The Effectiveness and Impact of FP6 New Instruments

Framework Programme Evaluation:
TAKING STOCK AND MOVING FORWARD

18 June 2009
Introduction and Background

• Objectives of the Sixth Framework Programme
  – Develop the European Research Area
  – Increase co-operation
  – Improve competitiveness
  – Greater complementarity of research
  – Improve co-ordination

• Objectives of Integrated Projects
  – Help build “critical mass” in objective driven research
  – Bring together large research teams

• Objectives of Networks of Excellence
  – Progressively integrate activities of network partners
  – Link national centres of excellence and provide framework for exchange of researchers and sharing of data and facilities
Key issues - general

- Lack of clarity in the implementation of the goals
- Small number of large projects led to high rates of oversubscription
- Initially rather inflexible
- Emphasis on size rather than critical mass in context
- Apparent requirement for large consortia led to cumbersome and costly proposal processes
- Lengthy evaluation processes
- Lower SME participation
- Low New Member State participation
- Discouraged scientific risk
Key issues - Integrated Projects

• Proposal and evaluation system seen as lengthy and cumbersome
• Management and IPR difficulties in large consortia
• Potential benefits of smaller consortia debated
• Relationship with STREPs in overall funding portfolio
Key issues - Networks of Excellence

• Concept of durable integration not well understood
• Lack of continuation/exit strategies
• Tensions between excellence and inclusiveness
• No funding for direct research activities
Main methods used

- Interviews with key players
- Analysis of key reports
- Statistical analysis
- Survey of participants
- Case studies
Average size of instruments varies

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Distribution by Priority

1. Life sciences
2. IST
3. Nanotech
4. Aero and Space
5. Food quality and safety
6. Sustainable development
7. Citizen and governance
Horizontal research activities involving SMEs
Euratom
Policy support
Research and Innovation
Research Infrastructures
Science and society
INCO

EUROPEAN POLICY EVALUATION CONSORTIUM
epec.info
Distribution across Priorities

• Networks largest in IST, Sustainable Development and Euratom
• Networks smallest in Nanotechnologies, Aeronautics and Space
• IPs largest in Food Quality and Safety
• IPs smallest in Citizens and Governance
Comparison of FP6 Instruments with FP5

- Average size of projects as a whole was greater
- Average project size rose from 5.1 to 7.2 participants
- STREPs/shared cost projects rose from 7 to 9 participants
- Average funding by partner rose by 13.5%
- Major decrease in the number of projects
- Reduction of 10,000 in the number of participants
Participation patterns

• NoEs dominated by HE institutions, with low industry participation
  – HE participation ranges between 29% in Aeronautics and Space to 70% in Citizens and Governance
  – Industry participation ranges from 0 (Citizens and Governance) or 3% (Food quality and Safety) to 16% (Euratom) and 11% (Sustainable development)

• IPs higher involvement of industry
  – HE participation ranges between 17% in Aeronautics and Space to 68% in Citizens and Governance
  – Industry participation ranges from 1% (Citizens and Governance) 48% (Nanotechnologies)

• SME participation follows the overall industry pattern
Geographical participation

- Overall participation of New Member States very low
- Participation rates of smaller countries also somewhat lower than expected in New Instruments
- Noticeable difference between participation rates in New Instruments between old and new Member States - the instruments themselves have had an effect
- Very few new instrument projects had NMS co-ordinators
Adaptations over the Programme

• No major change in balance between IPs and STREPs, apart from slight redistribution in final year
• NoEs saw major decline in funding and number of projects
• Work programmes continued to specify instrument types
Integrated Projects
Integrated Project Issues arising

• General agreement that projects had too many partners (especially from EU15)
• “Optimum size” for efficiency identified by respondents was 10-20 partners, but varying by priority
• Confusion over differences between IPs and STREPs reported by participants and advisers
• Case studies show projects generally flagships in the field
• Main outputs publications and new or improved techniques/processes
• Spin-offs least important output
• New knowledge and relationships main soft outcomes for all except SMEs who value new commercial/market knowledge
Findings on Integrated Projects

- IPs take a “programme” approach
- Ambitious approach often requires them to be multi-disciplinary
- Levels of complexity had increased (bureaucracy, IP, management time/cost)
- Scientific and financial risk both reported unchanged
- Lower flexibility than in previous programme
- Integration had occurred across research spectrum and this was beneficial
- Novel working relationships were formed, especially new relationships with new partners which would continue
- Not all partners were involved equally
- Involvement of SMEs often limited to specialist roles
- Overall view positive
Networks of Excellence
Networks of Excellence issues arising

- Many fewer participated in more than one NoE
- Most participants felt well involved in the network
- Only 38% felt networks were too big (compared to 61% for IPs)
- Large diversity in the nature/scale of the projects
- Scale initially seen as potential issue but later seen as strength
- Core partners usually based on previous collaboration
- Main motive for participation to ensure European presence in field
- Main results new publications and research projects, training courses/conferences and new organisations/permanent networks
Findings on Networks of Excellence

• Networks need active involvement at strategic level from the participating institutions from the beginning
• Instrument successful in generating new relationships, new activities and new research
• Provided good opportunities for the involvement of young researchers
• Lack of funds for related research was a limiting factor, and scale of funds meant network was limited part of participants’ overall activities
• Level of commitment from national research structures disappointing
• Some doubts as to whether lasting relationships generated at the institution level (rather than the personal)
Conclusions
Design

• Rationale for instruments clearly expressed and understood, but became lost when translated into specifications for instruments.
• Attitude of participants more positive towards NoEs than expected.
• No major changes introduced to IPs over programme but NoEs scaled down.
• Little evidence of major structuring impact yet. However, this would realistically not be expected to be evident yet.
Implementation

• Misunderstandings over nature of “critical mass” and “integration” major issue, and clarification activity had limited success. This suggests both internal and external communication issues were involved.

• Prescription of instruments and funding in calls led to frustration, low success rates and exclusion of some players. Evidence this has been addressed to some extent in FP7.

• NoEs not being able to fund research was seen as major limiting factor.
Impact/Value Added

• Too early for real impacts to be demonstrated
• Participants seem more positive than others on structuring effects of the instruments
• Critical mass now more understood as bring together complementary expertise
• Ability to participate in several work packages sometimes seen as beneficial in mobilising resources
• Administrative burden/budget limitations in IPs was felt a major issue, but some acknowledged it also enabled a degree of flexibility
• The instruments remain a problem for SMEs
Lessons learned

• Surveys are not the only or the best tool. More insight came from the case studies
• Project participants are rather generous people
• Assessing implementation methods does not fit well into the programming cycle - the first report was rather early and this report was rather late to influence the next generation
• Sometimes things need to be left to mature - especially when based on the development of relationships
• Effectiveness and impact can not necessarily be captured in the same evaluation.