



Panel

The top technical challenges
for the next 10 years
(my 3 top challenges)

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AMBER (Assessing Measuring, and Benchmarking Resilience)



Objectives

- Build consensus on **common understanding**, methodologies and practices for resilience assessment;
- **Integrate and coordinate** European research and practice on resilience assessment;
- **Establish** a resilience assessment and benchmarking **research forum** through AMBER web portal;
- Build and maintain a **data repository** to analyze and share resilience measurement data.
- **Foster** the effective transfer of resilience assessment **best practices** to European industry, namely contribute to the adoption of resilience benchmarks by industry;
- **Promote** the proposal of **standards** for resilience assessment and benchmarking;
- Propose a **research agenda** on assessing and benchmarking resiliency of systems and infrastructures.

AMBER (Assessing Measuring, and Benchmarking Resilience)



Objectives

- Build consensus and practices for resilience assessment and benchmarking
- Integrate and coordinate resilience assessment and benchmarking research on resilience assessment and benchmarking
- Establish a resilience forum through resilience assessment and benchmarking research
- Build and maintain resilience measurement and benchmarking research
- Foster the development of resilience practices to resilience assessment and benchmarking adoption
- Promote the proposed standards for resilience assessment and benchmarking
- Propose a **research agenda** on assessing and benchmarking resiliency of systems and infrastructures.

AMBER: www.amber-project.eu.

See the document:

“Preliminary Research Roadmap”

Direct link:

http://www.amber-project.eu/documents/md_207_amber_d3-2.1_preliminaryresearchroadmap_v1.0.pdf

Challenge 1

Metrics, methods, and tools



- Boundaries of the system and abstraction
- What metrics? Just a small number? Specific of a given context?
- What to observe/monitor in the system?
- How to aggregate data collected in order to obtain measures? Blended methods.
- Relative measurements (for comparison, improvement, tuning)
- How to achieve this in a practical way (tools)?

Challenge 2

Validation



- Properties
 - Representativeness
 - Repeatability
 - Reproducibility
 - Portability
 - Scalability
 - ...
- Generalization
- Just being pragmatic is enough?

Challenge 3

Impact and relevance



- Why the research we are doing on dependability and security is not having the same impact on industry and society we see in other areas?
- How to select the challenges and research problems that will increase the impact of our research in the world?
 - Pay attention to the industry
 - Pay attention to the users' needs