

# SMEPP

## Secure Middleware for Embedded Peer to Peer Systems



### Kick Off Meeting

Madrid, 1st-2nd October 2006



IST-5-033563-STP



# Meeting Agenda

## Monday October 2nd

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- 10:00 Welcome and partner presentation (5 minutes per partner)
- 10:45 Overview of the Project (Coordinator)
- 11:30 Coffee Break
- 12:00 Work Package Presentation (Short presentation for each WP)
  - WP Objectives
  - Deliverables, including a proposal for deliverable editors
  - Tentative planning, detailed for the next three month
  - Coordination issues (in the WP, with other WP and with related projects)
- 13:30 Lunch
- 14:30 Partner participation (for each WP and partner)
  - Partner specific objectives for the partner in the WP
  - Previous experience
  - Personnel assigned to WP
- 16:00 Coffee Break
- 16:30 Final project planning for the first 6 months and technical discussions
- 18:00 Conclusions



# Meeting Agenda

## Tuesday October 3rd

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- 9:00 Project Management Overview (Coordinator)
- 9:30 Steering Committee Meeting: representatives, meeting planning, functions,...
- 10:30 Coffee Break
- 11:00 Economical Issues
  - Payments from the commission
  - Consortium transferences
  - Eligible costs, audits,.....
- 12:30 Dissemination Activities (proposals from all the partners)
  - Workshop/conference participation proposals
  - Web page, Distribution lists, Logo,...
- 13:00 Meeting Conclusions
- 13:30 Lunch



# SMEPP Presentation Outline

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- Project Main Goals
- Participant Roles
- Objectives
  - Success Criteria
  - Validation
- Project Planning
  - Milestones
  - WorkPackages
  - Deliverables
- Budget Overview

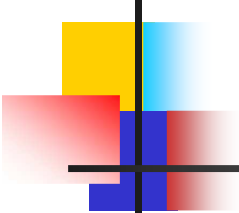
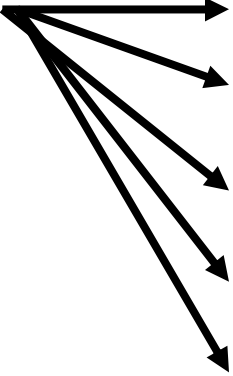


# Project Main Goals

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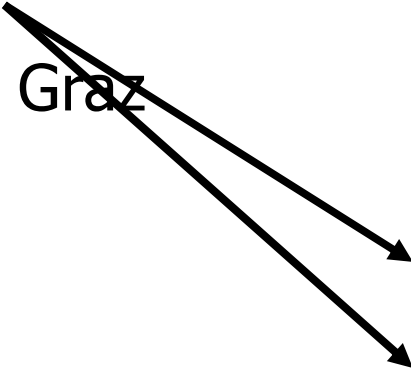
- Middleware for Embedded P2P systems
- Based on a new interaction model
  - No servers (identification,.....)
  - Network centric
- Security is a main issue from the design
- Validation through two main applications domains

# Participants and Roles

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- 
- Universidad de Málaga
  - Tecnatom, S. A.
  - Tech. Universität Graz
  - Siemens AG
  - VTT
  - Università di Pisa
  - Telefónica I+D
  - Institute for Infocomm Research
- 
- Interaction Models
  - Software Architecture
  - Security Services
  - Middleware Implem.
  - EP2P Applications
  - Network specific Protocols
  - Security foundations
  - Security validation

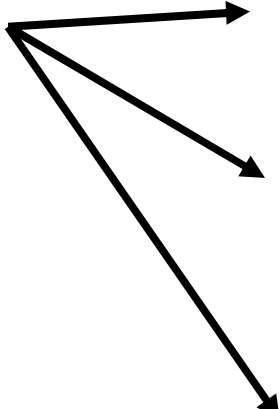
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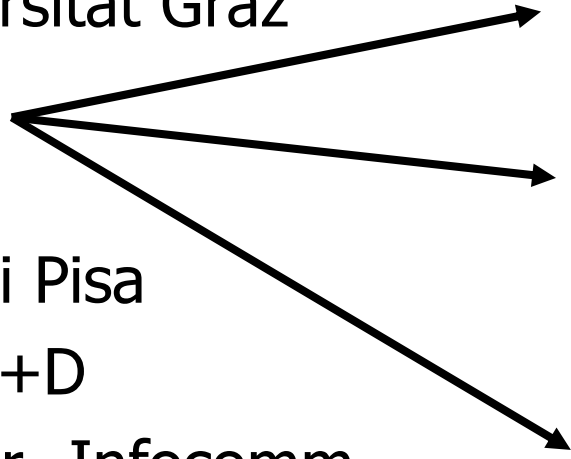
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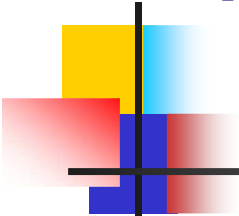

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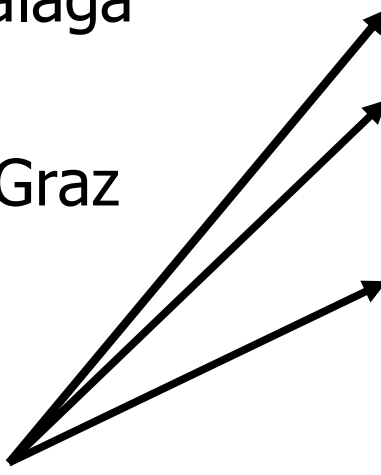
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graph LR; Siemens[Siemens AG] --> Security[Security Services]; Siemens --> EP2P[EP2P Applications]; Siemens --> SecurityFound[Security foundations];
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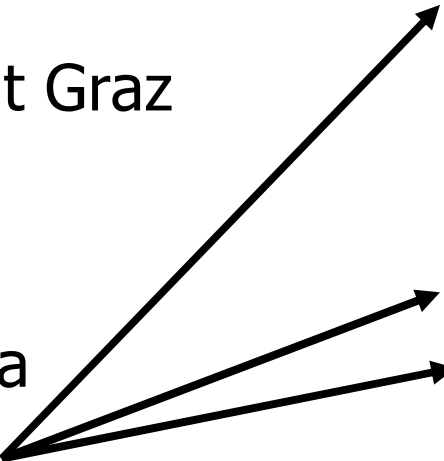
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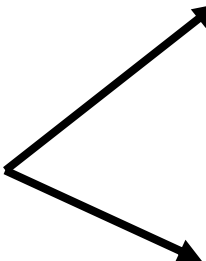
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# SMEPP Presentation Outline

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- Project Main Goals
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- Project Planning
  - Milestones
  - WorkPackages
  - Deliverables
- Budget Overview



# Objectives and Success Criteria

## Abstract Service and Interaction Model

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- Objectives
  - The development of self-configurable services for P2P
    - reconfigurable quality properties of services
    - scalability from tiny embedded devices with wireless connections to heterogeneous P2P networked systems.
  - To develop support for embedded P2P networking with
    - mechanisms that guarantee quality properties of services especially for the execution qualities such as reliability, performance and adaptability
    - communication services with special focus on self-organisation, mobility and service discovery and delivery
    - security services, that provides tools for the secure interaction between peers.

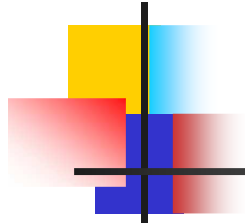


# Objectives and Success Criteria

## Abstract Service and Interaction Model

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- Success Criteria
  - The new abstract model supports all the types of P2P interactions needed by the applications
  - It can be effectively implemented
  - It makes easier to express interactions among peers
    - Identification
    - Broadcasting and group communications
    - ....
- Concrete criteria
  - Publications in high quality journals (IEEE Transactions on Sw Engineering or similar)
  - Standard metrics about simplicity compared to other middleware



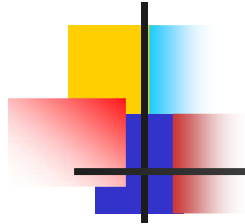
# Objectives and Success Criteria

## Middleware Architecture and Infrastructure

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- Objectives

- Design and implementation of a Component Based Framework to support the abstract service model
- Development of tools for quality analysis methods that facilitate the selection and instantiation of a concrete architecture depending on the type of devices and domain and application specific quality of service requirements.
- Design and implementation of a set of components implementing the most important aspects of EP2P system including, at least, security, reconfiguration and mobility.



# Objectives and Success Criteria

## Middleware Architecture and Infrastructure

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- Success criteria
  - The framework is successfully used in the context of the application
    - Minimal adaptation effort
    - Maximum reusability of components
  - **Concrete metrics** will be defined during the requirement phase and validated in the corresponding Work-Package



# Objectives and Success Criteria

## Security

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- Objectives
  - Design and implementation of a security infrastructure for EP2P systems.
  - Integration of this infrastructure in the SMEPP middleware.
  - Design and implementation of secure routing protocols.
  - Design and implementation of cryptographic protocols and security primitives for EP2P systems.



# Objectives and Success Criteria

## Security

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- Success criteria
  - There is a specific task devoted to the validation of security
  - The middleware must be effective against the specific attacks defined for EP2P (new threat models)
  - The implementation is efficient in terms of energy consumption and throughput
  - Especial requirements will be defined for the hardware support



# Objectives and Success Criteria Applications

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- Objectives in this area are twofold
  - The validation of the end-to-end vision of SMEPP
    - What are the real benefits of EP2P applications?
    - EP2P applications are really different from existing client-server solutions?
  - In what terms the development effort is reduced by the use of SMEPP middleware?
    - We need to define metrics in the requirements WP in order to validate this aspect



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# Project Planning

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- The project has been organized around three major global milestones
  - M1- Month 12
    - *Requirements Specification*
    - *Service Model Definition*
    - *Security Services Definition*
  - M2- Month 24
    - *Software Architecture Definition*
    - *Middleware Framework Implementation*
    - *Security Services Implementation*
  - M3- Month 36
    - *Applications*
    - *Security Validation*
    - *SMEPP Middleware Validation*

# Project Planning



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- Main decisions at each milestone
  - MIL1- Month 12
    - *Do the requirements change the initial vision of the project?*
    - *P2P interactions are really different and need a specific model?*
    - *What are the real differences between P2P security services and standard security services?*
      - Do we have solutions for the new security requirements?
  - MIL2- Month 24
    - *Can we define different software architectures for the new P2P model?*
    - *Can we define selection criteria depending on the requirements?*
    - *Are we able to implement effectively the new P2P security services?*

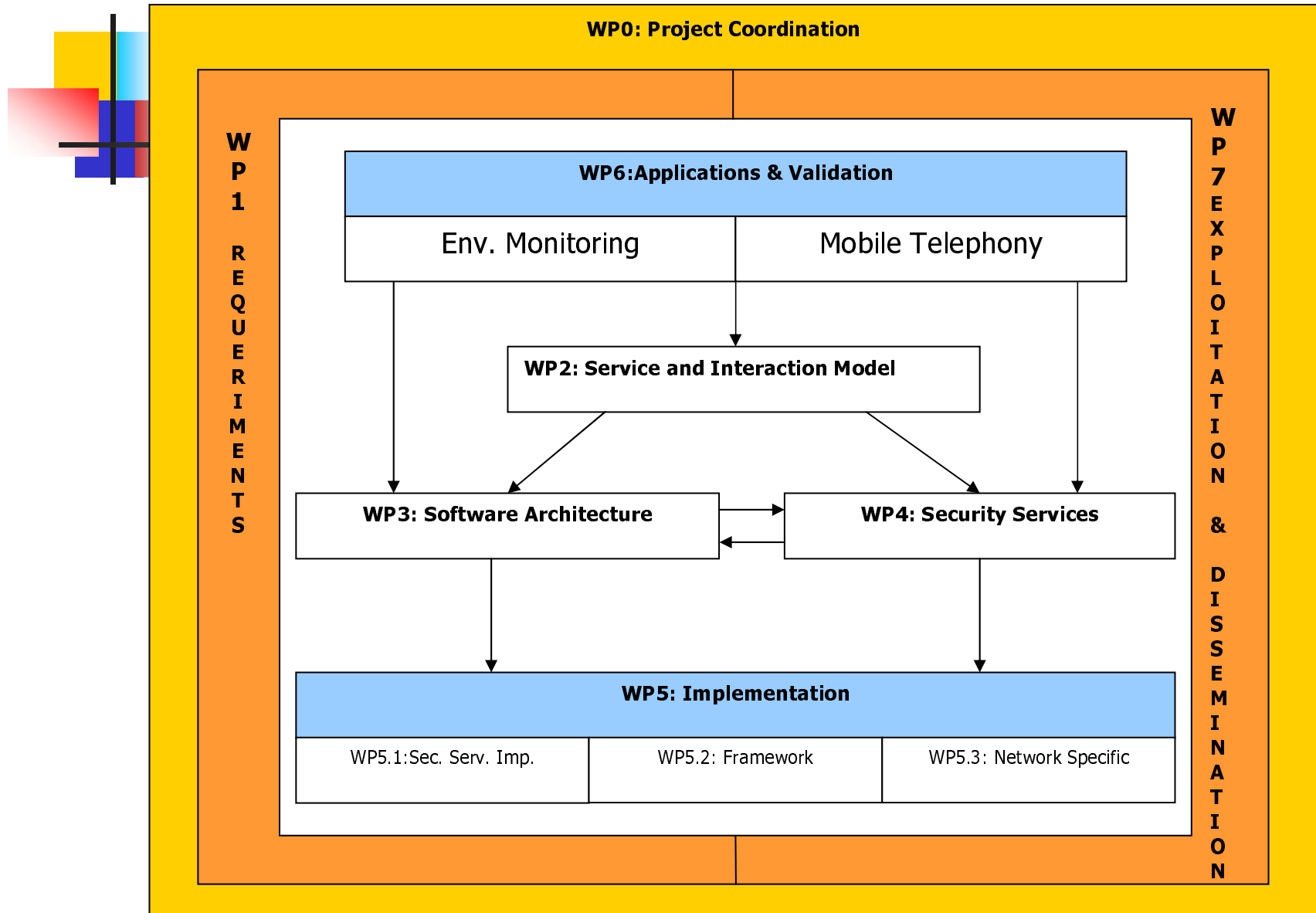
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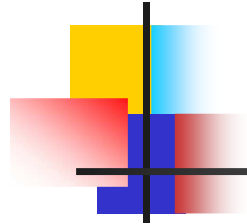
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- Main decisions at each milestone
  - MIL3- Month 36
    - *Are we able to provide an effective interaction model for the new applications?*
    - *How effective is SMEPP middleware, in terms of:*
      - *Memory and energy consumption*
      - *Performance*
      - *Easy of adaptation and component reuse*

# Workpackages



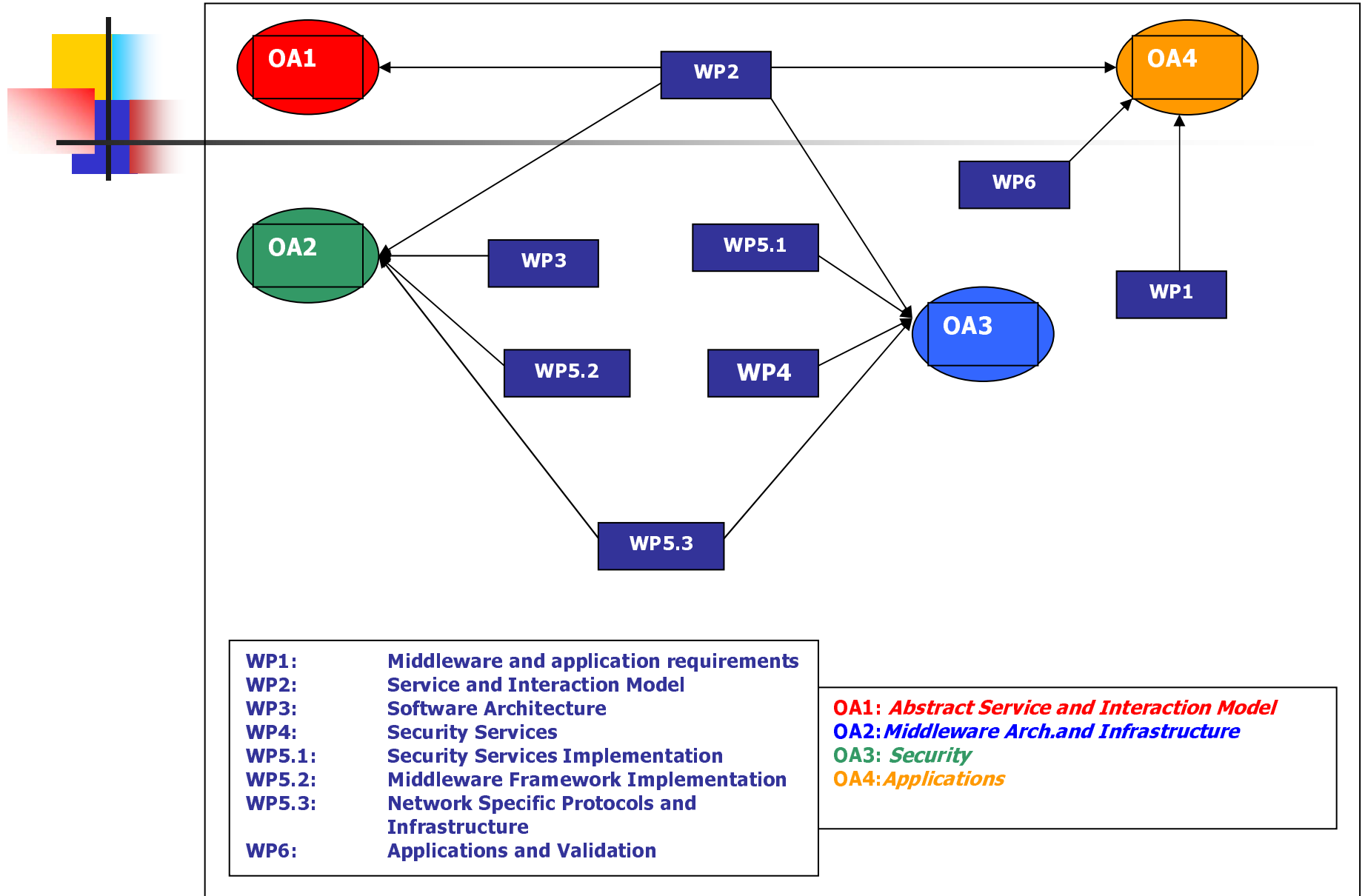
# Workpackages



| Workpackage <sup>1</sup> | Partner | WTL             |
|--------------------------|---------|-----------------|
| <b>WP0</b>               | UMA     | Manuel Díaz     |
| <b>WP1</b>               | TEC     | Esteban Cabrera |
| WP2                      | UPI     | Antonio Brogi   |
| WP3                      | VTT     | Jarmo Kalaoja   |
| WP4                      | UMA     | Javier López    |
| <b>WP5</b>               | TEC     | José Serrano    |
| WP5.1                    | TUG     | Manfred Aigner  |
| WP5.2                    | UMA     | Manuel Díaz     |
| WP5.3                    | I2R     | Jianying Zhou   |
| WP6                      | TID     | Pierre Plaza    |
| <b>WP7</b>               | SIEM    | Erwin Hess      |

<sup>1</sup> Project Control Work-Packages are in red

# Workpackages & Objectives



# Deliverables

| Deliv. No | Deliverable name                                              | W P no. | Lead participant | Estimated person-months | Nature <sup>[1]</sup> | Dissemination level <sup>[2]</sup> | Delivery date <sup>[3]</sup> |
|-----------|---------------------------------------------------------------|---------|------------------|-------------------------|-----------------------|------------------------------------|------------------------------|
| D0.1-D0.3 | Annual Management Reports                                     | 0       | 1                | 3                       | R                     | PU                                 | 12-24-36                     |
| D04-D0.6  | Annual Activity Reports                                       | 0       | 1                | 3                       | R                     | PU                                 | 12-24-36                     |
| D07-D0.9  | Intermediate Activity reports                                 | 0       | 1                | 1,75                    | R                     | PU                                 | 6-18-30                      |
| D0.10     | Final Report                                                  | 0       | 1                | 1                       | R                     | PU                                 | 36                           |
| D0.11     | Final Plan for use and dissemination of knowledge             | 0       | 1                | 1                       | R                     | PU                                 | 36                           |
| D0.12     | Report on raising public participation and awareness          | 0       | 1                | 0,75                    | R                     | PU                                 | 36                           |
| D1.1      | State of the Art and Generic Middleware Requirements          | 1       | 2                | 12                      | R                     | PU                                 | 6-12-15                      |
| D1.2      | Security Requirements of EP2P Applications                    | 1       | 2                | 6                       | R                     | PU                                 | 6-12-15                      |
| D1.3      | Application Requirements                                      | 1       | 2                | 9                       | R,P                   | PU                                 | 12-18                        |
| D2.1      | Service model description                                     | 2       | 6                | 26                      | R                     | PU                                 | 12-15                        |
| D2.2      | Tool support for the service model                            | 2       | 5                | 18                      | P                     | PU                                 | 12-15                        |
| D3.1      | Architectural specific requirements of secure EP2P middleware | 3       | 5                | 2                       | R                     | PU                                 | 8                            |
| D3.2      | Conceptual architecture of secure EP2P middleware             | 3       | 5                | 12                      | R                     | PU                                 | 8-12-20-30-35                |
| D3.3      | Concrete architecture of secure EP2P middleware services      | 3       | 5                | 16                      | R                     | PU                                 | 12-20-30-35                  |
| D3.4      | Evaluation results of EP2P middleware arch. and service model | 3       | 5                | 3                       | R                     | PU                                 | 12-20-30-35                  |
| D4.1      | Threat models for EP2P networks                               | 4       | 1                | 8                       | R                     | PU                                 | 6                            |
| D4.2      | Security services and primitives for EP2P systems             | 4       | 1                | 10                      | R                     | PU                                 | 9                            |
| D4.3      | Security Protocols for EP2P networks                          | 4       | 1                | 13                      | R                     | PU                                 | 9-24                         |
| D4.4      | Power estimation methodology                                  | 4       | 1                | 10                      | R                     | PU                                 | 18-24                        |

# Deliverables

| Deliverable No | Deliverable name                                           | W P no. | Lead participant | Estimated person-months | Nature | Dissemination level | Delivery date  |
|----------------|------------------------------------------------------------|---------|------------------|-------------------------|--------|---------------------|----------------|
| D5.0.1         | Configuration Management Plan                              | 5.0     | 2                | 0.75                    | R      | PU                  | 6              |
| D5.0.2         | Implementation Progress Reports                            | 5.0     | 2                | 6                       | R      | PU                  | 12-18-24-30-36 |
| D5.0.3         | Final Prototype of SMEPP middleware                        | 5.0     | 2                | 2                       | P      | PU                  | 36             |
| D5.1.1         | Spec. of Secure Instruction Sets for EP2P Devices          | 5.1     | 3                | 6                       | R      | PU                  | 12-15          |
| D5.1.2         | HW module for asymmetric crypt. and energy masur.          | 5.1     | 3                | 14                      | P      | RE                  | 36             |
| D5.1.3         | Design and Imp. of symmetric/ asymmetric algorithm         | 5.1     | 3                | 22                      | R-P    | PU                  | 24             |
| D5.1.4         | Design and Imp. of a elliptic curve algorithms             | 5.1     | 3                | 28                      | R-P    | PU                  | 36             |
| D5.2.1         | Component Infrastructure and Tool Design                   | 5.2     | 1                | 6                       | R      | PU                  | 12-18-35       |
| D5.2.2         | Component Infrastructure and Tool Implementation           | 5.2     | 1                | 10                      | P      | PU                  | 24-36          |
| D5.2.3         | Implementation of Extra Functional Properties support      | 5.2     | 1                | 6                       | P      | PU                  | 24-32          |
| D5.2.4         | Implementation of Upgrading and Extension Support          | 5.2     | 1                | 4                       | P      | PU                  | 30-36          |
| D5.3.1         | Analysis and Ev. of network specific EP2P protocols        | 5.3     | 8                | 6                       | R      | PU                  | 12-15          |
| D5.3.2         | Network and device specific protocols design               | 5.3     | 8                | 8                       | R      | PU                  | 21-36          |
| D5.3.3         | Specific protocols implementation and integration          | 5.3     | 8                | 12                      | P      | PU                  | 30-36          |
| D6.1           | Design and Implementation of environmental monitoring app. | 6       | 2                | 36                      | R-P    | RE                  | 24-36          |
| D6.2           | Design and Imp. of telephony services and applications     | 6       | 7                | 34                      | R-P    | RE                  | 24-36          |
| D6.3           | Evaluation of security algorithms and applications         | 6       | 8                | 9                       | R      | PU                  | 36             |
| D6.4           | Middleware validation                                      | 6       | 7                | 9                       | R      | PU                  | 36             |
| D7.0           | Web page and project presentation                          | 7       | 1                | 1                       | P      | PU                  | 6              |
| D7.1           | Dissemination Plan                                         | 7       | 4                | 6                       | R      | PU                  | 6-12-24-36     |
| D7.2           | Middleware Exploitation Plan                               | 7       | 2                | 6                       | R      | PU                  | 36             |
| D7.3           | Applications Exploitation Plan                             | 7       | 8                | 6                       | R      | PU                  | 36             |



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# Budget Overview

| Project Efforts                   | UMA        | TEC       | TUG       | SIEM      | VTT       | UPI       | TID       | I2R      | TOTAL      |            | UMA               | T         | UPI<br>U  | I2R       |
|-----------------------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|------------|------------|-------------------|-----------|-----------|-----------|
|                                   |            |           |           |           |           |           |           |          | Funded     | N-Fund     | Non-funded Effort |           |           |           |
| <b>Research</b>                   |            |           |           |           |           |           |           |          |            |            |                   |           |           |           |
| WP1 Middleware & Application Req. | 6          | 6         | 2         | 3         | 3         | 3         | 4         | 0        | 27         | 8          | 3                 | 3         | 2         | 0         |
| WP2 Service - Interaction Model   | 9          | 0         | 0         | 0         | 10        | 25        | 0         | 0        | 44         | 10         | 4                 | 0         | 6         | 0         |
| WP3 Software Arch.                | 12         | 5         | 0         | 0         | 33        | 20        | 3         | 0        | 73         | 11         | 5                 | 0         | 6         | 0         |
| WP4 Security Services             | 12         | 0         | 8         | 9         | 0         | 0         | 4         | 0        | 33         | 23         | 5                 | 6         | 0         | 12        |
| WP5 Imp. Coordination             | 9          | 4         | 0         | 0         | 0         | 0         | 4         | 0        | 17         | 3          | 3                 | 0         | 0         | 0         |
| WP5.1 Security Serv. Impl.        | 15         | 0         | 28        | 31        | 0         | 0         | 0         | 0        | 74         | 36         | 4                 | 12        | 0         | 20        |
| WP5.2 Middleware Fw. Imp.         | 9          | 0         | 0         | 0         | 10        | 10        | 0         | 0        | 29         | 4          | 3                 | 0         | 1         | 0         |
| WP5.3 Network Specific Inf.       | 14         | 8         | 0         | 0         | 0         | 0         | 4         | 0        | 26         | 11         | 6                 | 0         | 0         | 5         |
| WP6 App & Validation              | 15         | 35        | 10        | 8         | 0         | 0         | 29        | 0        | 97         | 11         | 6                 | 5         | 0         | 0         |
| WP7 Dissemination & Exploitation  | 5          | 8         | 2         | 4         | 6         | 2         | 5         | 0        | 32         | 10         | 4                 | 2         | 1         | 3         |
| <b>Total research/innovation</b>  | <b>106</b> | <b>66</b> | <b>50</b> | <b>55</b> | <b>62</b> | <b>60</b> | <b>53</b> | <b>0</b> | <b>452</b> | <b>127</b> | <b>43</b>         | <b>28</b> | <b>16</b> | <b>40</b> |

# Budget Overview

| Consortium management activities          | UMA | TEC | TUG | SIE<br>M | VTT | UPI | TID | I2R | Funded     | N-Fund |  | UMA | TUG | UPI | I2R |
|-------------------------------------------|-----|-----|-----|----------|-----|-----|-----|-----|------------|--------|--|-----|-----|-----|-----|
| <b>WP0 Management</b>                     | 26  | 1   | 1   | 1        | 1   | 1   | 1   | 0   | 33         | 9      |  | 6   | 1   | 1   | 1   |
| <b>WP6 App &amp; Validation</b>           | 2   | 1   | 0   | 0        | 0   | 0   | 0   | 0   | 3          | 1      |  | 1   |     | 0   | 0   |
| <b>WP7 Dissemination and Exploitation</b> | 1   | 1   | 0   | 0        | 0   | 1   | 0   | 0   | 3          | 1      |  | 0   | 1   | 0   | 0   |
| <b>Total consortium management</b>        | 29  | 3   | 1   | 1        | 1   | 2   | 1   | 0   | 39         | 11     |  | 7   | 2   | 1   | 1   |
|                                           |     |     |     |          |     |     |     |     |            |        |  |     |     |     |     |
| <b>TOTAL per Participant</b>              | 135 | 68  | 51  | 56       | 63  | 62  | 55  | 0   |            |        |  | 50  | 30  | 17  | 41  |
|                                           |     |     |     |          |     |     |     |     |            |        |  |     |     |     |     |
| <b>TOTAL EFFORTS</b>                      |     |     |     |          |     |     |     |     | 513        | 138    |  |     |     |     |     |
| <b>Overall TOTAL EFFORTS</b>              |     |     |     |          |     |     |     |     | <b>751</b> |        |  |     |     |     |     |

# Budget Overview



| Participant         | Personnel        | Travel         | Equipment     | Consum-ables  | Sub-contracting | Other Costs   | Overhead         | Total            | Requested EC Contrib |
|---------------------|------------------|----------------|---------------|---------------|-----------------|---------------|------------------|------------------|----------------------|
| UMA                 | 322.963          | 49.000         | 23.500        | 3.000         | 0               | 4.000         | 80.492           | 482.955          | 482.955              |
| TEC                 | 404.094          | 45.725         | 13.510        | 3.000         | 23.000          | 31.000        | 361.118          | 862.609          | 444.709              |
| TUG                 | 299.071          | 31.000         | 30.000        | 2.200         | 3.000           | 0             | 72.854           | 438.125          | 438.125              |
| SIEM <sup>(1)</sup> | 589.440          | 0              | 0             | 0             | 0               | 0             | 272.344          | 850.446          | 433.405              |
| VTT                 | 378.500          | 67.000         | 0             | 0             | 3.000           | 0             | 359.575          | 808.075          | 405.538              |
| UPI                 | 200.655          | 44.500         | 12.240        | 2.100         | 0               | 1200          | 52.139           | 312.834          | 312.835              |
| TID                 | 273.240          | 20.000         | 3.600         | 4.600         | 5.000           | 0             | 320.760          | 627.200          | 321.600              |
| I2R                 | 0                | 47.500         | 0             | 0             | 3.000           | 0             | 9.500            | 60.000           | 60.000               |
| <b>TOTAL</b>        | <b>2.467.963</b> | <b>304.725</b> | <b>82.850</b> | <b>14.900</b> | <b>17.000</b>   | <b>36.200</b> | <b>1.528.782</b> | <b>4.455.144</b> | <b>2.899.167</b>     |

<sup>(1)</sup> Due to Siemens accounting system, it is not possible to break down the total costs, and they are only assigned to personnel



# Budget Overview

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| Participant               | Total     | Requested EC Contrib | %Budget | First Tranche | First Payment |
|---------------------------|-----------|----------------------|---------|---------------|---------------|
| <b>UMA</b>                | 482.955   | 482.955              | 16,70   | 193664,39     | 96832,2       |
| <b>TEC</b>                | 862.609   | 444.709              | 15,20   | 176269,38     | 88134,69      |
| <b>TUG</b>                | 438.125   | 438.125              | 15,10   | 175109,72     | 87554,86      |
| <b>SIEM<sup>(1)</sup></b> | 850.446   | 433.405              | 15,00   | 173950,05     | 86975,03      |
| <b>VTT</b>                | 808.075   | 405.538              | 14,00   | 162353,38     | 81176,69      |
| <b>UPI</b>                | 312.834   | 312.835              | 10,80   | 125244,04     | 62622,02      |
| <b>TID</b>                | 627.200   | 321.600              | 11,10   | 128723,04     | 64361,52      |
| <b>I2R</b>                | 60.000    | 60.000               | 2,10    | 24353,01      | 12176,51      |
| <b>TOTAL</b>              | 4.455.144 | 2.899.167            | 100     | 1159667,01    | 579833,52     |

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# Meeting Agenda

## Monday October 2nd

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- 10:00 Welcome and partner presentation (5 minutes per partner)
- 10:45 Overview of the Project (Coordinator)
- 11:30 Coffee Break
- **12:00 Work Package Presentation (Short presentation for each WP)**
  - WP Objectives
  - Deliverables, including a proposal for deliverable editors
  - Tentative planning, detailed for the next three month
  - Coordination issues (in the WP, with other WP and with related projects)
- 13:30 Lunch
- 14:30 Partner participation (for each WP and partner)
  - Partner specific objectives for the partner in the WP
  - Previous experience
  - Personnel assigned to WP
- 16:00 Coffee Break
- 16:30 Final project planning for the first 6 months and technical discussions
- 18:00 Conclusions



# WPO Management

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- Objectives

- The aim of this WP is to guarantee effective progress of the project
- Following the work-plan and providing the necessary liaisons between the consortium and the EU
- Controlling the **quality** of the work and deliverables
- Coordination of the control WPs, paying special attention to Exploitation and Dissemination activities and risk control.
- All the administrative and financial management, including conflict resolution will also be included in this WP



# WP0 Management

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- **Deliverables**

- D0.1-D0.3 Annual Management Reports (M12-M24-M36)
- D0.4-D06 Annual Activity Reports (M12-M24-M36)
- D0.7-D0.9 Intermediate Activity Reports (M6-M18)
- D0.10 Final Management Report (M36)
- D0.11 Final Plan for use and dissemination of knowledge (M36)
- D0.12 Report on raising public participation and awareness (M36)

- **Editor:** UMA – Coordinator

- This WP is related to all the WPs and especially to the control WPs



## WP5.2 Middleware Framework Implementation

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- **Objectives**

- Design and implementation of a component framework to support the software architectures developed in WP3
- Highly customizable framework integrating:
  - a minimal set of component concepts (containers and ports for component interaction, support for dynamic deployment and binding of components, packaging and distribution, etc.)
  - a very small software footprint

- **Coordination**

- This framework will be initially based on the results of the RUNES project
- .....but it will require an adaptation to the P2P service interaction model defined in WP2
- This WP is related to WP5.\*, WP1 and WP3

- **Editor: UMA**



## WP5.2 Middleware Framework Implementation

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- **Deliverables**

- D5.2.1 Component Infrastructure and Tool Design (M12)
- D5.2.2 Component Infrastructure and Tool Implementation (M24)
- D5.2.3 Implementation of Extra Functional Properties Support (M30)
- D5.2.4 Implementation of Upgrading and Extension Support (M30)

- Next Three Months Planned Activities:

- Contact RUNES development Group
- Prototype developments
- Coordination with related WPs



# Meeting Agenda

## Monday October 2nd

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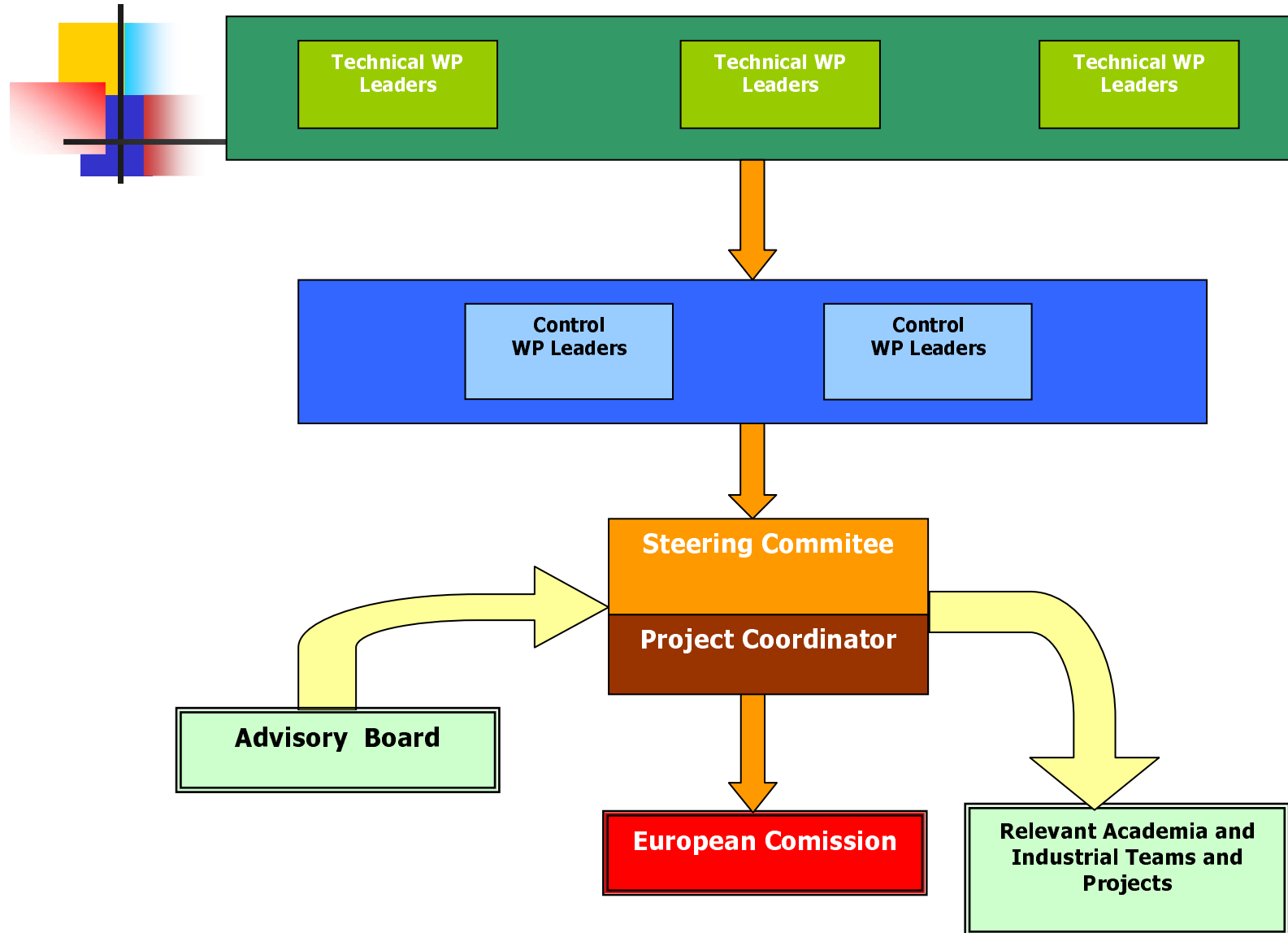
# Meeting Agenda

## Tuesday October 3rd

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- 9:00 Project Management Overview (Coordinator)
- 9:30 Steering Committee Meeting: representatives, meeting planning, functions,...
- 10:30 Coffee Break
- 11:00 Economical Issues
  - Payments from the commission
  - Consortium transferences
  - Eligible costs, audits,.....
- 12:30 Dissemination Activities (proposals from all the partners)
  - Workshop/conference participation proposals
  - Web page, Distribution lists, Logo,...
- 13:00 Meeting Conclusions
- 13:30 Lunch

# SMEPP Project Management





# Coordinator Role

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- The Co-ordinator shall be the intermediary between the Contractors and the **Commission**
- **Submitting reports** and other deliverables to the Commission
- The administration, preparation of minutes and provision of the chairman of the **Steering Committee**, and follow-up of its decisions
- The transmission of any documents and information connected with the Project to and between the Contractors concerned;
- Withholding advance payments and transferring sums allocated among the Contractors as per the budget agreed in the Steering Committee and keep related records identifying what portion of the payments made by the Commission has been allocated and/or paid to each Contractor
- Co-ordinating the progress of the technical work under the Project
- Reviewing deliverables at each agreed step under the Project Plan concerned and advise the Contractors of any delay in delivery that could not be remedied or any major discrepancy



# Steering Committee

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- The Steering Committee shall consist of one representative of each Contractor, including the project coordinator
- Each representative shall have one vote and may appoint a substitute to attend and vote at any meeting of the Steering Committee
- The Co-ordinator shall convene meetings of the Steering Committee at least on a half yearly basis and shall also convene meetings at any time upon written request of any Contractor in the case of an emergency situation.
- Any decision requiring a vote at a Steering Committee meeting must be identified as such on the invitation.
- Should a Contractor suggest adding a discussion/decision to the proposed agenda, it shall do so in writing to all other Contractors at least two calendar days prior to the meeting date.

# Steering Committee



## ■ Responsibilities

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- Deciding upon the allocation of the Project's budget to Work Packages in accordance with the Contract, including the Project Plan, and reviewing and proposing to the Contractors budget transfers
- Making proposals to the Contractors for the review and/or amendment of terms of the Contract and/or this Consortium Agreement
- Deciding to suspend all or part of the Project or to terminate all or part of the Contract, or to request the Commission to terminate the participation of one or more Contractors;
- In case of default of a Contractor agreeing on actions to be taken against the Defaulting Contractor,
- In case of default of the Co-ordinator in the performance of its tasks as a coordinator, agreeing on actions to be taken and possible nomination of a new Co-ordinator
- Deciding upon the entering into the Contract and the Consortium Agreement of new Contractors



# Steering Committee

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## ■ Responsibilities

- Deciding upon the designation of the depository and rules for the management of the funds received from the Commission and for the management and co-ordination budgets rules
- Deciding upon major changes in Work Packages.
- Electing the members of the Advisory Board.
- Deciding on technical roadmap for the Project;
- Reviewing the selection of additional expertise (sub contractors);
- Agreeing press releases and publications by the Contractors or by the Commission or with the Commission with regard the Project as per the Commission contractual rules
- Supporting the Co-ordinator in preparing meetings with the Commission and related data and deliverables.



# Advisory Board

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- The Advisory Board will be composed of invited representatives from academia and industry that will provide inputs to the project on general technical trends when required.
- It will be elected by the Steering Committee during the **first six months** of the project and will be composed by a small group (five to eight) of leading scientific and industrial people with experience in the area.
- The members of this board will receive all the relevant information about the project and will provide feedback about its evolution.
- They will attend to the annual project workshops whenever it is possible.



# WP Leaders

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- Responsibility for individual Work-Packages will rest with the Work-Package Team Leader
- WTLs will be in charge of coordinating the project activities they are responsible for
- They will act as the principal points of contact with the project coordinator, assist in the preparation of WP plans and reports and will prepare exception plans if necessary.
- There are two types of WPs:
  - *Technical WPs*, WTL of technical WPs will report primarily to the control WTL. This will constitute the first stage of coordination and minor problems will be solved at this level.
  - *Project Control WPs*, in a second level of coordination, the control WTL will report to the Steering Committee and/or Project Coordinator.



# Decision Process

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- Any conflicts which arise will be resolved at the lowest possible level
  - In a first stage, the WTL will try to solve all the internal problems by consensus of the WP participants.
  - If this consensus cannot be reached or some situations arise that affect more than one WP, the WTLs will report the conflict to the project coordinator.
  - The project coordinator will try to solve this problem informally with the rest of the members of the SC (by e-mail or tele-conferencing). If such a consensus is not possible, the situation will be resolved in a formal meeting of the SC.
  
- In addition, all strategic decisions will be taken by the SC. It is expected that decisions will normally be taken unanimously. However, if the members cannot come to an agreement, a voting procedure will follow and decisions be taken by majority.
  
- Any decision requiring a vote at the SC meeting must be identified as such on the pre-meeting agenda, unless there is an unanimous agreement to vote on a decision at that meeting and three-quarters ( $\frac{3}{4}$ ) of the members of the Project Co-ordination Committee are present or duly represented by proxy.



# Project Meetings

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- **Coordination/administrative meetings**
  - They will be devoted to the control of the administrative and financial issues of the project and to deal with the exploitation and dissemination plans.
  - These meetings include the ones of the SC , that will be held ***once every six months*** and other possible bilateral or multilateral meetings to deal with possible deviations or modifications of the workplan.
  - These meetings will also asses the progress in the planned iterations and will be in charge of analyze global risks.
- **Scientific/assessment meetings:** These meetings will be devoted to integration activities that cut across the work package structure. Its periodicity will depend on the phase of the project and on the possible problems encountered during problem development



# Project Meetings

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- Within **the three first months** of the project we will arrange three information sharing workshops:
  - A **kick-off meeting** to exchange information about the ideas and background of the different groups and to define in more detail the initial scientific and technical approach.
  - An **application and initial requirement workshop** to establish the methodology for the initial requirements phase and the validation process.
  - A **whole project workshop** that will be held after the two previous meeting, once the main scientific and technical requirements have been defined. In this meeting we will present the global process and methodology together with concrete objectives and with a detailed planification for the first project iterations.
- After this initial phase, technical meetings will be planned in the context of the corresponding workpackages.
- We will also celebrate a **plenary workshop every year**, where all the WTLs will present the results of their corresponding WPs in order to give a full picture of the project evolution to all the participants.
- The members of the **advisory board** will be invited to this workshop.



# Dissemination and Exploitation

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## ■ Initial Tasks

- Identify conferences and journals closely related to the area of software for networked embedded systems.
- Develop a **project website** that will offer online up-to-date project information, all current publications and
- Annual workshop
  - The consortium members will try to hold the workshop in the context of a well-known conference to ensure maximum audience (the initial candidate conferences are ACM Middleware, Int. Conference on P2P and PerCom).
- During the first year we have to develop a **concrete dissemination plan** where a plan for dissemination will be described in detail, paying special account to maximizing the impact of the project in non scientific media.