

PPP: FoF Topic FoF-NMP-2012-6

Model-Based *D*ecision Support in *R*eal-Time for *E*fficient *A*gile *M*anufacturing (DREAM)

Objectives:

- Improve competitiveness and enable agility in factories
- Development and demonstration of tools and methodology for rapid development and use of modelling for new line installation and improvement of existing lines
 - Multicriteria analysis to optimise
 - Investment
 - Cost
 - Resources
 - Energy
 - Quality
 - Throughput
 - Cycle Time
- Develop post-processing tools to transform model output to decision information
- Further develop rapid modelling to move from strategic improvement to optimised tactical allocation of resources in real time

Expected results:

- New algorithms and software to rapidly develop models for design, improvement and operation of production lines
- Provide DSS through the post-processing of model output
- Prove the effectiveness through demonstrated application in a range of production environments across several product sectors
 - Automotive
 - Semiconductor
 - Aerospace
 - Food
 - Biomedical
 - Electronics
 - Household

Info about project/Project structure:

- Industry lead specification of requirements
 - Detailed review of existing modelling application/ challenges for modelling in different industry sectors
 - Compare and contrast the different requirements for modelling
- Development of tools and algorithms for rapid strategic modelling
 - Common elements, algorithms and analyses
 - Customised elements, algorithms and analyses
 - Develop tools to allow use of alternative solutions from common interface
- Development of tools and algorithms for rapid tactical modelling
 - Algorithms to build/transform strategic models into tactical models
- Apply developed tools and algorithms in demonstrators
 - Industry partners implement improvement and/or scheduling tools and approaches
 - Apply output from post processing DSS to factory
 - Measure and report on accuracy of predicted performance benefits

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Interested Potential Partners				
S.No	Partner Name	Type	Country	Role in the Project
	Dublin City University	Uni	Ireland	Coordination, Rapid Modelling, Quality Modelling, Complex Manufacturing, Scheduling and Optimisation
	University of Skovde	Uni	Sweden	Model Development Interface, Rapid Modelling, Post-Processing, Optimisation
	Cranfield University	Uni	UK	Modelling strategies, Assembly of models, analysis and optimisation
	Volvo	Ind	Sweden	Automotive Manufacturing, specification, development and demonstration
	Boston Scientific	Ind	Ireland	Biomedical Device Manufactuirng, specification, development and demonstration
	Seagate	Ind	UK	Semiconductor Manufacturer, specification, development and demonstration
Required Partners				
S.No	Profile	Type	Country	Role in the project
	SME Manufacturer	Ind	Other	Specification, development and demonstration of system in SME
	Manufacturer	Ind	Other	As above

Organisation
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