



## Identification of needs - Research community perspective

Wednesday 28<sup>th</sup> of September 2016  
EU-SOLARIS Final Conference

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The EU-SOLARIS Project is co-funded  
by the European Union

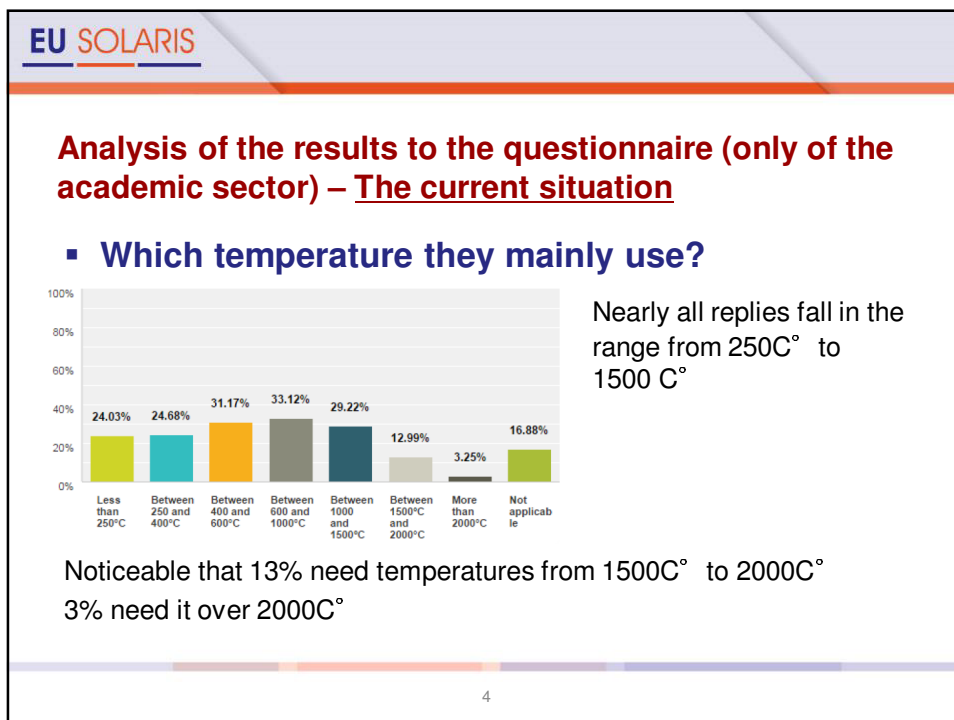
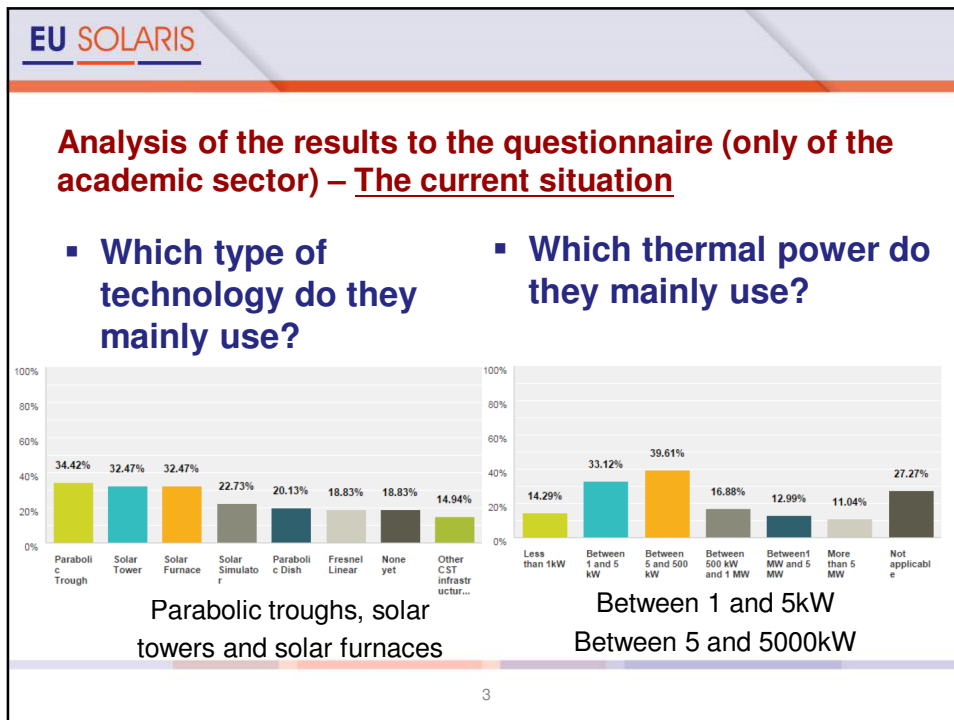
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### How to analyse the user needs for CSP Research Infrastructures in the R&D community?

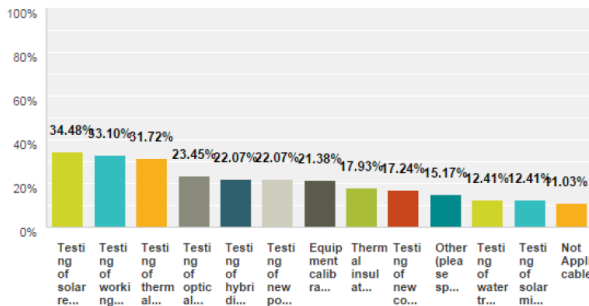
- **A questionnaire was disseminated to the R&D community to gather their needs of high-temperature R&D facilities**
  - 186 replies were gathered
  - 90% from the public sector replied
  - 70% of the replies were users that had already accessed the RIs
- **What did we want to know?**
  - Which kind of technology they use and need?
  - Which kind of temperature/thermal power they use and need?
  - For which topics are they interested in using the RIs?
  - Which services they need?
  - Which access scheme to the RI is best suitable for them (free, partly-free, ...)?
  - Do they need training?

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**Analysis of the results to the questionnaire (only of the academic sector) – Definition of trends and needs**

- All technologies mixed, which cross-cutting activities are needed?

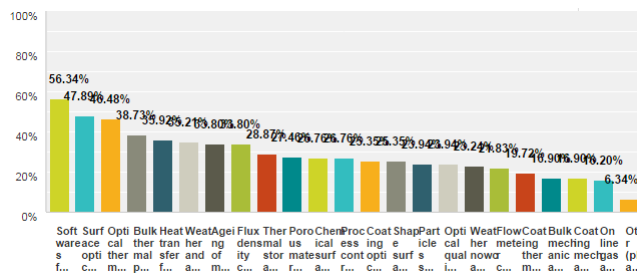


Testing of solar reflectors  
 Testing of working fluids  
 Testing of storage prototypes

In "Other", it is important to note the needs for Solar Fuels and Material synthesis and processing.

**Analysis of the results to the questionnaire (only of the academic sector) – Definition of trends and needs**

- Which type of services they need to have?




The academic sector is mainly interested by optical related services: optical or thermo-optical characterization or measurements; One of the most common replies also was the need for services in softwares for modelling

- Do they need training regarding R&D CSP facilities?  
 72% replied no (reminder 70% of the repliers had already used CSP R&D facilities)

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## Analysis of the results to the questionnaire (only of the academic sector) – The access scheme

- **What are the reasons for not accessing R&D facilities?**  
 First reply : No funding available (12%)  
 Second Reply : Not aware of these possibilities (7%)  
 Most of the replies specified they had already used the facility
- **What was the cost model when accessing the R&D facilities?**  
 45% replied Free Access  
 Funded through EU funds like SFERA II or National grants
- **Are you able to access RIs without external funds?**  
 57% are not able to use the RIs without any external funds like EU funds

 **It is important to maintain a free based access otherwise, the use of the RIs by the public sector would not be possible**

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## Future trends to be taken into consideration when analysing the profile of users accessing the SFERA II project RIs

**Table 8: Profiling of possible future users of EU-SOLARIS**

Type of user	User description	Importance for EU-SOLARIS
<b>User 1</b>	Researcher/industry in materials science	Very high. Materials science experiments are drawn by the high temperatures offered by furnaces. There is a question mark on the long term longevity of this partnership if no more such RIs are built or if alternative experimental settings are found
<b>User 2</b>	Researcher in water treatment and other chemical processes	Medium to low. This group does not require the higher temperatures achieved by concentration, but could form a lasting partnership if RIs offering appropriate conditions are present
<b>User 3</b>	Modeller of STE systems and subsystems	High. Modelling of STE systems however may happen outside the confines of RIs, in a computer simulation environment
<b>User 4</b>	Researchers interested in STE subsystems (e.g. storage, HTFs, mirrors etc.)	Very high. As long as there is interest and sufficient funding in the technology, this group will be always represented
<b>User 5</b>	Researchers interested in hybridisation with other energy sources, grid integration and policy issues	High. This scientific area is poised to grow in importance and hence the researchers working on it, but current RIs and future plans do not have hybridisation as a top priority
<b>User 6</b>	Researchers interested in polygeneration (e.g. desalination, solar cooling, industrial heat etc.)	High. As above, interest will grow. Some RIs are specifically targeting such systems, but still there are few and far between.

 **SFERA II EU funded project that provides free access to R&D users**  
**Annual Access Campaign Open**  
**Deadline to submit : January 2017**

**Thank you for your attention**

Gilles Flamant  
Director of PROMES-CNRS

