

PROMETEO

Plataforma Tecnológica Española de
Sistemas con Inteligencia Integrada



MINISTERIO
DE CIENCIA
E INNOVACIÓN



Centro para el Desarrollo
Tecnológico Industrial

**Jornada-Taller PROMETEO-CDTI: 14 Julio 2011
(Tecnalia-Bilbao)**

Proyectos Actuales de Convocatorias ARTEMIS

ARTEMIS Joint Undertaking

ARTEMIS Industry Association is a founding member of the ARTEMIS Joint Undertaking (ARTEMIS JU). This is the Public Private Partnership with the European Commission, 22 in ARTEMIS participating member states and the Industry Association (200 + members). The stakeholders in the ARTEMIS Joint Undertaking adopt a commonly agreed research agenda closely following the recommendations of the ARTEMIS SRA. This research agenda is implemented in a 10-year R&D funding programme on embedded systems. Therefore, each year an ARTEMIS call for innovative project proposals will be launched. Selected projects will be co-funded by the EC and the 22 countries that have joined the ARTEMIS JU: <http://www.artemis-ju.eu/>

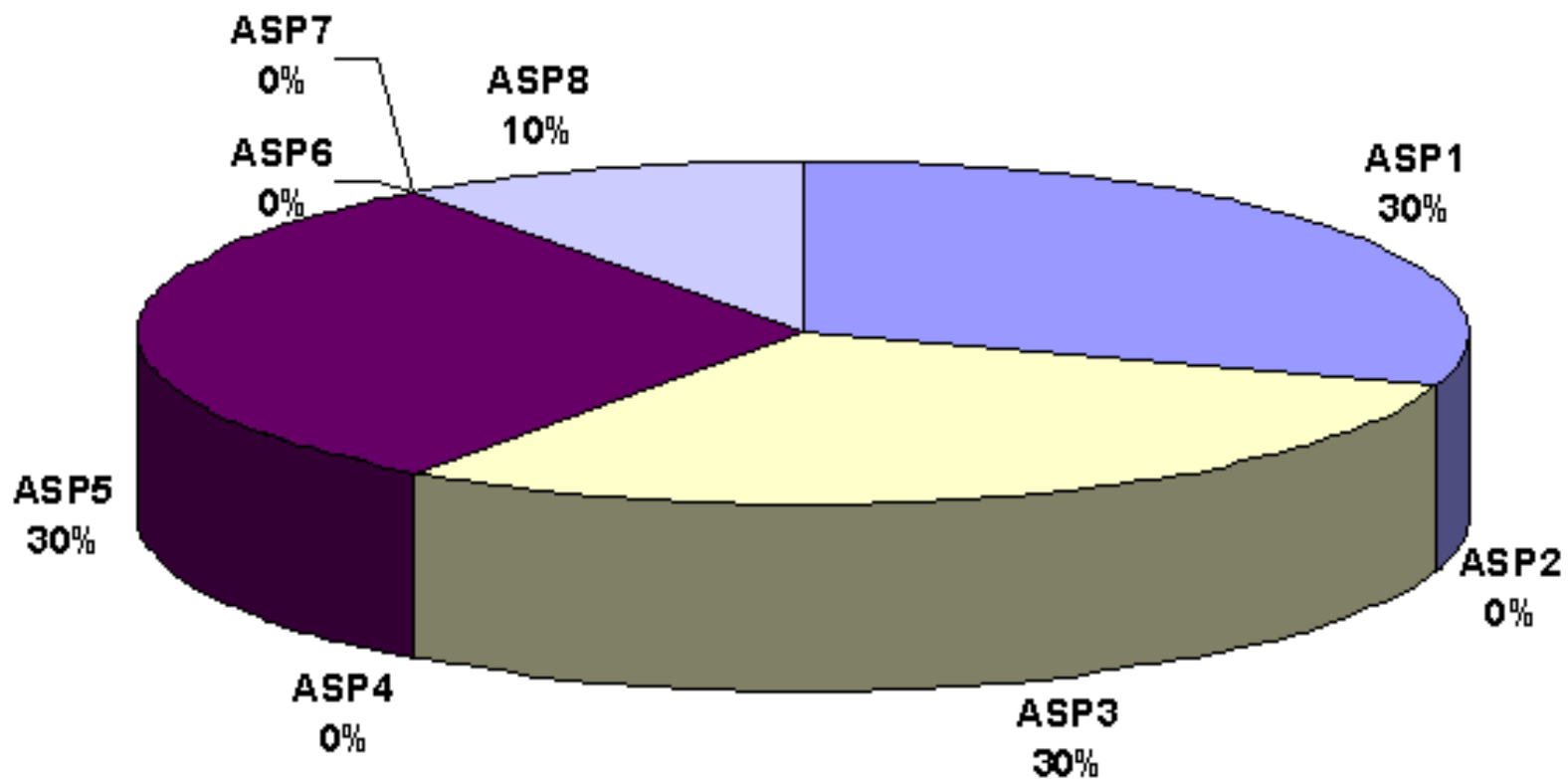
ARTEMIS ASPs

- ASP1: Methods and processes for safety relevant embedded systems
- ASP2: Embedded Systems for Healthcare systems
- ASP3: Embedded systems in Smart environments
- ASP4: Manufacturing and production automation
- ASP5: Computing platforms for embedded systems
- ASP6: ES for Security and Critical Infrastructures Protection
- ASP7: Embedded technology for sustainable urban life
- ASP8: Human-centred design of embedded systems

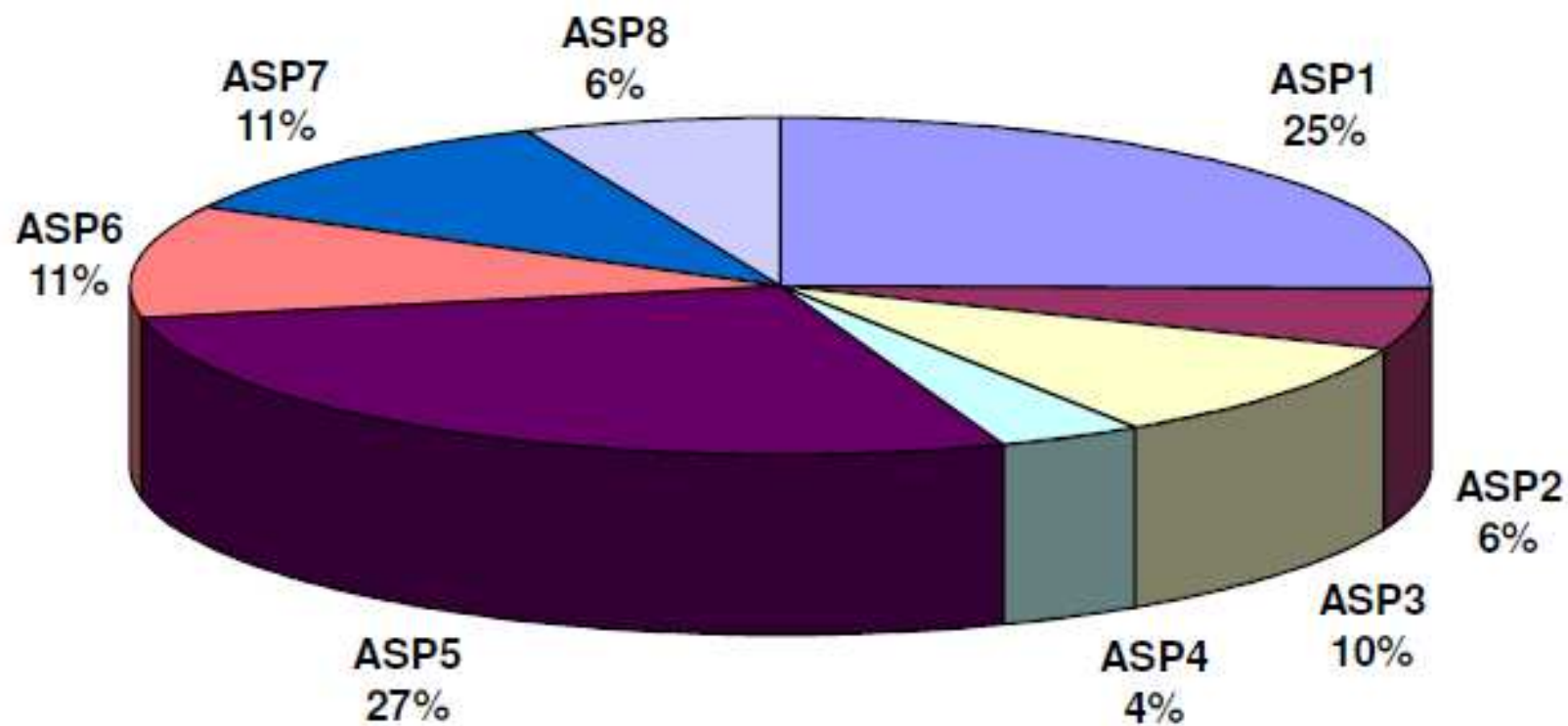
ARTEMIS-JU Convocatorias

Convocatoria	Cierre	ARTEMIS Joint Undertaking Budget	Member States Budget - Spain
ARTEMIS-JU Call 2008	FP: 03/09/2008	35.100.000 €	6 M€
ARTEMIS-JU Call 2009	PO: 15/04/2009 FP: 03/09/2009	37.086.500 €	5,99 M€
ARTEMIS-JU Call 2010	PO: 26/03/2010 FP: 01/09/2010	33.120.000 €	4 M€
ARTEMIS-JU Call 2011	PO: 31/03/2011 FP: 01/09/2011	23.223.750 €	4 M€

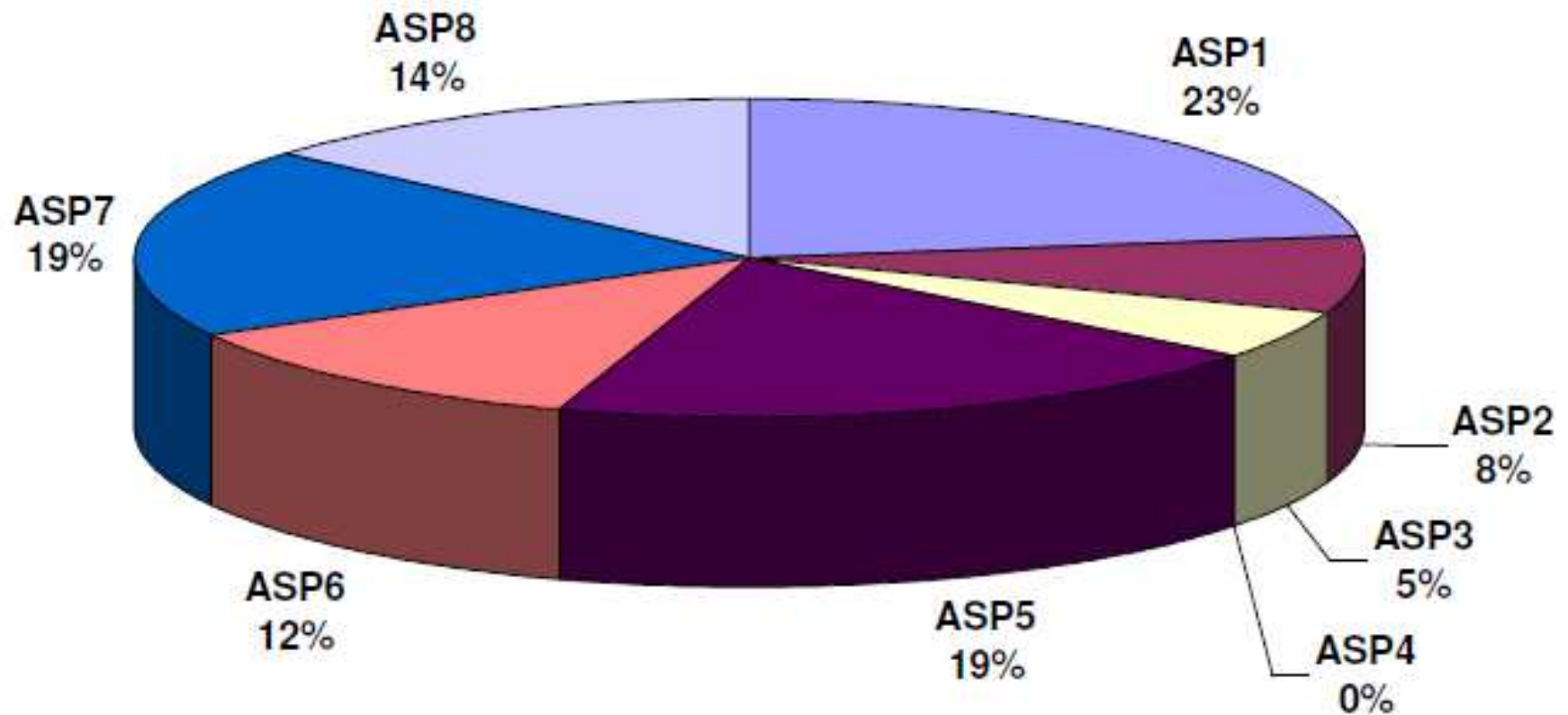
ARTEMIS Call 2008 - % de participación propuestas/ASP



ARTEMIS Call 2008 + 2009 - % de participación propuestas/ASP



ARTEMIS Call 2010 % de participación propuestas/ASP – 2010



ARTEMIS Call 2008 Proyectos - 1

Resultados: 27 FPPs, 12 proyectos financiados

	Industrial	Nomadic Environments	Private Spaces	Public Infrastructure
RDA	CAMMI INDEX SYS			eDIANA
SCM	CESAR iLAND	EMMON SOFIA	SMART	SCALOPES
DMT	CHARTER CHESS			
		SYS MODEL		

RDA= Reference Designs and Architectures
SCM= Seamless Connectivity and Middleware
DMT= Design Methods and Tools

ARTEMIS Call 2008 Proyectos – 2

NOMBRE	ASP	COMIENZO	DURACIÓN	DESCRIPCIÓN
CESAR	ASP1	01/03/2009	36 months	CESAR targets significant reduction of overall development time and effort, between 30% and 50%, using a Reference Technology Platform (RTP). The aim is, within 5 years, to double the number of European technology providers and SMEs joining the CESAR ecosystem and reduce by 50% the cost of integration, configuration, deployment, and maintenance of tool-chains.
CHARTER	ASP1	01/04/2009	36 months	CHARTER will develop concepts, methods, and tools for embedded system design and deployment that master complexity and substantially improve the development, verification and certification of critical systems.
CHESS	ASP1	01/02/2009	36 months	CHESS aims to build modelling languages for extra-functional properties, and develop tools for evaluation of these properties of component contracts. It will adapt component infrastructures for the integration of real-time and dependable patterns, and validate the approach through multi-domain case studies.
EMMON	ASP3	01/03/2009	36 months	EMMON will research, develop and test a functional prototype for large scale Wireless Sensor Networks. It aims to advance the number of devices by one order of magnitude compared to what is possible today, and develop simulation tools for networks two orders of magnitude larger than at present. The goal is to create technologies that allow effective monitoring with 10,000 to 100,000 devices, in an area of 50 square km in a real world scenario.
SMART	ASP3	01/03/2009	36 months	SMART will create an innovative WSN infrastructure based on both off-the shelf reconfigurable devices (FPGAs) and specially designed Reconfigurable Application Specific Instruction Set Processors (RASIPs). This infrastructure will support video and data compression as well as high-levels of security with lower power consumption than existing solutions.
SOFIA	ASP3	01/01/2009	36 months	SOFIA will create an Open Innovation Platform (OIP) providing the interoperability that allows interaction between multi-vendor devices. For this, it will create interaction models and embedded devices that support a variety of “smart spaces” and a variety of users, and develop methods, techno-economic structures and toolkits for the deployment of smart environments and for the development of services and applications based on them. It will also define scenarios to demonstrate the capabilities of the OIP in personal spaces, indoor spaces and cities.

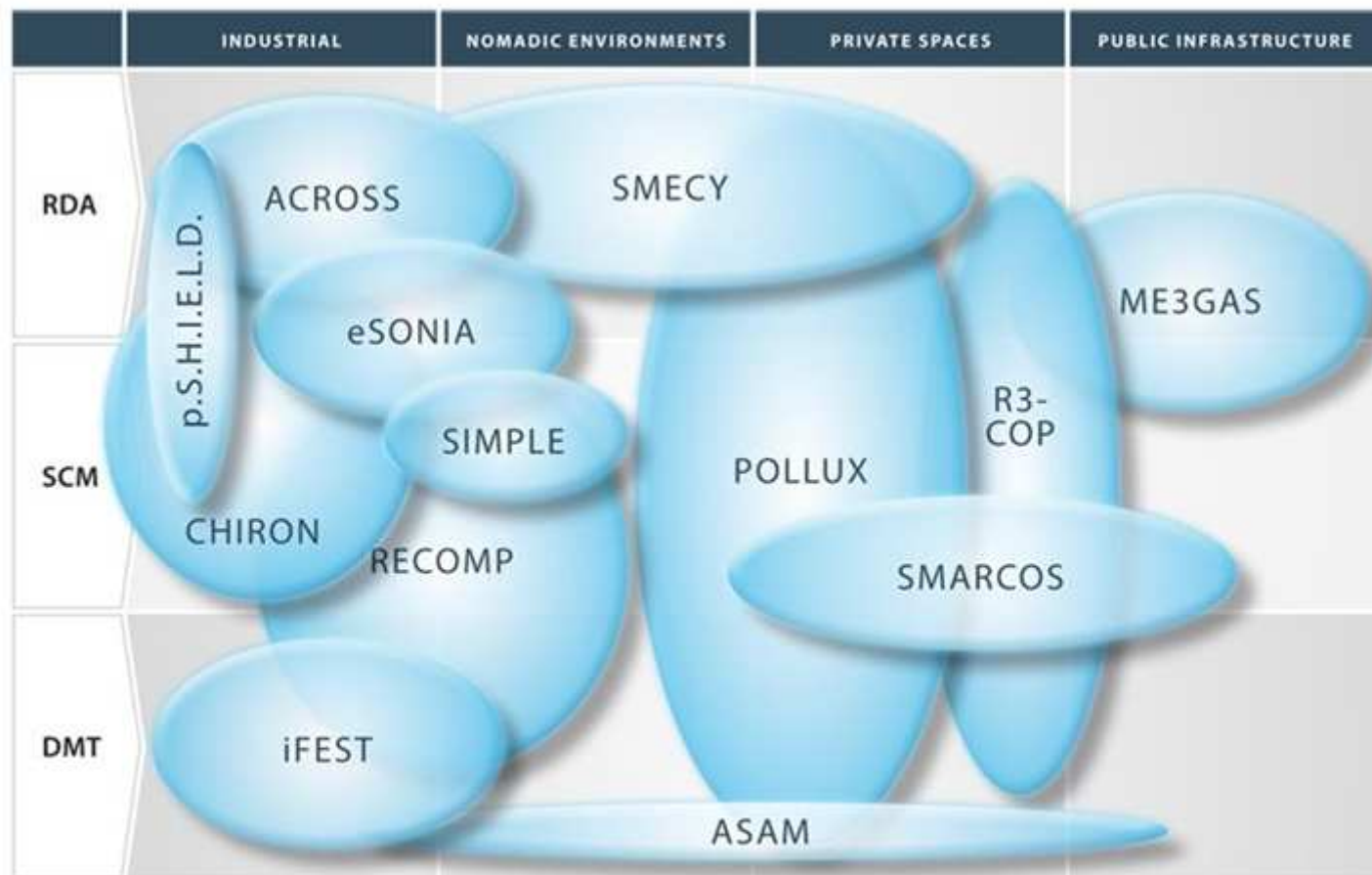
ARTEMIS Call 2008 Proyectos – 3

NOMBRE	SP	COMIENZO	DURACIÓN	DESCRIPCIÓN
iLAND	ASP5	01/03/2009	36 months	iLAND will develop enabling technologies for modular, component-based middleware for networked systems that demand deterministic, dynamic functional composition and reconfiguration. Its results embrace a lightweight middleware architecture offering deterministic services and QoS-based resource management, and an approach for modelling deterministic, dynamic reconfiguration and composition of applications, with validation through three application demonstrators.
INDEXYS	ASP5	01/04/2009	30 months	INDEXYS will develop a cross-domain instantiation of the GENESYS embedded system architecture, for Industrial-grade exploitation on real-world platforms in Railway, Aerospace, Automotive and Industrial Control domains.
SCALOPES	ASP5	01/01/2009	24 months	SCALOPES' objective is to enable an industrially sustainable path for the evolution of low-power, multi-core computing platforms, for application domains with strategic value for European competitiveness.
CAMMI	ASP8	15/12/2008	36 months	The objective of CAMMI is to demonstrate a joint-cognitive approach to controlling devices, where a workload exceeding the operator's capability ideally results in offloading non-critical, time-consuming tasks to autonomous agents (software, artificial-intelligence agents) and to let the operator focus his attention on critical tasks only.

ARTEMIS Call 2009 Proyectos - 1

56 PO, 44 FPP

Resultado: 13 proyectos financiados



RDA = Reference Design and Architectures
SCM = Seamless Connectivity and Middleware
DMT = Design Methods and Tools

ARTEMIS Call 2009 Proyectos - 2

NOMBRE	ASP	COMIENZO	DURACIÓN	DESCRIPCIÓN
ACROSS		April 2010	36 months	ACROSS will develop and implement an ARTEMIS cross-domain architecture for embedded Multi-Processor SoCs based on the architecture blueprint developed in the FP7 project GENESYS (Generic Embedded System Architecture), and develop a first generic MPSoC implementation in an FPGA.
ASAM		April 2010	36 months	ASAM addresses a uniform process of automatic architecture synthesis and application mapping for heterogeneous, multi-processor embedded systems, defining a new and unified design methodology, as well as related synthesis and prototyping tool-chains. For this, a highly efficient automatic synthesis flow will be created from the algorithmic specification down to its hardware/software implementation at the circuit/code level.
CHIRON	ASP2	March 2010	36 months	Addressing growing health-care concerns, CHIRON will combine state-of-the art technologies and innovative solutions into an integrated framework designed for an effective and person-centric health management over the complete care cycle.
eSONIA	ASP4	March 2010	36 months	eSONIA means greater predictability of plant behaviour and visibility, reduced safety risks, enhanced security and cost efficiency.
iFEST	ASP5	April 2010	36 months	iFEST will specify and develop an integration framework for establishing and maintaining tool chains for the engineering of complex industrial embedded systems. Specific emphasis is placed on open tool chains for HW/SW co-design of heterogeneous and multi-core solutions, and life cycle support for an expected operational life time of several decades.
M3Gas		April 2010	36 months	ME ³ Gas will also contribute to the standardization work being carried out currently in Europe in the smart metering field (under the M/441 mandate of the EC mainly). The work will propose a standard for a European Gas Metering Infrastructure, which can be a part of a multi-utility platform to be made within the project.
POLLUX		March 2010	36 months	POLLUX will develop a distributed real time ES platform for next generation electric vehicles, by using a component and programming-based design methodology.
R3-COP	ASP5	March 2010	36 months	R3-COP will develop a fault-tolerant high-performance processing platform, based on a multi-core architecture, as well as innovative system components for robust perception of the environment including sensor fusion, and for reasoning and reliable action control.

ARTEMIS Call 2009 Proyectos – 3

NOMBRE		COMIENZO	DURACIÓN	DESCRIPCIÓN
RECOMP	ASP1	April 2010	36 months	RECOMP will establish methods, tools and platforms for enabling cost-efficient (re-)certification of safety-critical and mixed-criticality systems. Applications addressed are automotive, aerospace, industrial control systems, and lifts and transportation systems
p.S.H.I.E.L.D.	ASP6	March 2010	12 months	SHIELD aims at addressing Security, Privacy and Dependability (SPD) in the context of Embedded Systems (ESs) as “built in” rather than as “add-on” functionalities, proposing and perceiving the first step toward SPD certification for future ES.
SIMPLE		September 2010	36 months	The main goal of SIMPLE is to research and deliver an intelligent, self-organizing embedded middleware platform, designed for the integration of manufacturing and logistics. SIMPLE will address the self-organization and cooperation of wireless sensors and smart (RFID) tags for federated, open and trusted use in the manufacturing and logistics applications.
SMARCOS	ASP8	January 2010	36 months	SMARCOS helps users of interconnected embedded systems by ensuring their inter-usability. Many products today connect with web services (media players, refrigerators, e-books, even cars).
SMECY		February 2010	36 months	SMECY envisions that recently emerged multi-core technologies will rapidly develop to massively parallel computing environments which, due to improved performance, energy and cost properties, will extensively penetrate the embedded system industry in a few years.

ARTEMIS Call 2010 Proyectos - 1

72 POs, 43 FPPs

Resultados: 10 proyectos financiados

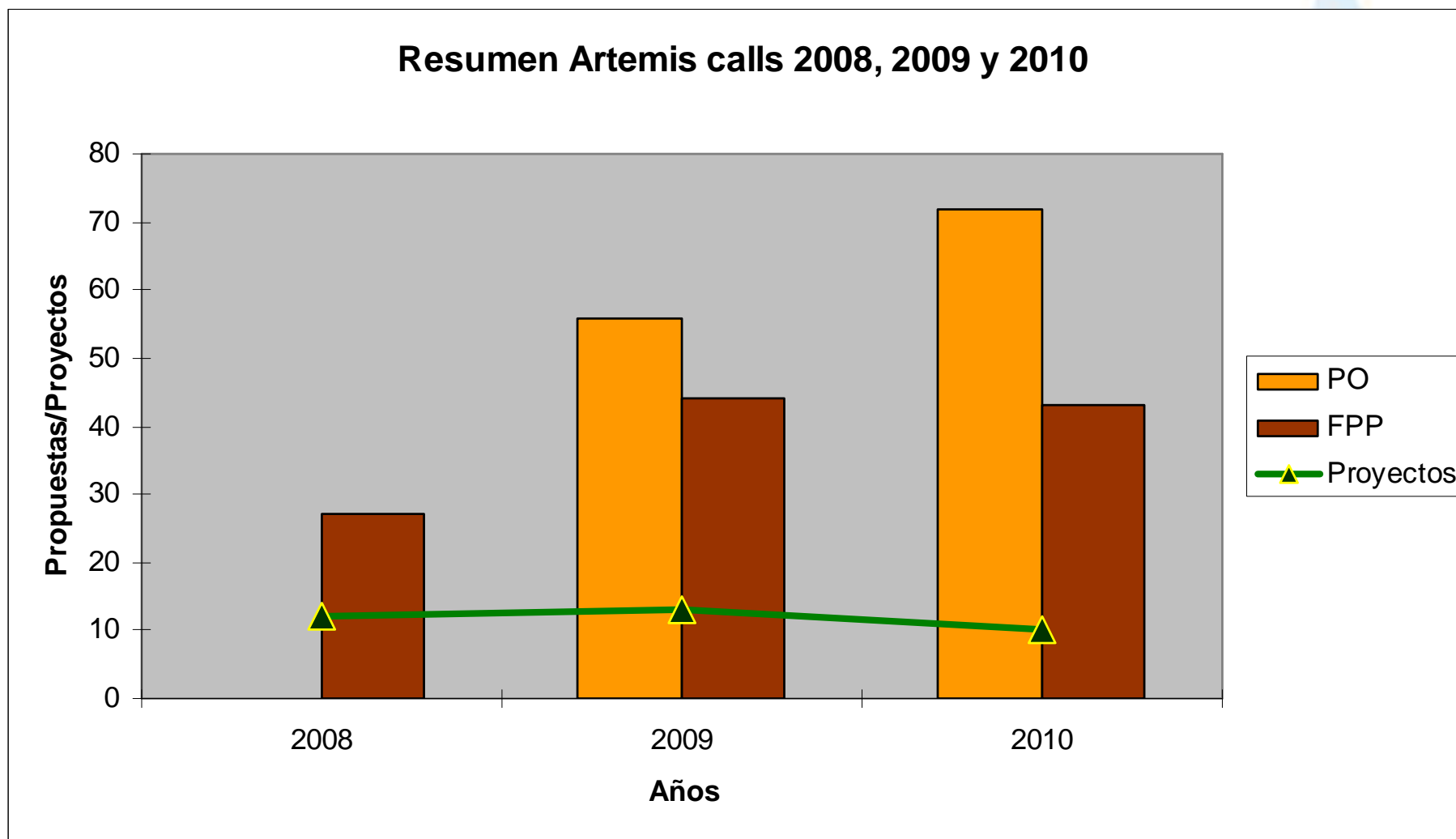
Aún no se dispone de información sobre cada uno de los proyectos financiados

	Industrial	Nomadic Environments	Private Spaces	Public Infrastructure
RDA				
SCM				
DMT				

ARTEMIS Call 2011 Proyectos - 1

41 POs presentados
Fase FPP: 1 de Septiembre de 2011

Conclusiones: PO/FPP/Proyectos

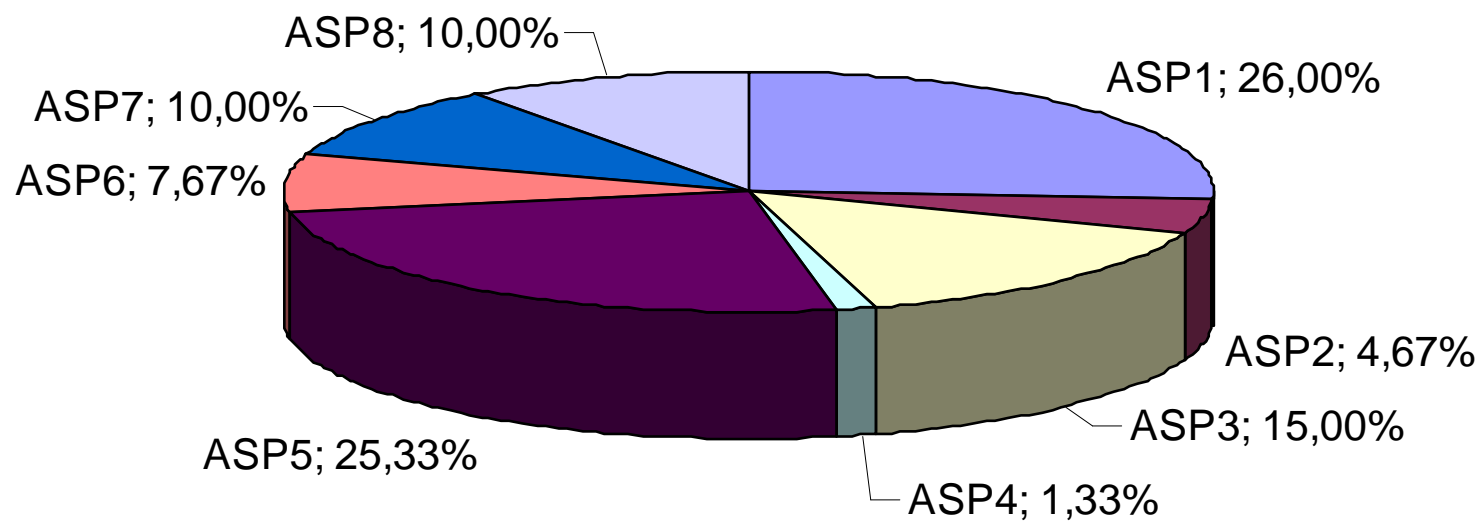


Conclusiones: PO/FPP/Proyectos

- El presupuesto de Artemis y España se ha reducido un 33% respecto del 2008.
- El número de FPPs ha aumentado en un 159% respecto del 2008.
- Los ratios de abandono (presentaron PO pero no FPP) son:
 - 2008: no hubo fase PO.
 - 2009: 21%.
 - 2010: 40%.
- Los ratios de éxito (proyectos aceptados) son:
 - 2008: 44%.
 - 2009: 30%.
 - 2010: 23%.
- **Conclusión:** cada vez mayor competencia, aunque todavía hay oportunidad para las buenas propuestas.

Conclusiones: PO/FPP/Proyectos

Propuestas por ASP 2008-2010



Conclusiones: ASPs

- En el 2010 la desviación respecto a la media es:
 - ASP1 (histórico 26%). Variación: -8%.
 - ASP2 (histórico 5%). Variación: 33,3%
 - ASP3 (histórico 15%). Variación: -50%.
 - ASP4 (histórico 1%). Variación: -100%.
 - ASP5 (histórico 25%). Variación: -29,63%.
 - ASP6 (histórico 8%). Variación: 9%.
 - ASP7 (histórico 10%). Variación: 72,73%.
 - ASP8 (histórico 10%). Variación: 133,33%.
- Tendencia hacia los proyectos transversales (más de un ASP).
- **Conclusión:** hay una descompensación en el interés por los diferentes subprogramas.

Conclusiones: tangibles

- Tendencia hacia la generación de valor vía dos herramientas:



- **Conclusión:** las propuestas deben ir alineadas a la creación de plataformas y/o centros de excelencia.