

ECHORD

European Clearing House for Open Robotics Development

Florian Röhrbein

CogSys-2012

Academia and industry hand in hand



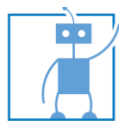
Experiments



Structured Dialogue

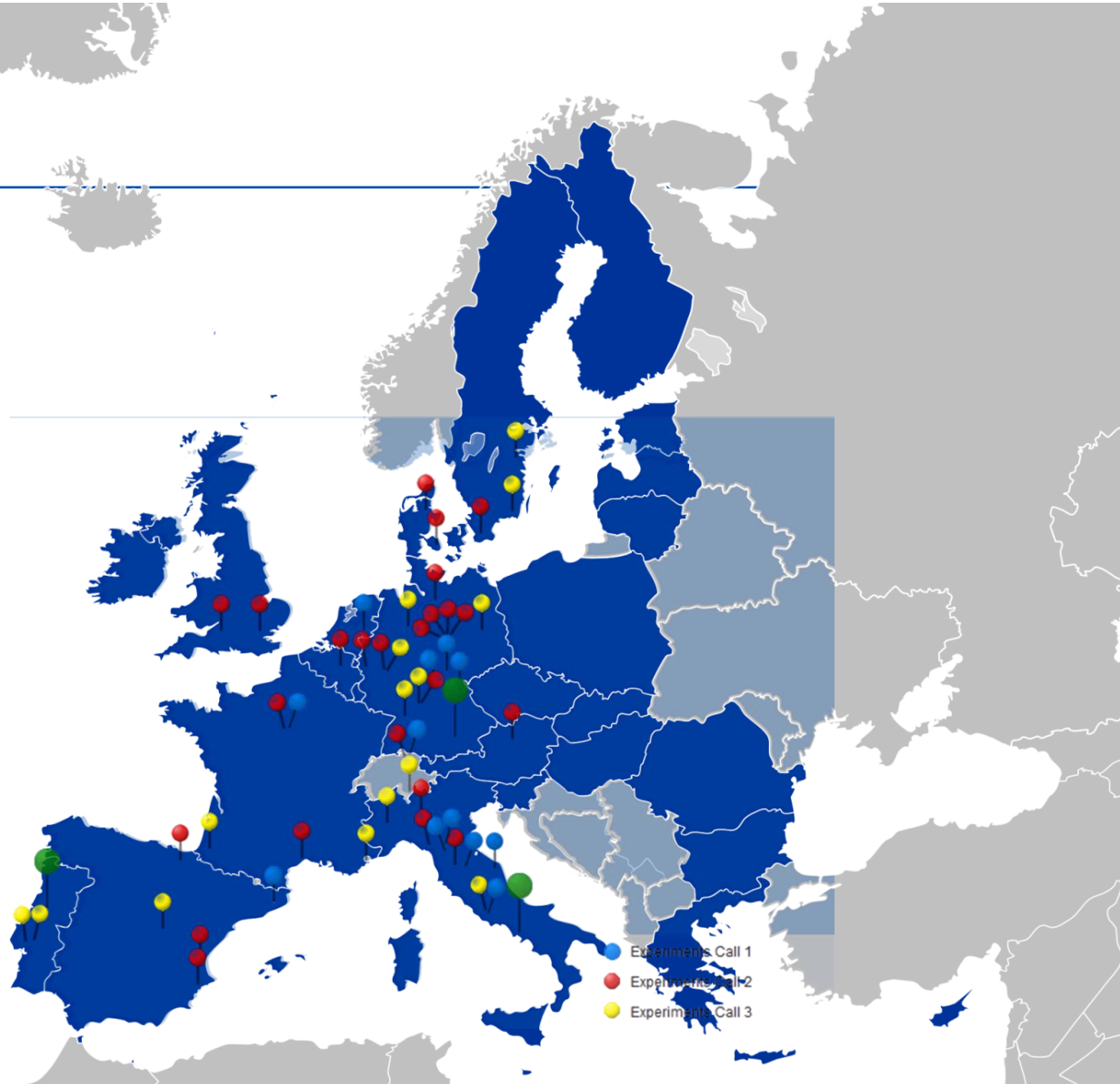
Project outline

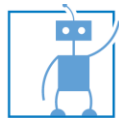
- Funded by DG INFSO, INFSO.E.5: Cognitive Systems, Interaction, Robotics. Head of Unit: Dr. Libor Král
- Duration: 2009-01-01 to 2013-09-30 (to be approved)
- Total budget: approx. 24 M Euro, 19 M Euro funding
- New funding concept: Experiments
 - Actual research done in 51 small-scale “experiments”
 - Duration of the experiments 12 to 18 months
 - Management of calls by ECHORD coordinators, not EC
 - Evaluation of experiment proposals by independent experts
 - Final decision about experiments is with the EC



Who is ECHORD?

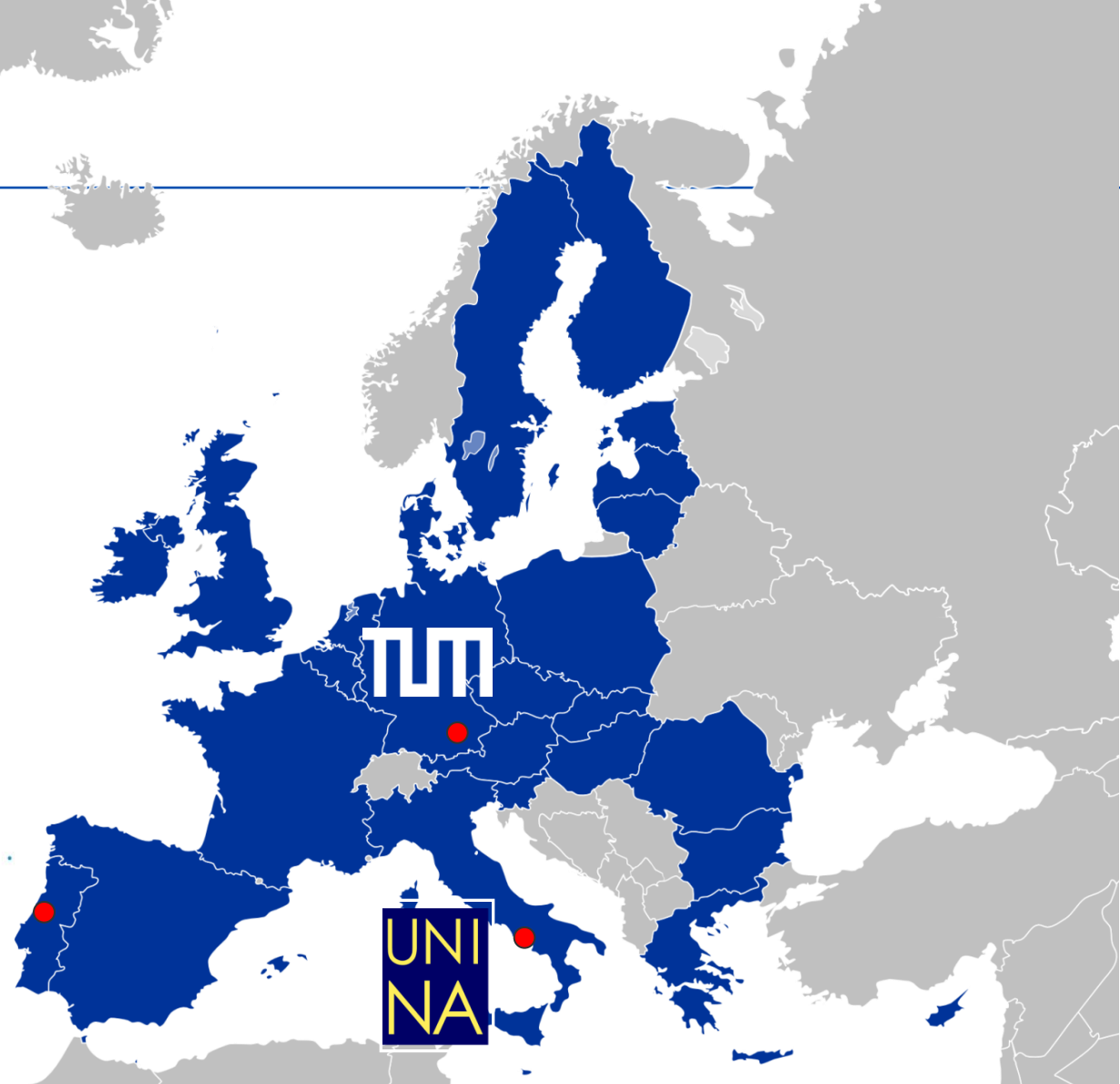
51 experiments
> 100 partners





Who is ECHORD?

Core consortium



ECHORD experiments @CogSys-2012

ActReMa



LearnBiP



KANMAN

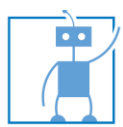


S4R



InterAID





ECHORD Experiments – Funding and operating scheme

3 Equipment quotes (~4 weeks)

41 companies, 317 items

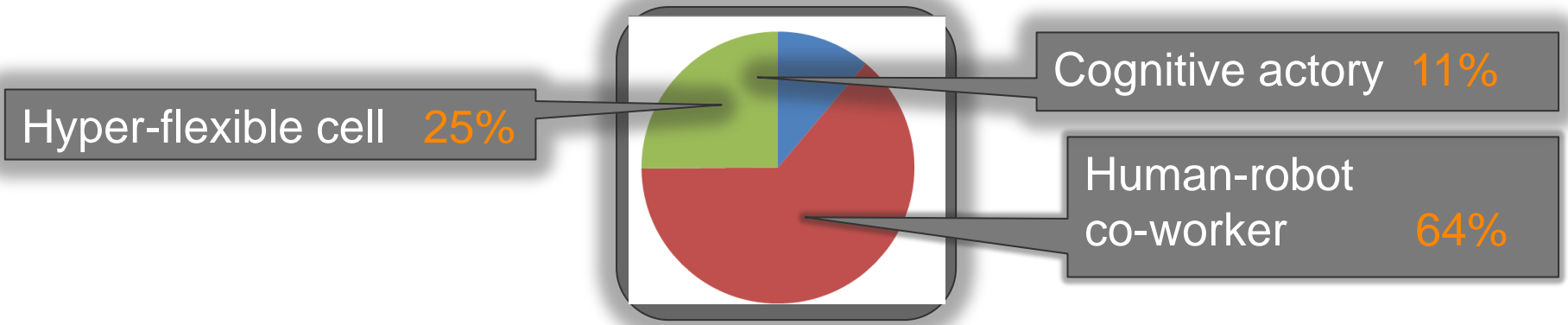
3 Calls for proposals (6–8 weeks)

243 submissions

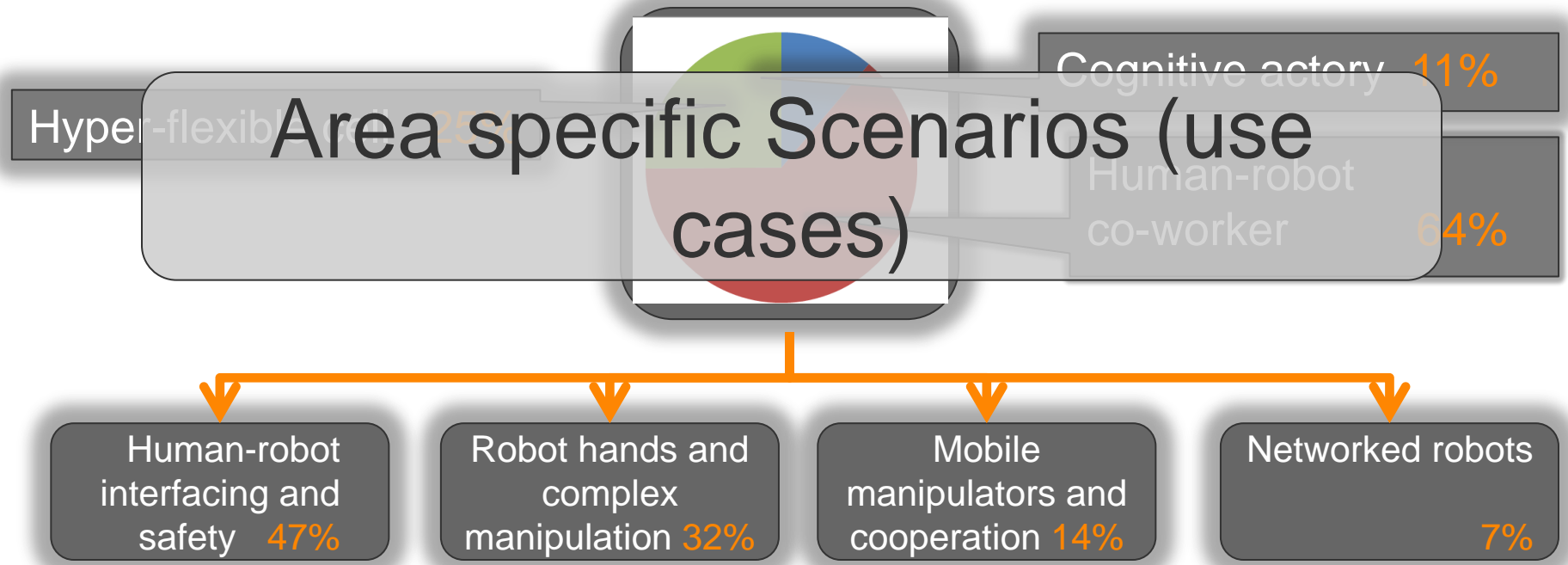
Evaluation (6–7 weeks) 51 selected
and formal approval (several months)

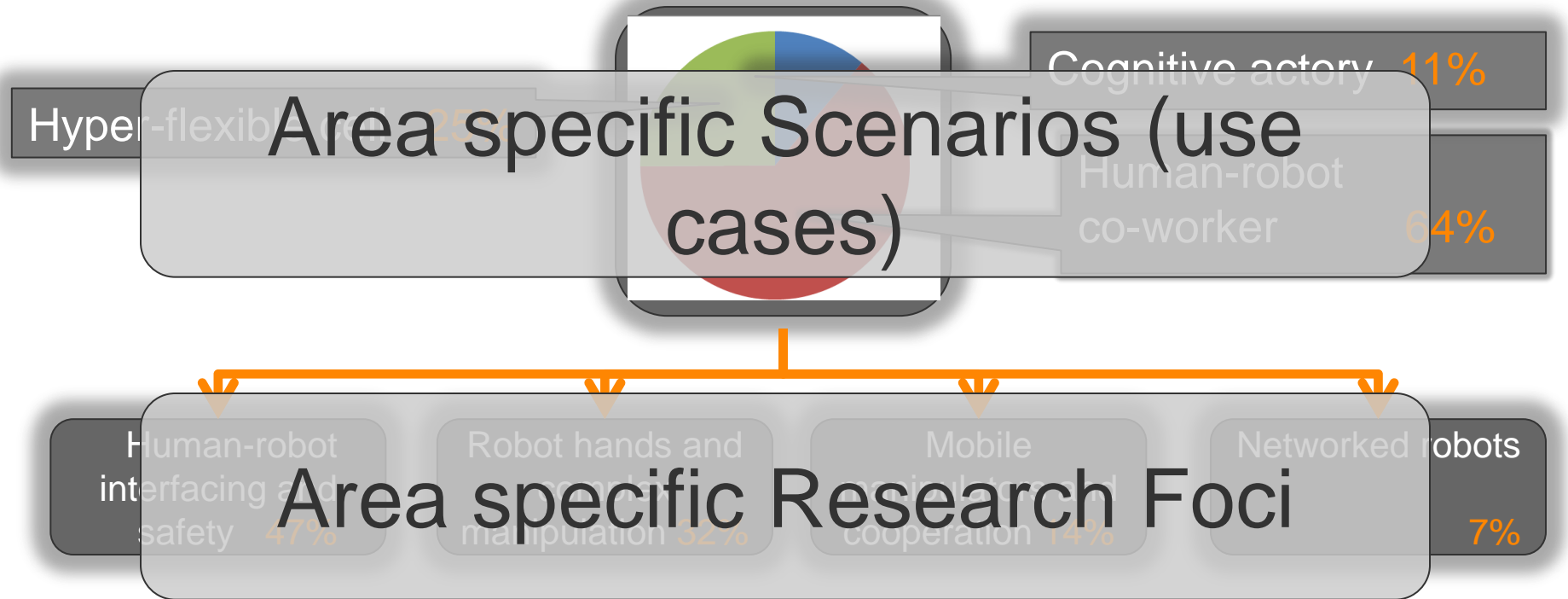
Executing and monitoring (12–18months)

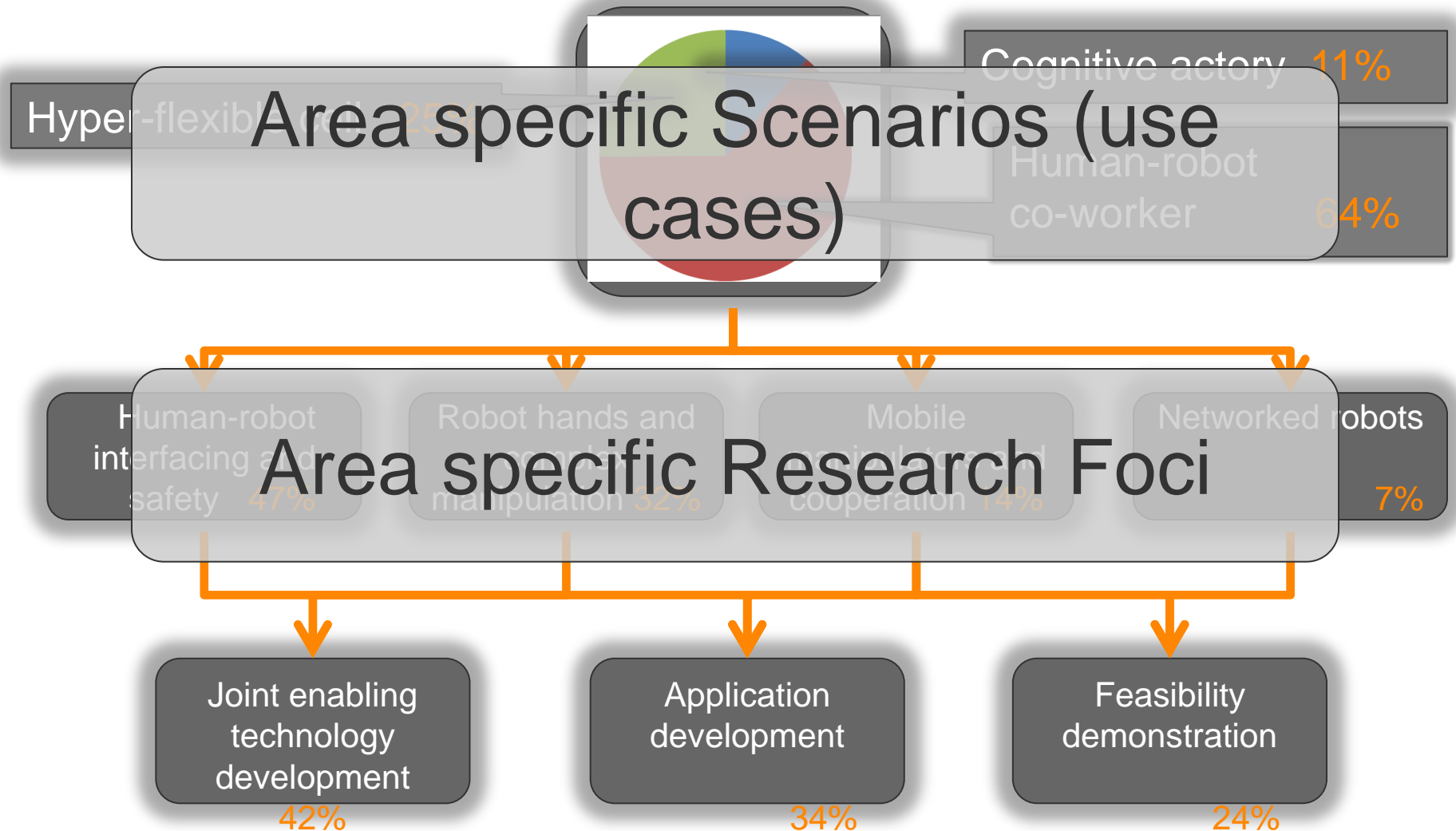
Result collation (8+ weeks)

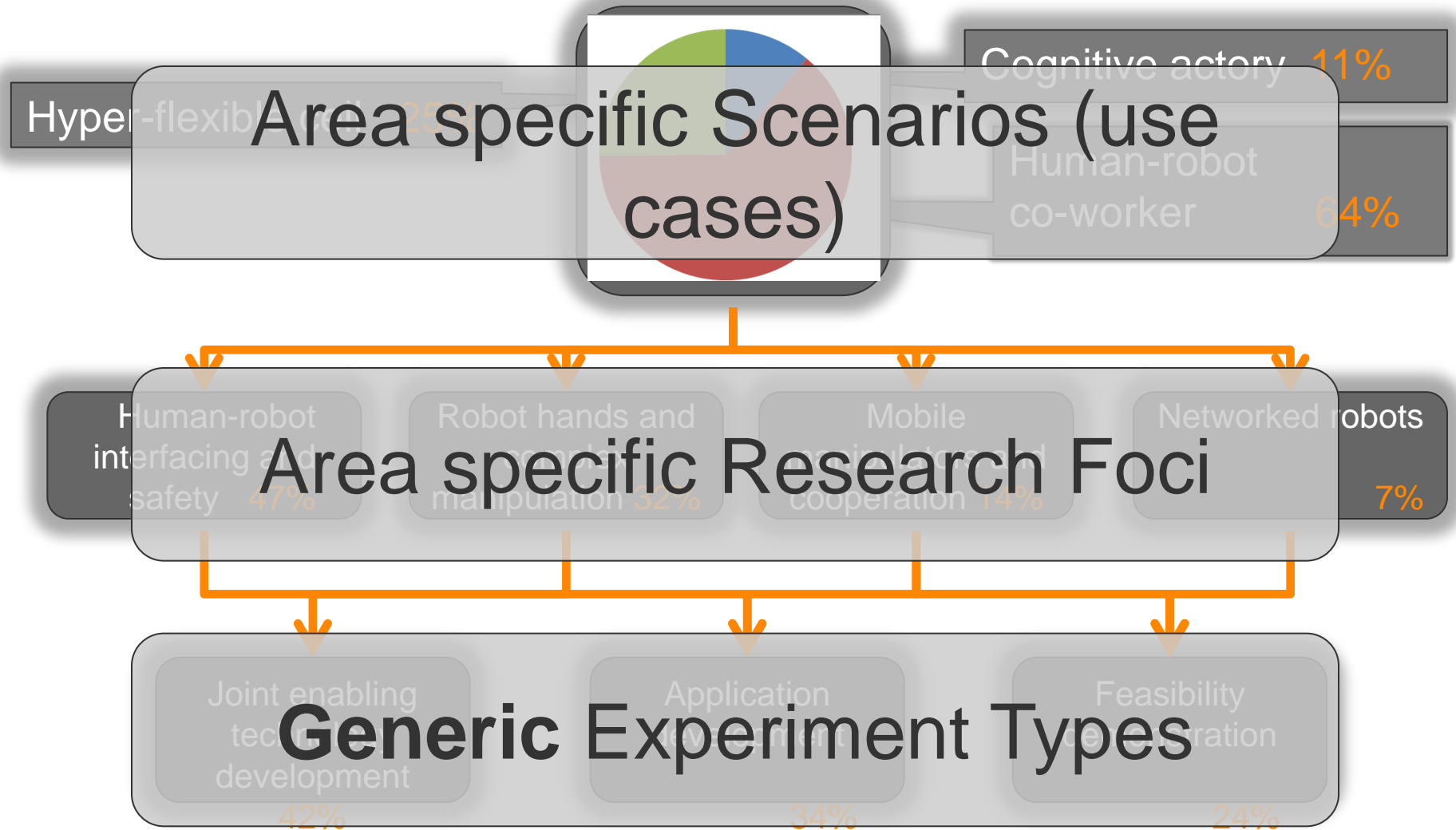












Call	Deadline	Main scenario	Number of eligible proposals	Number of experiments selected
1	Dec 1, 2009	Human-robot co-worker	108	16
2	Apr 30, 2010	Hyper-flexible cell	70	20
3	Oct 1, 2010	Cognitive factory	65	15
	TOTAL		243	51

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post-carnival list of ECHORD experiments:

HipRob

ATROMOBILE

RODIN

GRASPY

ODEUO

REMAV

Execell

Riverwatch

The second pillar: “Structured dialogue”



- Questionnaires
- Workshops
- Literature analysis
- Lab tours
- Experiment monitoring

- Networking and community building
- Knowledge transfer
- White paper on “Knowledge Transfer opportunities between academia and industry in European robotics”

Structured Dialogue – Lab tour USA & Canada



- Current research and long-term trends
- Industry-academia collaboration schemes and IPR handling
- Success factors for start-ups

Structured Dialogue – Lab tour USA & Canada

- Strategic questions
 - What is the state of the art and what are the emerging research trends in (service) robot technologies?
 - What is your long-term vision for robotics research – and where do you see robotics applications in 5, 10, 20 years from now?
 - Are we doing enough to educate our children and students so that they will be able to further advance robotics technology?
- Knowledge transfer
 - What are the instruments and the success factors for knowledge transfer and how can you measure it?
 - What are the most relevant examples for successful knowledge transfer?
 - What does academia need from industry to improve the transfer?

Structured Dialogue – Lab tour USA & Canada

- **Major findings of the experts**

- The time window for service robotics in industry is **now open** – all major laboratories are working on different kinds of applications
- **Platforms** are being used that make it possible to concentrate on application development – not on classical robot development
- The US is pushing very hard to bring technology forward – through DARPA and the **National Robotics Initiative**
- The US is becoming aware of its leading role in manufacturing, and will invest heavily into its **Advanced Manufacturing Program** (US\$ 2 bn)
- The „classical“ areas (elderly care, medical robotics, ...) may not be perceived as spectacular any more, but they are also **pursued with high pressure**
- Europe will need to find an answer to this **rising competition!**

Polls, literature reviews, probing conferences, etc.

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Summary: Motivation of the ECHORD Project

Idea

- Encourage robot manufacturers and research institutions to work together more closely on an operational level
 - Instrument 1: Enable them to get funding for **small projects** (called “experiments”), without much overhead and paperwork
 - Instrument 2: Start a **systematic bidirectional exchange** of views and opinions about the trends, needs and technology developments
- ➔ **Shape European robotics future profile ... by strengthening two-way synergies between academia and industry!**

The ECHORD Project – Feb 2012

- Experiments are successfully underway, see poster session for some first results!
- Focus now shifts more to structured dialogue.
- ECHORD is developing into an attractive and useful platform for marketing and for presenting European technology to players in the USA and in Asia.

