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„The Framework Programme (FP7)“ Looking Forward A Proposer’s view: Practices and Lessons Learned

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Looking Forward Challenges

- Transmission and processing:
 - ⇒ Efficient modulation formats and advanced coding techniques for optimal bandwidth utilization
 - ⇒ DSP focusing on real-time implementations
 - ⇒ Intelligence to the network: self-configuring components (e.g. in wavelength, bit rate and dispersion)
 - ⇒ New amplification schemes (wavelength, coherent amps)
 - ⇒ New optical fibres
 - ⇒ All-optical processing, synergizing electronics at very high data rates



Looking Forward Challenges

- Photonic components with a view to industrialization:
 - ⇒ Data centers:
 - ✓ pluggable, green Tb/s components
 - ✓ Exploitation of 3D integration disciplines for optical-interconnect boards
 - ⇒ Telecom:
 - ✓ all-optical networks with transparency and dynamicity (ROADMs, Tx, Rx)
 - ✓ energy-aware traffic engineering and dynamic bandwidth allocation
 - ✓ convergence of wired/wireless networks
- “Beyond CMOS” and “More-than-Moore” Photonics / Electronics Integration



The Gains of Participation

- Collect necessary knowhow and expertise from larger pool (Japan & Europe)
⇒ Usually not feasible by a single organisation/enterprise
- Cost is shared among the partners
- Opportunities to arise for global strategic alliances
- Far broader exploitation prospects for participants
- Winners in a highly competitive environment



The Essence of an FP7 Proposal

- Clear presentation of concept as main strategic objective
 - ⇒ Innovative and Visionary
 - ⇒ Beyond the state of the art
 - ⇒ Within the challenges of Workprogramme
- Clear identification/description of partial objectives as means to implement major goal
- Awareness of risks and means/action to mitigate them
- Appropriate consortium synthesis
 - ⇒ Core Team is tantamount to success:
 - drives the idea creation process
 - 2-4 partners need to share same vision



Criteria for the Consortium Synthesis

- Experienced Coordinator:
 - ⇒ Expertise to match Call/Knowledge of state-of-art
 - ⇒ Good overview of project objectives
 - ⇒ Awareness of partners' competences and roles
 - ⇒ Accumulated coordination experience
 - ⇒ Knowledge of Commission's rules
- Reliable partners:
 - ⇒ Prominent research profile
 - ⇒ Experience in EU project participation
- Diversity and complementarity of partners in terms of:
 - ⇒ Roles
 - ⇒ Competency and Knowledge
 - ⇒ Resources contributed to the project
- Good balance between partners from:
 - ⇒ Academia: guarantee research excellence
 - ⇒ Industry: guarantee the commercial value & impact



Proposal Preparation Stage

- Work distinguished between scientific and administrative
 - ⇒ Administrative issues: consult coordinator
 - ⇒ Research part: coordinator orchestrates, rest provide technical contribution
- Each partner should contribute individual, reasoned views on project impact
- Clear individual exploitation plans for project outcome
- Full cost justification for each activity/participant



Foundamentals of Proposal Preparation

- Allocation of tasks and responsibilities
 - ⇒ Who writes what → Defined by roles
- Agreement about terminology (and style):
 - ⇒ Structured and easy-to-read document
- Deadlines:
 - ⇒ When to deliver
- Preparation is an iterative process of revisions
 - ⇒ continuous improvement of the quality
- Preparation duration until its final submission:
 - ⇒ from several weeks to several months (in average)



Who writes what - example

- Administrative part (**coordinator and partners**)
- Technical part
 - ⇒ **Start (collaboratively)**
 - Define objectives
 - Define relevance
 - Define research challenges
 - Define Work packages structure and leaders
- Beyond state of the art for each challenge (**Collaboratively**)
- Work package content, including WP tables (**each partner**)
- Project management structure (**coordinator**)
- Impact (**dissemination partner**)
- Partner data (**each partner**)
 - ⇒ **Partners profiles**
 - ⇒ **CV's**
 - ⇒ **Role in the project and competencies**
 - ⇒ **Individual Exploitation /Dissemination plan**



Proposals to Avoid

- Scope does not match Call objectives or strategic interests of participants
- Proposals for the shake of funding:
 - ⇒ Poor vision
 - ⇒ No joint interest
 - ⇒ Do not significantly advance state-of-art
 - ⇒ Unclear strategy (collective and individual)
- Anything that is extremely secret
- Low required collaboration among partners
 - ⇒ Solo works are not encouraged



Potential Difficulties in Proposal Preparation

- Poor knowledge of European Commission regulations and rules for participation
- Location and selection of the appropriate partner
- Exploitation and Intellectual Property (IP) issues
- Language difficulties
- Difficulties due to geography:
 - ⇒ **Time difference:**
 - Coordination of teleconferences
 - ⇒ **Long distance trips**
 - Less frequent project meetings
 - Higher logistics costs