

ERF Workshop

“The Socio-Economic Relevance of Research Infrastructures”

Report Parallel Session 4

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The Presentations

- Chair:
 - Helmut Dosch, DESY
- Knowledge/learning spillover to industry
 - *Michel Judkiewicz, EIRMA*
- Best practice on S&T Parks – The Grenoble area – Impact on large-scale Ris
 - *Amal Chabli, CEA-LETI*
- EIRISS – Supporting cohesion between Ris and industry, finding effective measures to support European Industry for RI instrumentation development
 - *Rachael Jack, STFC, UK*
- Spin-offs from European RIs – Some examples
 - *Regina Rochow, Elettra*
- Use of facilities by industry – Light sources as an example
 - *Katja Kroschewski, DESY*

Major Conclusions

- Knowledge/learning spillover to industry
 - *Michel Judkiewicz, EIRMA*
- Traditional distinction between the Dyonisos researcher (fundamental researcher), the Appolo researcher (applied research) and innovation
- Transition from a hierarchical perspective to a model where fundamental research and applied research are interactive components
- “None of us is as smart as all of us”: link between universities, research organisations and the industry and transversal research will become more and more important. All actors contribute to the “society in the making”
- The industry is getting organised globally (World association of industrial research organisations), like : EARTOs (RTD organisations) and EUA (Universities)
- EIRMA: ambition to be the preferred network for European open exchange of best practices in RDI for a sustainable world, across all industrial sectors”
- Responsible partnering between actors having different cultures (*Responsible Partnership Guide*)

Major Conclusions

- Best practices in S&T Parks – The Grenoble Area – Impact on large-scale RIs
 - *Amal Chabli, CEA-LETI*
- How to leverage the outcomes of basic research performed in RIs for the industry?
- Example of Minatech innovation campus (micro- and nano-characterisation): large-scale RIs are essential components in the landscape of the innovation cycles and industrial R&D (access for industrial applications, collaboration on technical developments and devices)
- Limitations
 - Technical level: shutdown of regularly used beamlines, link between demand and supply (how the needs of industry are taken into account)
 - Requirements of industrial development cycle: speed and frequency of access
 - Specific constraints of industry competitiveness: IP management and confidentiality
 - Cost of beam time
- Need for a technological interface for industrial users (“retrievers” are needed)

Major Conclusions

- EIRISS – Supporting cohesion between RIs and industry, finding effective measures to support European Industry for RI instrumentation development
 - *Rachael Jack, STFC, UK*
- Instrumentation of European RIs is a substantial market, but room for optimisation
- Survey of policies, national strategies, sector networks, market study, practices, financial mechanisms supporting instrumentation
- Case studies: SKA, ELI, XFEL, CERN
 - The value of RI industry interaction is recognised by both parties (solutions showstopper technologies, new technologies to market, credibility, know-how and expertise)
 - Barriers: visibility of new opportunities in case of well-established relations with specific companies, new RIs have no industry forum, future technology requirements not mapped
 - Interaction barriers: culture (in-house development, R&D partnerships not part of the RI core mission, high risks of long-term development projects, no awareness of respective capabilities, administrative barriers (capacity to tender, public procurement rules
 - Knowledge transfer: few patents are granted
- Industry survey:
 - Visibility of present and future opportunities
 - Public procurement facilitated
- Financial mechanisms (R&D tax credits and soft loans not useful for companies already in debt, collaborative research schemes useful but IPR leakage issues when large firms are involved)
- Recommendations:
 - Best practice forum + information on public procurement
 - KTT support:: EU helpdesk

Major Conclusions

- Spin-offs from European Research Infrastructures – Some examples
 - *Regina Rochow, Elettra*
- Spin-off companies as a good way to disseminate results for RIs
- Focus on: Swiss Neutronics (PSI spin-off), Dectris (PSI license), Leosphere (LSCE), Soltekture (Helmholtz-Zentrum Berlin), Electrospinning Company (RAL), Novitom (ESRF), Kyma (Elettra), Instrumentation technologies (Elettra, Jefferson Lab & PSI)
- Spin-off companies have activities which are not restricted to the RI host region:
 - Delocalised services
 - Sites in partner countries or third countries
- Sales and interactions:
 - Typically 90% of turnover from international sales
 - Strategic R&D partnerships
 - International knowledge interactions and spill-overs
- RI spin-offs are global players and generate important benefits even outside the RI host region.

Major Conclusions

- Use of facilities by industry – Light sources as an example
 - *Katja Kroschewski, DESY*
- RIs as a black box or white spot on the map for industry (different cultures and objectives)
- Main recommendations from studies (ERID-watch + Gennesys)
 - Fast and easy access to industrial customers
 - Study customer needs
 - Modular fine tuned services, full services, standardisation and reliability
 - Networking and partnerships
 - Suitable marketing mix
- Flexible access and support from synchrotron staff empowers even SMEs to use synchrotrons
- Rapid access for short periods, flexible contractual procedures, liaison office and networking
- Interaction with the industry is a people to people matter
 - Key account managers
 - Individual information and close personal contacts