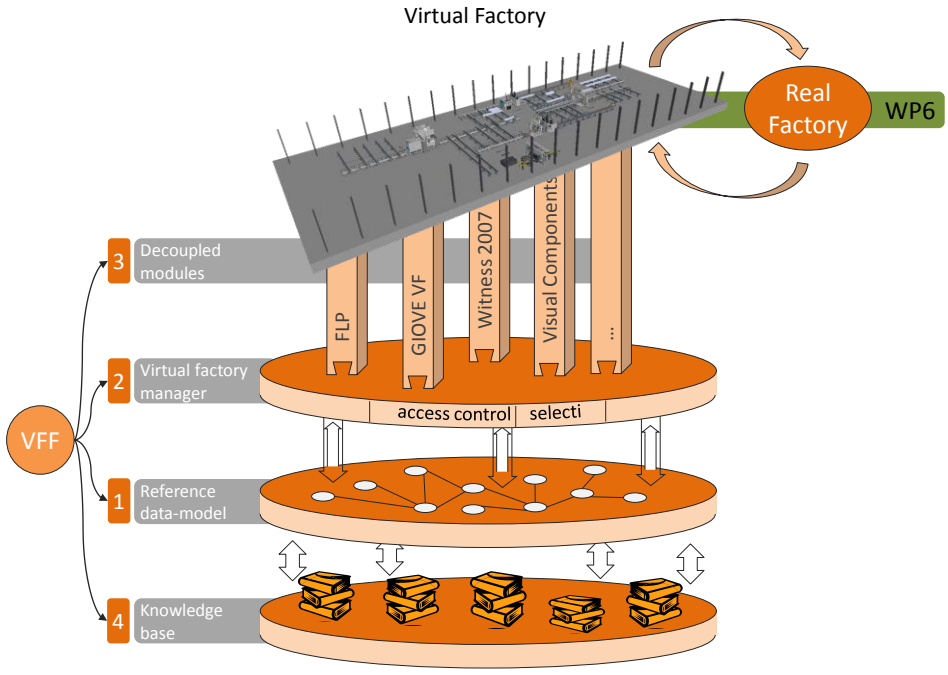
WP4
WP5


Virtual Factory
Real Factory
WP6
3
Decoupled modules
2
Virtual factory manager
1
Reference data-model
4
Knowledge base
VFF
FLP
GIOVE VF
Witness 2007
Visual Components
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access control
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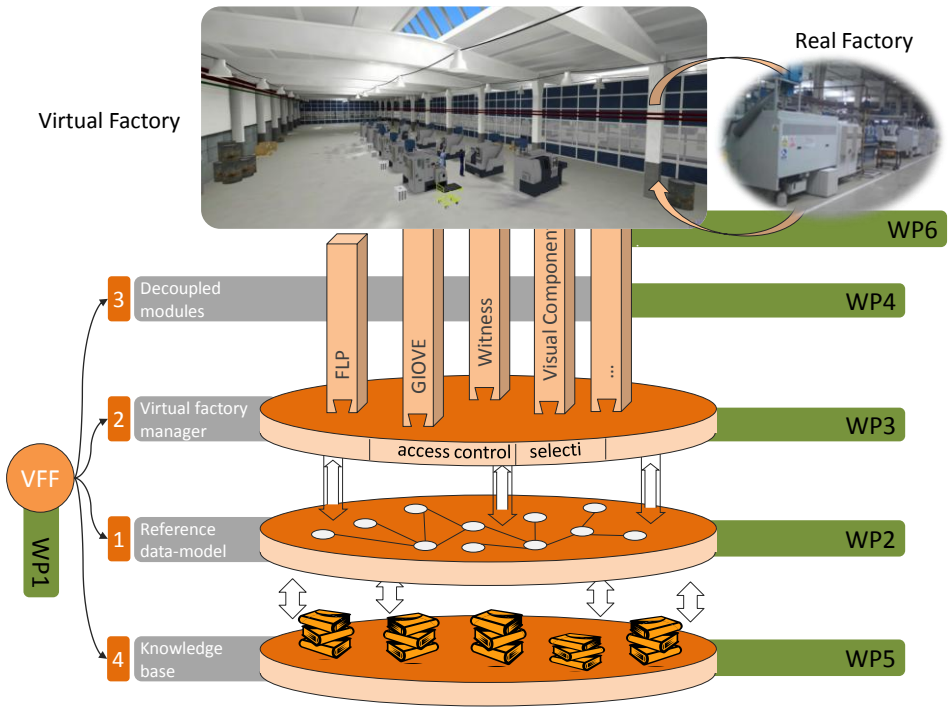
Virtual Factory
Real Factory
WP6
3
Decoupled modules
WP4
2
Virtual factory manager
WP3
1
Reference data-model
WP2
4
Knowledge base
WP5
VFF
WP1
FLP
GIOVE
Witness
Visual Componen
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access control
selecti

Principais benefícios

1. Reduzir o tempo e custo durante a fase de planeamento, *ramp-up* e reconfiguração
2. Todas as ferramentas de planeamento usam um modelo único consistente e não redundante
3. Realizar diferentes actividades de planeamento em simultâneo em virtude de versões sofisticadas e mecanismos de bloqueio.
4. Utilização sistemática do conhecimento passado. Utilização das melhores práticas para a reutilização de soluções anteriores
5. Simulação e optimização do sistema de produção usando dados reais recolhidos na fábrica real. Sincronização da informação entre a fábrica real e a virtual.

Contactos e Informação

Web site: www.vff-project.eu

Brochura do Projecto

Newsletter: #1 e # 2

Redes Sociais:

Twitter (www.twitter.com) VirtualFactory

Slideshare (www.slideshare.com)

Coordenador: Marco Sacco

e-mail: info@vff-project.eu