

**ARTEMISIA ASSOCIATION**

*The association for R&D actors in the field of ARTEMIS*



# **ARTEMIS Joint Technology Initiative**

**Yet another “Yeti” or a real new opportunity?**

**An Industry Perspective**

HRK Information Day, Jan 15, 2008, Brussels

Dr. Götz-Philip Brasche

Chairman ARTEMISIA Chamber C (Corporations)

Director Embedded Systems R&D, European Microsoft Innovation Center

Advanced Research & Technology for Embedded Intelligence and Systems



First, let's clarify some terminology...

- ❖ **European Technology Platform (ETP)**
  - ❖ Industry-driven framework to define a common, pan-European research agenda in selected strategic areas
- ❖ **Joint Technology Initiative (JTI)**
  - ❖ Public-Private Partnership to implement ETP research agenda
- ❖ **Joint Undertaking (JU)**
  - ❖ Legal embodiment of a JTI
- ❖ **ARTEMIS**
  - ❖ European Technology Platform for Embedded Systems
- ❖ **ARTEMISIA - ARTEMIS Industry Association**
  - ❖ Legal body acting as association for R&D actors of ARTEMIS
  - ❖ JU stakeholder; delegates members of Industry Committee of JU



...then, let's recap the actual motivation...

- ❖ No European Research Area in place
  - ❖ ICT in EU research framework program
  - ❖ ICT in EUREKA clusters
    - ❖ MEDEA+ for systems on silicon
    - ❖ ITEA2 for software intensive systems and services
  - ❖ ICT in national & regional research programs
- ❖ EUREKA project funding subject to national decisions!
- In 2003, EU Competitiveness Council and EUREKA Ministers called for closer cooperation; ETPs came up to
  - ❖ Bring together key stakeholders in a specific domain
  - ❖ Define a common Strategic Research Agenda (SRA)
  - ❖ Provide input to FP7 work program



..and, let's see what the status is

- ❖ 34 ETPs have been defined since 2004
- ❖ 9 ETPs in ICT domain
- ❖ Lately, 4 JTIs have been approved by the European Parliament (Dec 20<sup>th</sup>, 2007)
  - ❖ ARTEMIS - embedded systems, [www.artemisia-association.org/](http://www.artemisia-association.org/)
  - ❖ ENIAC - nano-electronics, <http://www.eniac.eu/>
  - ❖ IMI - innovative medicine initiative, <http://imi.europa.eu/>
  - ❖ Clean Sky- air transport, <http://www.cleansky.eu/>
- ❖ 100+ ARTEMISIA members
- ❖ ARTEMIS JU call 1 announced for April
  - ❖ Max budget around €240m
  - ❖ First projects in Jan 2009



# ARTEMIS Joint Undertaking *Research Principles*



## ❖ “Think BIG”

= projects with **appropriate critical mass** and significant societal impact

## ❖ “Socio-Economic Benefits”

= improved industrial efficiency “... to **strengthen European competitiveness** and allow the emergence of new markets and societal applications.”

❖ i.e. a focus on key technical issues, solving high-visibility issues with commercially valorisable results

## ❖ “Multi-national”

= considers national/regional strategic priorities

## ❖ “Think Different”

= significant and complementary **added-value** over existing programs



Now, *Yeti* or opportunity?  
*The European Commission says*

“By bringing together industry and European public research investment in a specific industrial area under one programme, we boost the chances of **making a technological breakthrough putting Europe at the forefront of innovation.**”

Janez Potocnik in Dec 07  
EU Science and Research Commissioner



## Now, *Yeti* or opportunity? *The ARTEMISIA Industry Association says*

“The use of embedded computer systems is the major enabler for innovation and competitiveness of major industrial sectors like automobile, manufacturing, airplane, consumer electronics, communications, public infrastructure and medical instrumentation. **The unique feature of ARTEMIS is creating cooperation among these otherwise relatively distinct sectors.** By federating large industrial corporations, small and medium sized technology companies, research institutes and universities, **ARTEMISIA will create a new and dynamic industrial ecosystem** focused on embedded systems. This will lead to increasingly advanced technology, more compelling products, more useful applications, as well as increasingly effective training of a **skilled workforce all over Europe and emerging standards that we expect will gain worldwide acceptance.**”

Professor Yrjö Neuvo in Dec 07  
President of ARTEMISIA



Now, *Yeti* or opportunity?

*Microsoft as ARTEMISIA industry representative says*

## ❖ ARTEMISA JU

- ❖ Assures research investments to be more sustainable (both time- and budget- and quality-wise)
  - ❖ Activates critical mass and eases collaboration (customer driven innovation!)
  - ❖ Creates awareness (internally & externally)
  - ❖ Enables - but also requires (!) – better alignment of national and European activities
- Opportunity provided that projects will prove different





Want more information?



❖ ARTEMIS

❖ [www.artemisia-association.org/](http://www.artemisia-association.org/)

❖ [www.artemis-office.org/](http://www.artemis-office.org/)

❖ European Commission

❖ [http://cordis.europa.eu/fp7/jtis/home\\_en.html](http://cordis.europa.eu/fp7/jtis/home_en.html)

❖ <http://cordis.europa.eu/technology-platforms/>

❖ <http://cordis.europa.eu/ist/embedded/index.html>

❖ Research at Microsoft

❖ [www.microsoft.com/emic/](http://www.microsoft.com/emic/)

❖ [www.research.microsoft.com/](http://www.research.microsoft.com/)



# Vielen Dank für ihre Aufmerksamkeit

In case of questions, please contact me at  
[Goetz.Brasche@microsoft.com](mailto:Goetz.Brasche@microsoft.com)



- Annex – supplementary information



# ARTEMIS European Technology Platform

## *Some Background*

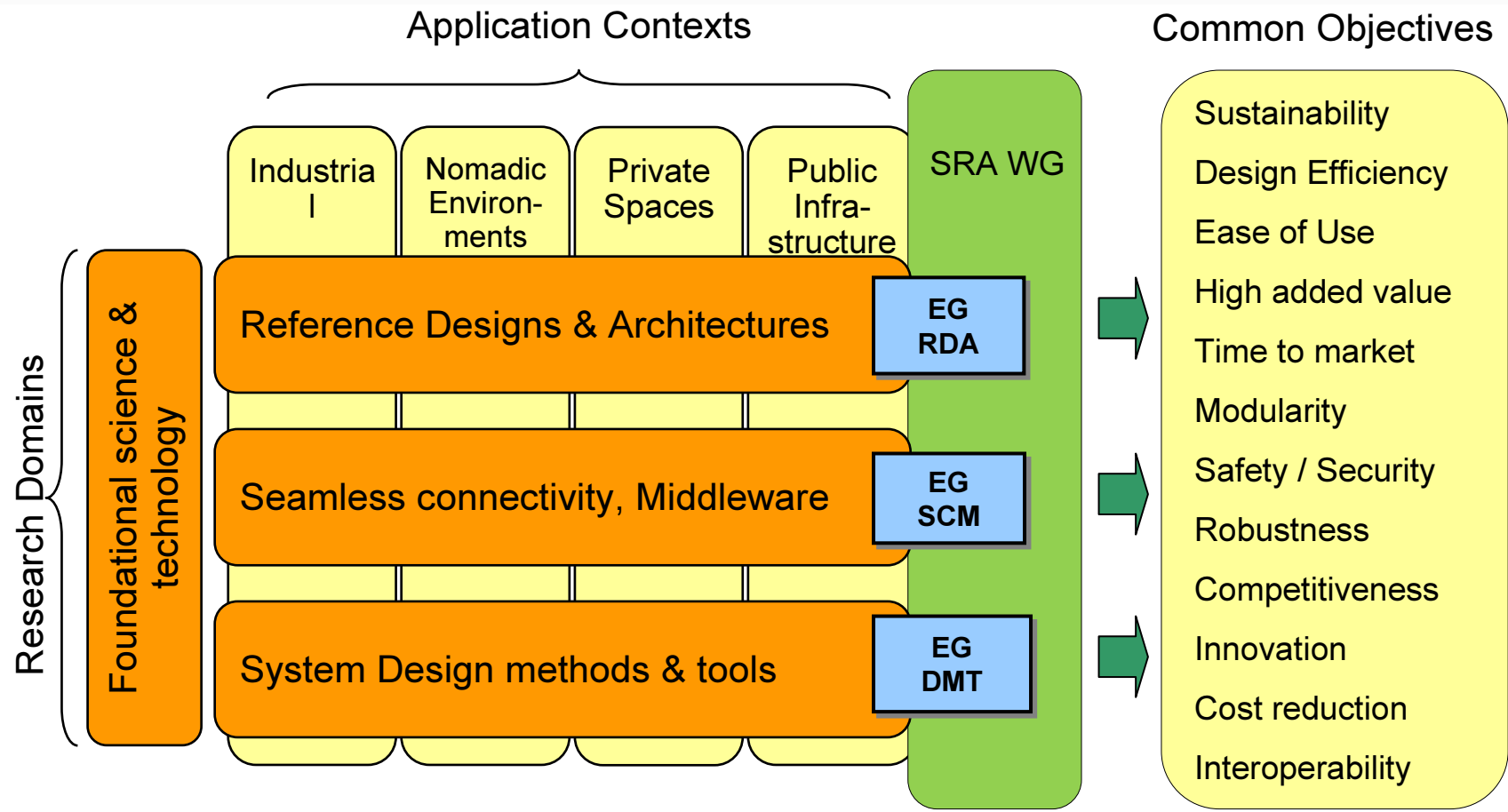


- ❖ Created in 2004 to develop a joint European embedded systems' (ES) vision & strategy
- ❖ Scope: ubiquitous, interoperable & cost-effective ES
  - ❖ R&D in design methods and tools, reference design and architectures, and seamless connectivity and middleware
  - ❖ Innovation environment: IPR, open source software, standards, research infrastructure, education...
- ❖ Governance structure 2004 - 2006:
  - ❖ Steering Board: 29 members from industry (10 of top-25 EU companies in terms of global R&D), academia, SME federation, ITEA, MEDEA+
  - ❖ Mirror Group: 24 countries + EC
  - ❖ Working Groups with more than 100 experts



# ARTEMIS European Technology Platform

## Strategic Research Agenda - Synopsis





# ARTEMIS Industry Association



## ❖ ARTEMISIA

- ❖ Wife of King Mausolus of Halicarnassos, for whom she had the Mausoleum built in 353 BC as one of the 7 Wonders of the World

## ❖ Established Jan'07 by

- ❖ DaimlerChrysler, Nokia, Philips, STMicroelectronics, Thales

## ❖ Dual purpose

- ❖ Continuation of ARTEMIS ETP activities
- ❖ Representation of R&D actors in JU

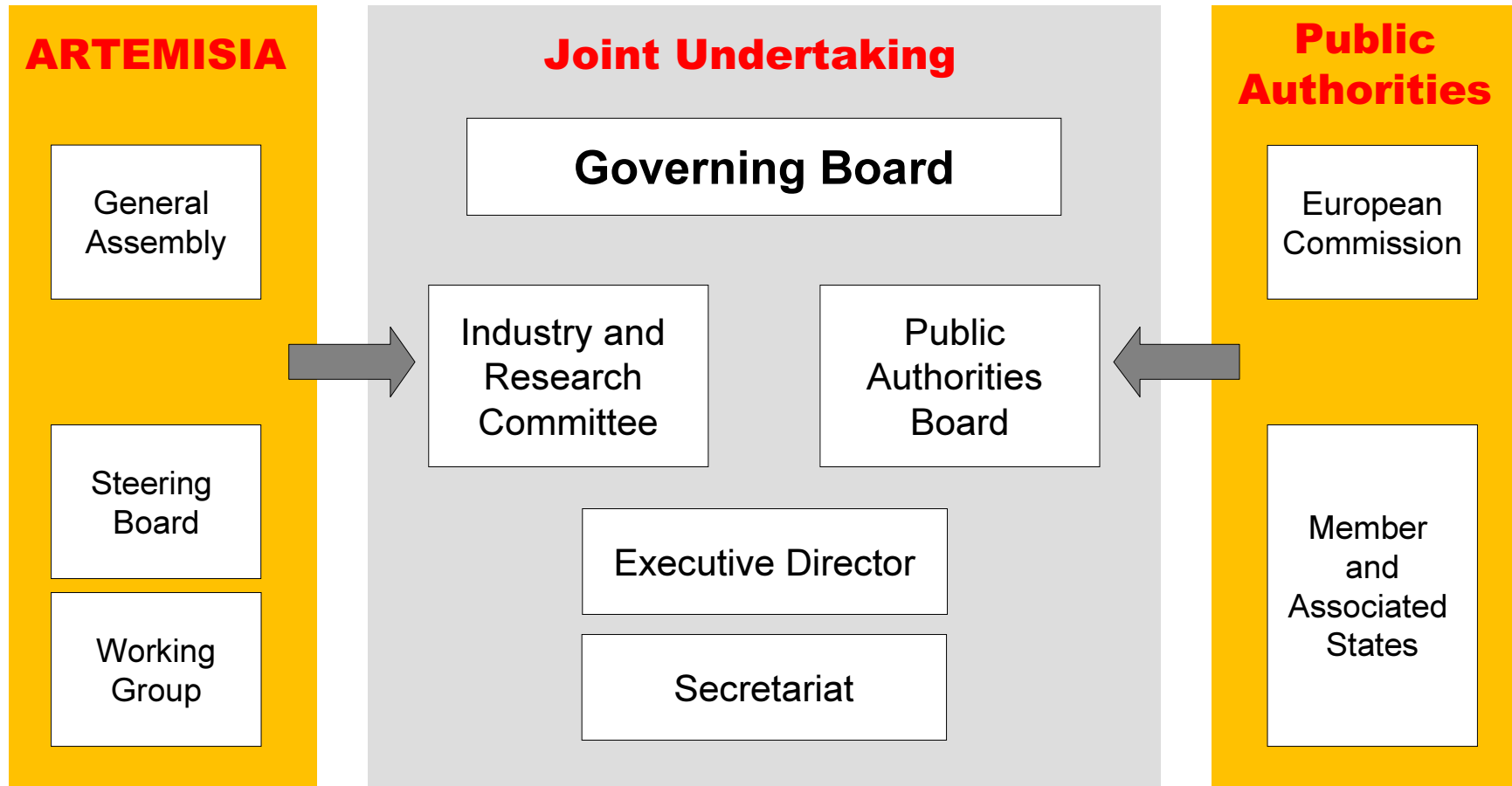
## ❖ Constituency

- ❖ Members A: SMEs
- ❖ Members B: Public Research Organisations
- ❖ Members C: Corporate
- ❖ Associates (non-voting)





# ARTEMIS Joint Technology Initiative Structure





# ARTEMIS Joint Technology Initiative

## *Proposed Research Plan and Agenda*



- ❖ ARTEMISIA expert groups are busy defining a multi-annual strategic plan with **8 subprograms**
  - ❖ Each addressing well-known societal concerns...
    - ❖ Environment, safety, healthcare, secure employment...
  - ❖ ... in a viable business context
    - ❖ Relevant for new businesses and growth markets
  - ❖ Each subprogram has been elaborated to embrace the ARTEMIS SRA approach
- ❖ **Yearly calls**
  - ❖ Call 1 is scheduled for April; budget around €240m max
  - ❖ First projects Dec 2008/Jan 2009





# ARTEMIS JU Research Subprograms

## *Relation to the ARTEMIS SRA*



<b>Subprogram</b>	<b>DM&amp;T</b>	<b>SC&amp;M</b>	<b>RD&amp;A</b>
<b>Methods and Processes for Safety-relevant Embedded Systems</b>	X	X	X
<b>Person-centric Health Management</b>		X	X
<b>Smart Environments and Scalable Digital Services</b>	X	X	X
<b>Efficient Manufacturing and Logistics</b>	X	X	X
<b>Computing Environments for Embedded Systems</b>	X	X	X
<b>Security, Privacy and Dependability</b>		X	X
<b>Embedded Technology for Sustainable Urban Life</b>	X	X	X
<b>Human-centric Design of Embedded Systems</b>	X		X



## About Us *Microsoft*

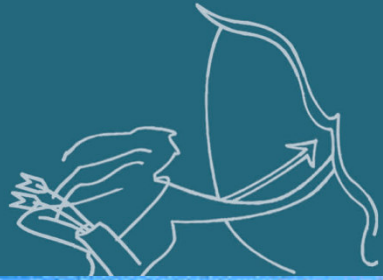


### ❖ Microsoft

- ❖ Founded '75, headquartered in Redmond, WA, US
- ❖ 85,000 employees, 103 countries, \$51B rev '07
- ❖ Operation in Europe since 1979

### ❖ MS Research & Innovation

- ❖ Founded '91, 1000 researchers
- ❖ \$7B R&D (\$0,5B in Europe)
- ❖ 8 major R&D centers world-wide (4 in Europe)
  - ❖
  - ❖
- ❖ Innovation facilities in 15 European countries
  - ❖ European Microsoft Innovation Center in Aachen



About Us  
*Microsoft Campus in Redmond*







## About Us

### *European Microsoft Innovation Center Overview*



#### ❖ 'Open Innovation':

- ❖ We transform ideas into reality!  
Hand in hand with our partners
- ❖ Project based, collaborative, applied R&D
- ❖ Timeframe 3 to 6 years
- ❖ 40+ employees

#### ❖ Research areas

- ❖ Security and privacy
- ❖ Wireless technologies and  
Embedded systems
- ❖ Web services





## About Us

### *European Microsoft Innovation Center Objectives*



- ❖ Collaborative nature allows to
  - ❖ Contribute knowledge to the European technology base
  - ❖ Learn from European areas of excellence and expertise and transfer the results to society as a whole through products and technologies
  - ❖ Foster partnerships and relationships with European industry and academia
  
- Better products, enhanced systems and standards through open and inter-sector innovation

