



Session I.3

What does it mean to conduct experimentally driven research?

Moderator: Prof. Nancy Alonistioti, Univ. of Athens
PM of SELFNET (<https://www.ict-selfnet.eu/>)



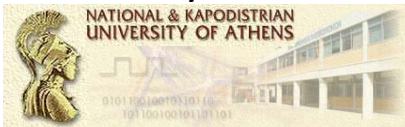
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Starting from own experience...

- In the context of SELFNET many brainstorming sessions have addressed issues related to the experimentation methodology:
 - Prioritisation of use cases for prototyping and experimentation with internal (to the project) test beds
 - Which use cases will be targeted for the European experimentation facilities?
 - At which stage of the project?
 - Should we target the comparison of results between test beds and facilities?
 - How many iterations should be foreseen?
 - What are the metrics or KPIs?
 - Should we target only technical evaluation (scalability, performance etc.) or also evaluation of business sustainability?
 - Which are the most relevant experimentation facilities for our use cases and for the targeted evaluation?
 - How and when should we address the experimental facilities and is there a commitment from the facilities to provide the required resources in the time required by the project?
 -etc..

May be some of the questions will be answered in this session and in session IV.5



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Session Scope

- The experimentally driven research, based on large scale federated experimental infrastructures is quite a challenge. The mere benefits appear to be :
 - The engagement in a validation and assessment loop early in the R&D process. In this way in complex systems, experimentation could be the key for discovery and validation throughout the research process.
 - Potential involvement of end users participating as active testers at an early stage of the R&D cycle. They could become key indicators of several metrics related to the realization of theoretical approaches in tangible real life scenarios.
 - Indicative metrics that could be assessed: the scalability of solutions, performance, usability, robustness and security of the tested functionality.
 - Reduced time to market of tested products could be the imminent outcome of the whole process.
- Relevant topics to be addressed:
 - Experimentation as a methodology to achieve concrete results: where, how, when?
 - The experimentation facilities as a service offered to R&D
 - What are the metrics relevant to experimentations?
 - The impact to standardization
 - Large scale experimentation: requirements and limitations



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Planning of the session

Intro on Experimentation methodology and speakers	Nancy Alonistioti	10 min
Necessity for experimentation from the PPP point of view	Didier Bourse	15 min
Presentation on the methodology issues and how to experiment	Martin May	15 min
How the methodology could facilitate the shorter time to product development	Vania Conan	15 min
Experimentation as a methodology to achieve concrete results: where, how, when	Dimitri Papadimitriou	15 min



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