

The challenge : recent studies quantify European outsourcing at 21% of total assembly activities (outside Europe), and had forecasted a rise to over 40% by 2007 [1,2]. Since 2007 the economic downturn and established outsourcing procedures have worsened the case. The hidden issue behind such facts is that the cost-effectiveness of assembly in Europe, and this is particularly true for novel products and markets, to a large degree depends in the short/midterm or long-term perspective taken by the enterprise in question.

This challenge is not only imposed by external conditions such as new forms of business (globalisation), technological achievements, or regulations (ecological etc.), but also internally.

The answer : IDEAS - Instantly **D**eplorable **E**volvable **A**ssembly **S**ystems. It will be necessary to develop self-configuring, highly adaptive (self-diagnosis), process-oriented components, and shift the technological focus from complex, flexible, multi-purpose systems to a simpler, dedicated machine modules maintained by a highly distributed control system approach. The goal of IDEAS is to provide a prototype industrial assembly system application as a proof-of-concept of this new control approach.

IDEAS project at a glance:

Project full title

Instanty Deployable Evolvable Assembly Systems

Contract type:

Small or medium-scale focused research project

Project status:

Execution

Project founding:

IDEAS is funded by the EU 7th framework programme (FP7), FP7-NMP-2009-SMALL3. Grant Agreement

Project start:

01/04/2010

Project end:

30/06/2013

Duration:

39 months

References

1. B. Bidanda; O. Arisoy; L. J. Shuman "Offshore manufacturing: Implications for engineering jobs and education"; *Robotics and Computer-Integrated manufacturing*, No. 22, 2006 pgs 576-587

2. R. Meredith "Giant sucking sound"; www.forbes.com; October 6, 2003