In the context of embedded software deployed on "off the shelf" execution platforms, the LAMBDA project has two major goals:

- To demonstrate the technical feasibility and the interest of model libraries by formalising the key properties of execution platforms,
- To reconcile appropriated standards (SysML, MARTE, AADL, IP-XACT) with de facto standards (already implemented by widespread analysis and simulation tools).

PROGRESS BEYOND THE STATE OF THE ART

Lambda focuses on systems composed of complex assemblies of COTS, on test cases that are representatives of system integrators issues (control of network latencies, task scheduling, configuration). Based on SysML/MARTE architectural descriptions, different kinds of analytical and simulation models are developed. Models are calibrated and validated against measures performed actual platforms.

MAJOR PROJECT OUTCOMES

- **Publications:**
  - Espinoza (CEA LIST); B. Selic (Malina Software Corp.); D. Cancila (CEA LIST); S. Gérard (CEA LIST), Challenges in Combining SysML and MARTE for Model-Based Design of Embedded Systems, H. ECMDA'09, The Netherlands, June 2009.
  - Frédéric Mallet, Charles André, Julien DeAntoni: Executing AADL models with UML/MARTE, ICECCS – UML & AADL’09, Postdam (Germany), June 2009 (pp 371-376).
  - Charles André, Frédéric Mallet, Aamir Mehmood Khan, Robert de Simone: IP-XACT components with abstract time characterization, FDL’09, Sophia-Antipolis (France), Sept 2009.

- **Product(s) or Service(s):**
  - caded System, Cofluent, Papyrus, Obeo Designer.

- **Job creation:**
  - Creation: 2 CDI, 2CDD.
  - Preservation: 5 CDI.