



**Nationale und Europäische Förderprogramme für
SW- und Systementwicklung (IKT)
Technologieplattformen und "Joint Undertakings"
– nicht nur für die Großen**

CON.ECT Informunity 2009 – Sept. 29

Erwin Schoitsch

Übersicht über Förderung (Ansprechpartner FFG)

Nationale Fördermöglichkeiten

- Oft einfacher und flexibler zu nutzen
- Lokale Partner
- Höhere Erfolgchancen

Aktuelle thematische Ausschreibungen (Themat. Programme)

- 1. Call austrian electronic network AT:net Phase 2 21.9. - 23.11.
- 4. Call FIT-IT Visual Computing 9.9. - 3.11.
- 4. Call FIT-IT Trust in IT Systems 9.9. - 27.10.
- 1. Joint Call FIT-IT Embedded Systems & Semiconductors 17.9. - 9.11.
- 5. Call „benefit“ („Demografischer Wandel als Chance“ - IKT gestütztes aktives Altern) 14.9. - 9.11.

Weitere themat. Programme: ways2go (Mobilität 24.6.- 6.10.), asap (Weltraum), Take-Off (Luftfahrt), IV2Splus (Intelligente Verkehrssysteme & Services), A3-Programme (Austrian Advanced Automotive),

**Regelmäßig Kick-off Veranstaltungen für neue Ausschreibungen oder
Ergebnisveranstaltungen!**

Themenoffene Ausschreibungen (auch IKT):

- **Basisprogramme / Basisförderung**
 - Firmenorientiert; Einzel- und Kooperationsprojekte
 - Ca. 50% der Projektkosten werden über einen Mix aus Zuschüssen und Darlehen gefördert
 - Innovationsgehalt, technische Schwierigkeit, wirtschaftliche Verwertungsaussichten als Kriterien

- **Themenoffene Förderungen mit Strukturzielen**
 - **BRIDGE – Brückenschlagsprogramm Wirtschaft – Wissenschaft** (Forschungsinstitute bis zu 80% Anteil, Nutznießer Firmen, 60 – 75% Förderung)
 - **COIN – Kooperation und Innovation** (vor allem KMU, Koop. FH, FZ, Unis)
 - ProtecNet – KMU, Technologietransfer
 - **Kompetenzzentrenprogramme COMET:**
 - Einige IKT-Zentren.
 - K-Projekte (z.B. ECV)

Informationen, Arbeitsprogramme: www.ffg.at

Europäische Programme

7. Rahmenprogramm (FP7, RP7) und ICT Policy Support Programme (ICT-PSP)

- Große Projekte mit europäischen Partnern
- Mehrjährige Laufzeiten, ehrgeizige Ziele
- Hohe Förderintensitäten im Erfolgsfall (oft nur 1:5 bis 1:10 !!)

- Zunehmend verfließen die Grenzen
- z.B. EU-kofinanzierte Programme mit nationalem Anteil:
z.B. ARTEMIS und ENIAC
⇒ folgt noch im Detail !!
- Wichtiges Anliegen der EC: KMU (SME) Beteiligung!

- Spezielle Förderung: **Anbahnungsförderung für Projektanträge!!**
 - **AF Wirtschaft (spätestens 3 Wochen vor Deadline)**
 - **AF Wissenschaft (spätestens 3 Wochen vor Deadline)**

European Technology Platforms - ETPs

Spring European Council in Brussels, March 2003, encouraged the European Commission to support the European Research and Innovation Area (ERA) by:

"...creating European Technology Platforms bringing together technological know-how, industry, regulators, and financial institutions to develop a strategic agenda for leading technologies".

Mainly industry-driven (big players), forced by EC to include SMEs.

Goal:

- To define medium to long-term research and technological objectives,
- To cover the whole value chain: To transform knowledge generated through research into technologies and processes, and ultimately into products and services.

European Technology Platform - ETP

The process: Often started as a Specific Support Action

Vienna Conference, May 2006: A major step for continuation!! (Reason to promote ETPs : decreasing industrial participation towards end of FP6!)



European Technology Platform - ETP

Areas of ETPs (38):

- **Energy (7)**
- **Environment (5)**
- **Manufacturing Technologies (5)**
- **Transport and Space Technologies (7)**
- **Information and Communication Technologies (8)**
- **Biosciences and -technologies (6)**

European Technology Platform - ETP

ETPs in ICT:

- *Embedded Systems (ARTEMIS)*
- *European Technology Platform on Smart System Integration (EPoSS)*
- European Nanoelectronics Initiative Advisory Council (ENIAC)
- Mobile and Wireless Communication (eMobility)
- Networked Electronic Media (NEM)
- *Networked European Software & Services Initiative (NESSI)*
- European Robotics Platform (EUROP)
- The Photonics Technology Platform (Photonics 21)

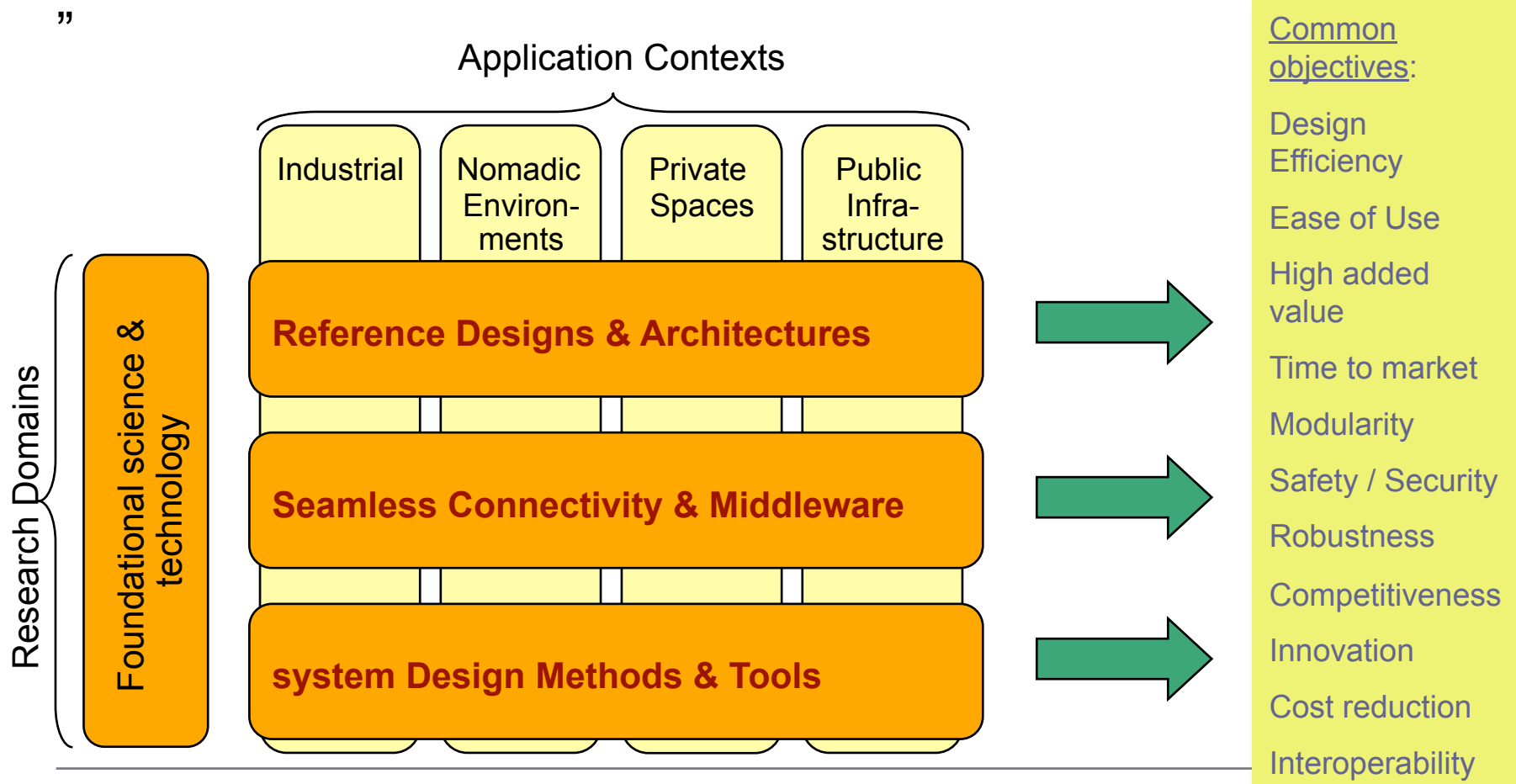
Artemis C-Members (Corporate Members)

ABB AB Corporate Research Sweden
Acciona Infraestructuras S.A. Spain
AIRBUS France
AVL List GmbH Austria
Daimler A.G. Germany
Dassault Aviation France
Dassault Systemes France
EADS Deutschland GmbH Germany
Elektrobit Group Plc Finland
Ericsson AB Sweden
**European Microsoft Innovation
Center GmbH Germany**
Eurotech SpA
Finmeccanica-Società per azioni Italy
Gemalto France
Hellenic Aerospace Industry Greece
**Honeywell Aerospace s.r.o. Czech
Republic**

Infineon Technologies AG Germany
Israel Aerospace Industries
KONE Cooperation Finland
**MCC: Mondragon Corporación
Cooperativa Spain**
Nokia Corporation Finland
NXP The Netherlands
The Netherlands Philips Electronics
Robert Bosch GmbH Germany
Rockwell Collins France
SAFRAN France
Schneider Electric GmbH Germany
Siemens AG Germany
ST Microelectronics Belgium
Telelogic AB Sweden
Thales Corporate France
Thompson France

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Artemis: Advanced Research and Technology for Embedded Intelligence and Systems“ – Strategic Research Agenda (SRA)



Artemis Working Groups/SRA Contributions

- Reference Designs and Architecture (Prof. Kopetz!)
- Seamless Connectivity and Middleware
- System Design Methods and Tools
- Foundational Science and Technology
- Standards Working Group (AVL, AIT) → ProSE Project
- Education and Training WG (AIT)



Artemis Goal: *...to overcome the fragmentation within embedded systems industries, cutting barriers between application sectors so as to 'de-verticalize' the industry, sharing across sectors tools and technology that are today quite separate and establishing a new embedded system industry that supplies tools and technology that are applicable to a wide range of application sectors.*

European Technology Platform - EPoSS

European Technology Platform on Smart Systems Integration

Kick off 7. July 2006, Brussels

Smart Systems Integration: Key factor to Europe's success !!

Integration

- of different components and functions into a small system,
- into the macrosystem,
- of small systems into the application system.

Key issues:

Interdisciplinarity (sensor, actor, network, computing, control, information processing (smart=intelligence), mechanical, electrical, electronics, biological, HMI, SW-Integration, trust and security, photonics, micro- and nanotechnologies, smart materials) plus physics, chemistry, biological understanding!

European Technology Platform - EPoSS

Topics/Working Groups (companies are only examples!)

- Automotive: **CRF (Fiat)**, Siemens VDO, VW, Robert Bosch GmbH, Continental Automotive Systems, Magneti Pirelli, **NOTE: ADOSE project!**
Current Topics: Road Safety, Full Electric Vehicle
- RFID: **Hitachi**, Metro Group, VTT, STM, **New Topic: "Internet of Things" (2020) – retail, logistics, pharmaceutical, health, ubiquitous smart devices, AAL, Smart Home, Transportation (automotive, public), security**
- Aerospace: **EADS Deutschland**, Airbus Toulouse, Thales
- Security: **Thales**
- Information and Communication: **Alcatel-Lucent**, ST Microelectronics, Sagem Communications, Bumar
- MedTech Systems: **Siemens**, Philips, ElaMedical/Sorin
- Key Technologies (Cross Cutting Issues): **CEA-LETI**, VTT, Infineon, FhG, VDI/VDE/IT

European Joint Technology Initiatives - JTI

- Based on Article 171 of the EU Contract: „...positioning Europe in the global context by joining forces“ (joint initiatives, joint undertakings)
- Selected ETPs to progress towards a JTI, forming a „Joint Undertaking“: legal form of PPP between EC, national authorities, research and industry via the ETP
- Criteria of ETP SRA: „radical technological change“ (and impact for Europe’s global position)
- Budget: EC $\frac{1}{6}$, national funding $\frac{1}{3}$, industry/ETP $\frac{1}{2}$

Note: National funding varies in total sum and percentage for each group of partners (Austria for research: 59%)

Risk: National funding of foreign partners may not be sufficient!

European Joint Undertakings - JU

First examples: European Parliament Dec. 11, 2007,
European Council Dec. 20, 2007

- Embedded Systems (ARTEMIS)
- Nanoelectronics (ENIAC)
- Innovative Medicine (IMI)
- Clean Sky (formerly ACARE initiative)

Next: The European Fuel Cell and Hydrogen JTI (FCH, launch TODAY)
Global Monitoring for Environment and Security (GMES)

On it's way (2-3 years perspective): EPoSS
(ETP...become a JTI or die)

European Joint Undertaking - Artemis



- ETP – European Technology Platform on „Advanced Research and Technology for Embedded Intelligence and Systems“ (starting 2004)
- Artemisia – Legal form as Association (2007) (ARC member since 2007, Chamber B, Research)
- Artemis Strategic Research Agenda (SRA) – Basis for Artemis Calls
- Artemis: First EU Joint Undertaking (JU) as JTI (Joint Technology Initiative) (Dec. 20, 2007 EU Council, official start Feb. 7, 2008)
Partners: Artemisia, EC, national gov.mnt. (Austria founding member)
- Artemis JTI: 2,5 Billion € investment in Embedded Systems Research!
- Artemis – first Call May 8, 2008 (Austria Kick-off May 30, FFG)(398 Einreicher, 28% SMEs)(ENIAC: 265 Einreicher, 12 Projekte, 47% SMEs)
Austria 4Mio € (all EU-27 63,8 Mio€, JU 35,1 Mio€)

NOTE: Project ProSE (Promoting Standardization for Embedded Systems)

Example of ARTEMIS Call (2009):

Two-step procedure:

Call opened Feb. 28, 2009 (Work Programme)

1. Project Outline (deadline April 15, 2009)

2. Full Project Proposal (deadline Sept. 3, 2009)

**Summary of Project Outline Results,
and consequences – to provide an overview!**

Call 2010: similar time line expected, updated WP.

Beispiele: AIT Beteiligungen

- **R3-COP: Robust and Safe Reasoning Robotic Co-operative Systems (AIT als Koordinator,), 31 Partner (11 SMEs)**
Gesamtvolumen 19,381.809€ (1843 PM), 6 österreichische Partner, (3 SMEs) (Gesamtkosten 4.232.870, (358 PM), national funding 2,228.928)
- **POLLUX: Fiat (CRF) als Koordinator, Gesamtvolumen 35,856.994 €, 8 österr. Partner 8,122.756 € Cost, 3,001.634 € national funding).**
- **SCALE: Lean Development of Safety-Critical Embedded Systems (Elektrobit, Finnland, als Koordinator; Deputy Co-ordinator Philips Applied Technologies, Eindhoven)**
48 Partner, etwa 12 SMEs, nur AIT und AICO Software aus Ö, sowie AVL, aber durch Regensburg vertreten; AIT (co-leader) mit Philips Apptech Leiter des WP 3, Validation, Verification and Certification).
Gesamtvolumen 3754 PM, 40 162 016 €, Ö cost 2,129.263 €, national funding 1,219.582 €.

Status of proposed projects after PO evaluation

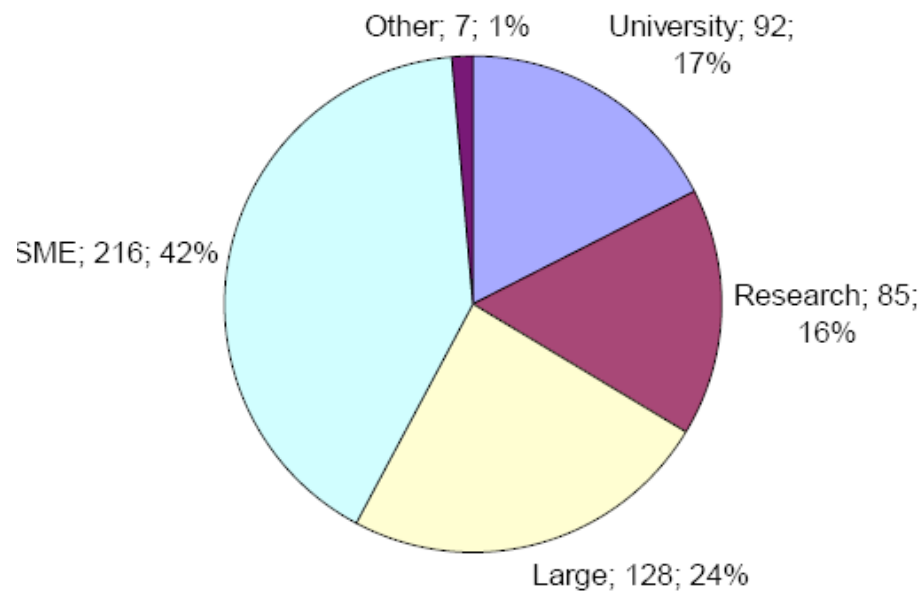
- Total Number of proposals: 56
 - Number of ineligible proposals: 1 (only partners from one country)
 - Total requested costs: 585 M€
 - Total requested national funding: 221 M€ (budget 67.5)
Oversubscription: 1: 3,3
 - Total requested JU funding: 105 M€ (budget 37.1)
Oversubscription: 1: 2,8 (i.e. national funding less than expected)

Proposal Size (costs)

- Number of proposals above 30M€ costs : 4 (> 40 partners)
 - Largest project of Call 2008: CESAR 53 partners, 68 Mio € cost!
- Number of proposals between 10M€ -30M€ costs : 17
(* R3-COP)
- Number of proposals below 10M€ costs : 34

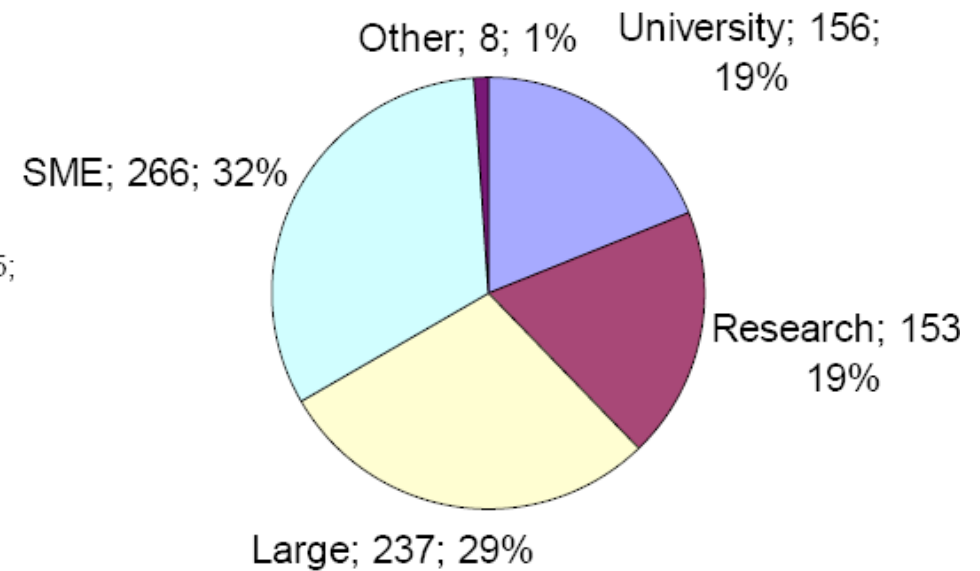
Breakdown of participants' structure

Number of distinct participations



Total: 528

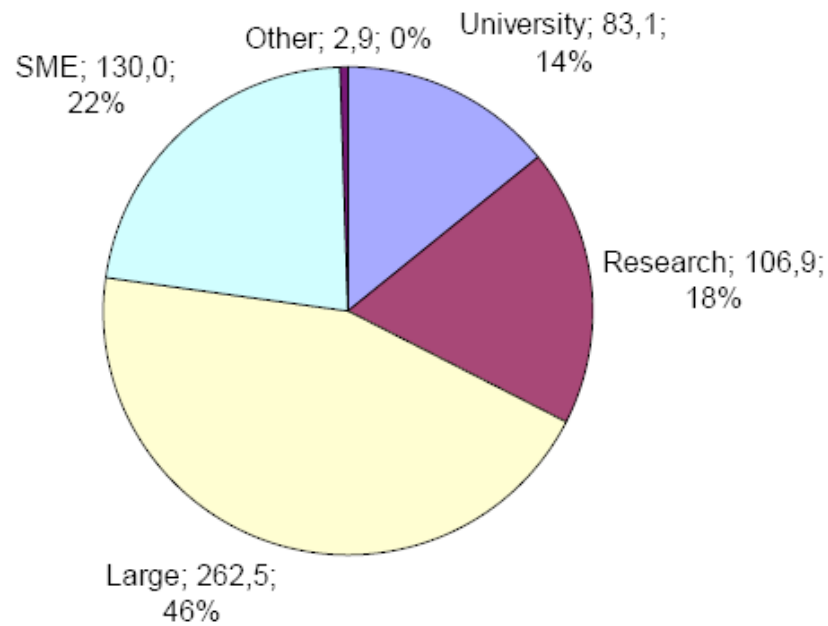
Total number of Participations



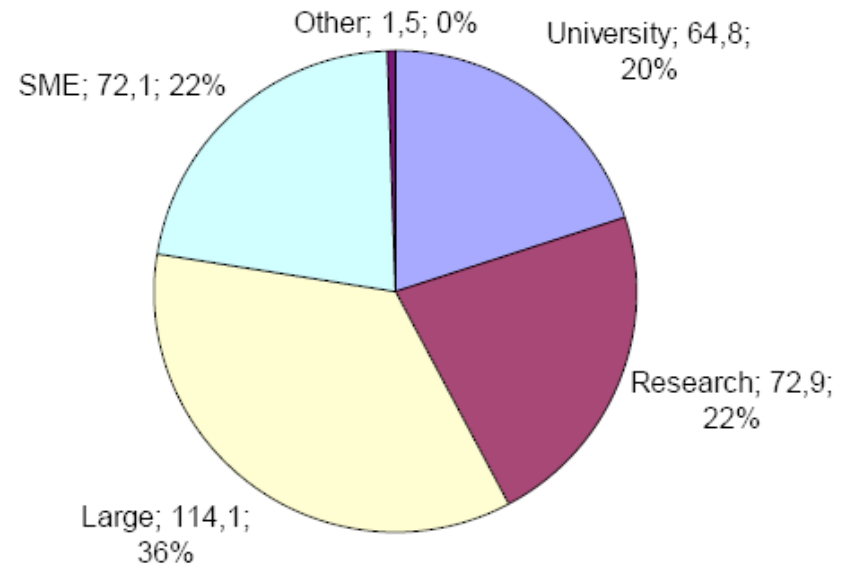
Total: 820

Breakdown in costs (M€)

Total requested costs **Total requested funding**

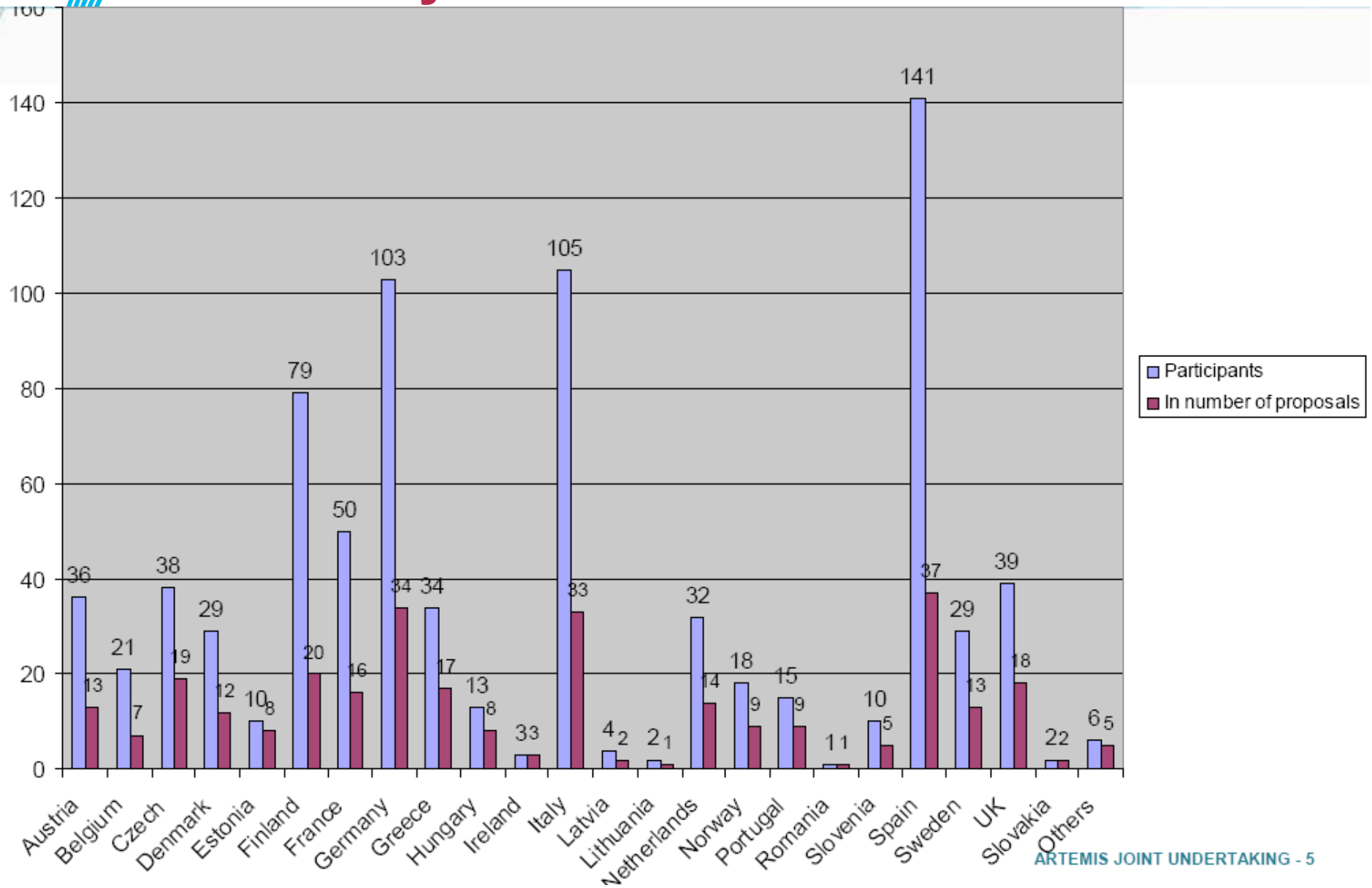


Total: 585 M€



Total: 326 M€

Country distribution:



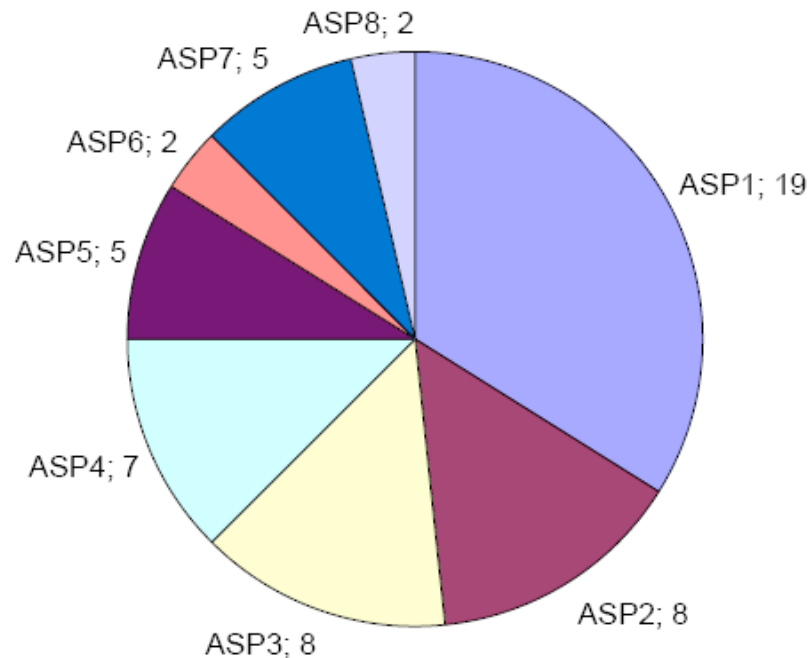
ARTEMIS JOINT UNDERTAKING - 5

Critical funding restrictions:

Country	€	participants	projects	Country	€	participants	projects
Austria	4	36	13	Italy	10	105	33
Belgium	2,5	21	7	Latvia	0,5	4	2
Czech R.	3	38	19	Lituania		2	1
Denmark	1,5	29	12	Netherlds	5	32	14
Estonia	0,3	10	8	Norway	1,5	18	9
Finland	6	79	20	Portugal	0,8	15	9
France	4,5	50	16	Romania	0	1	1
Germany	8	103	34	Slovenia	1,5	10	5
Greece	2	34	17	Spain	5,99	141	37
Hungary	1,98	13	8	Sweden	3	29	13
Ireland	1	3	3	UK	4	39	18

Distribution over Subprogrammes

Number of proposals



Total: 56

- ASP1: Methods and processes
- ASP2: Person-centric health
- ASP3: Smart Environments
- ASP4: Manufacturing
- ASP5: Computing
- ASP6: Security
- ASP7: Sustainable urban life
- ASP8: Human centric design

Conclusions from Commission and JU view:

- Very good response to second call:
 - 100% increase from Call 1 in terms of numbers (27 to 56)
- Widely varying size of proposals, in line with PAB approach
- Good coverage of almost all countries
- Good total oversubscription for 2nd Call (1:3) (JU view!)
- Unbalance between requested national funding and budget for certain countries (problem for us as well!)
- **Increased SME participation** (positive evaluation remarks in many proposals (PO's)) (was an important requirement from EC)

A few ARTEMIS Key Issues

- Industrial impact (not research-oriented only) and exploitation (3 to 5 years time frame to demonstrate) – to be best described by industrial partners
- Economic benefit for Europe (faster time to market, to establish Europe as key player (prime position) in robotics and autonomous systems in various domains, to extend the good position of Europe in dependable embedded systems to autonomous co-operative systems, ...) – market impact has **DOUBLE WEIGHT!!!**
- Platform (reference tool platform) is a major requirement
- Reference to existing ARTEMIS (FP7?) work (platforms, co-operation?)
- Cross Domain Aspects to strengthen (e.g. via demonstrators)
- Focus on Autonomous Systems in general
- Clear role of each partner to describe (table of key competences vs. WP/ tasks ?) (a large set of demonstrators makes this task easier)
- National rules very complex: national co-ordinators to contact their national contact points in time and report to project team), responsible for national mix (e.g. “effort”: person years, NOT costs, or vice versa).

Österreichische Plattform für Forschung und Entwicklung im Bereich Embedded Systems:

- Promotion der Beteiligung an der ARTEMISIA Industry Association und an europäischen Projekten im Rahmen von ARTEMIS
 - Partnerbildung für innovative Projekte im Bereich Embedded Systems, insbesondere für Projekte auf europäischer Ebene (ARTEMIS, Rahmenprogramm)
 - Aufbau einer Wissensbasis und Unterstützung des Informationsaustauschs, z.B. durch Beiträge für den Online-Auftritt der Plattform, durch Bereitstellung von Informationsmaterial (Studien, Marktanalysen, Konferenzergebnisse, ev. über einen geschützten Mitgliederbereich) und durch die Mitwirkung an Veranstaltungen
 - Unterstützung des Technologietransfers im Bereich Embedded Systems
-
- **ARTEMIS-Austria Tagung „Embedded Systems und industrielle Automatisierung“**

Montag, 5. Oktober 2009

10:00-17:00 Uhr

Steigenberger Hotel Herrenhof

Herrengasse 10

1010 Wien

www.artemis-austria.net

Thank you for your
kind attention



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