



# Future and Emerging Technologies



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European Commission - DG CONNECT  
Excellence in Science

# FET IN FP7

*Pathfinding future ICT*

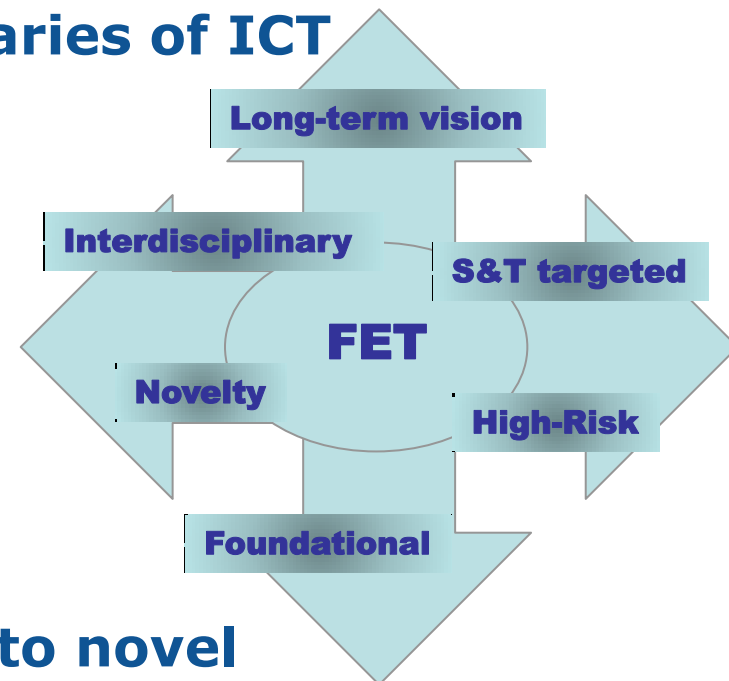
## Establishing new foundations for future ICT

### Redefines the conventional boundaries of ICT

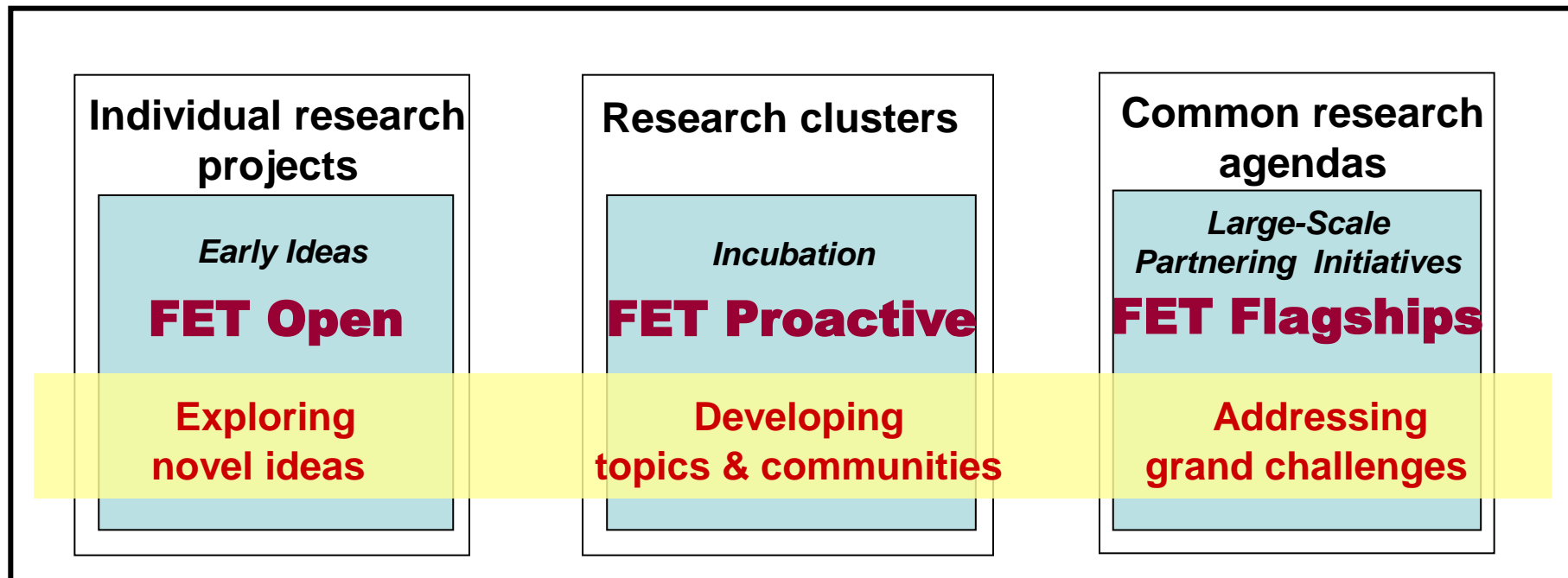
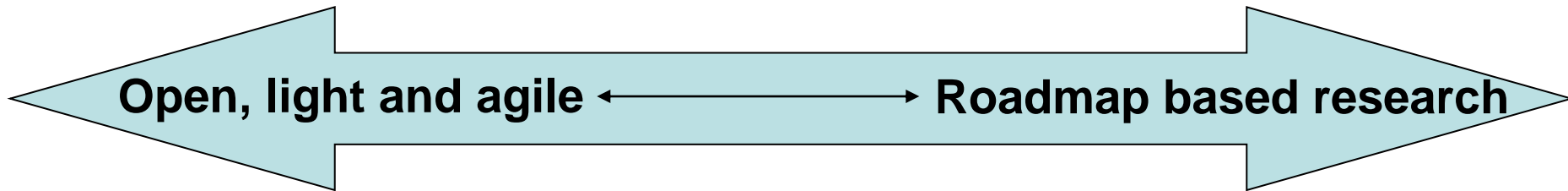
- Venturing into uncharted territories
- Relying on fresh synergies, cross-pollination and convergence with different scientific disciplines

E.g. Biology, chemistry, nano- and molecular science, neuro- and cognitive science, ethology, social science, economics, including the arts and humanities

**Nurture early proofs-of-concept into novel directions for mainstream research and innovation**



## FET – three complementary approaches ('schemes')



## FET Open, an incubator for radically new ideas for future technologies

*New and visionary ideas with long-term impact on ICT*

- ... **come from anywhere, from anybody and at anytime**
- ... **hard to find**
- ... **fragile and easy to shoot down**
- ... **hard to do and take time to incubate**
- ... **require an open and transdisciplinary research atmosphere**

***Needs a specific approach...***



- **FET-Open call**, a long history of more than 20 years.

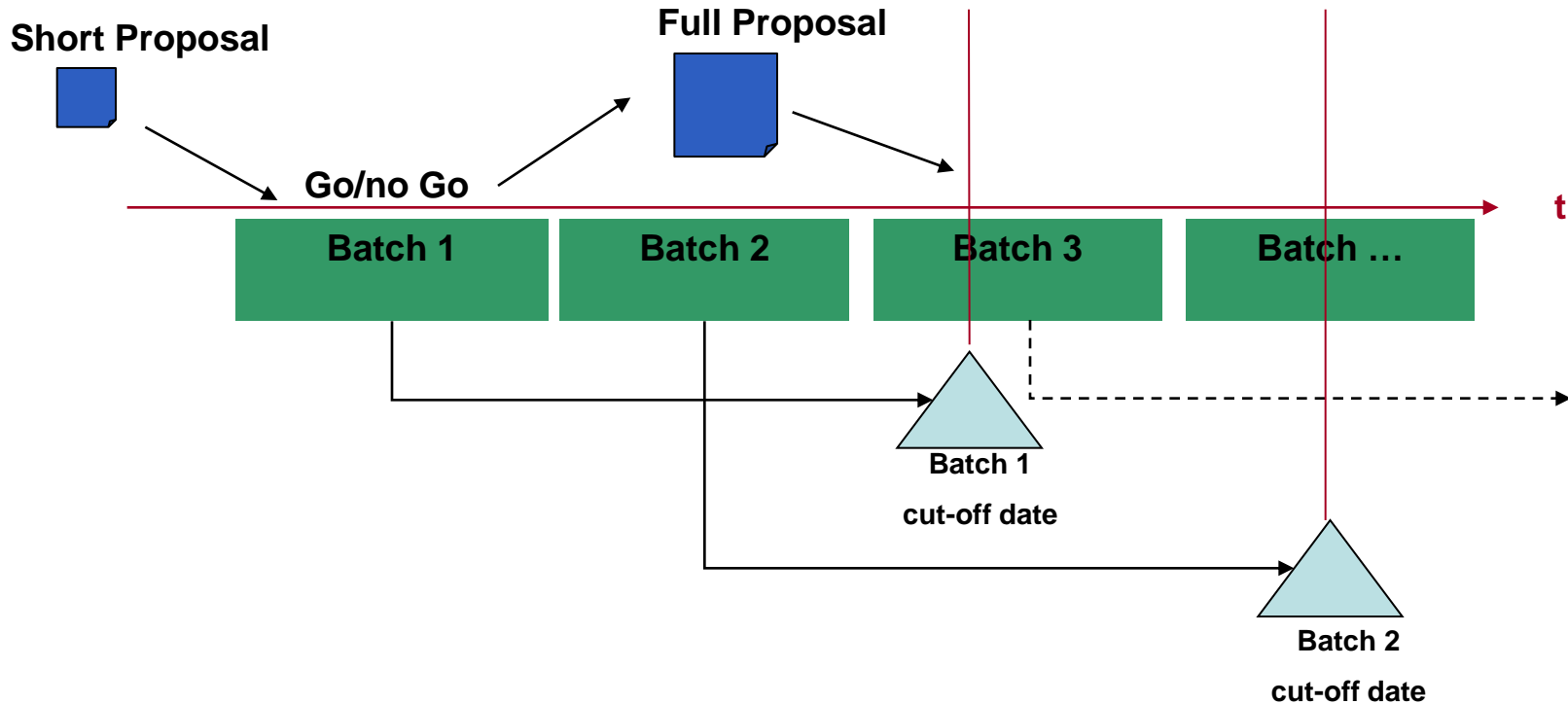
- **Light, topic-agnostic and deadline-free scheme**
- **Continuously open 24/7**
- **2-steps submission and evaluation**

Step 1: 5 pages 'short' proposal, with double-blind evaluation of S&T

Step 2: 'full' proposal

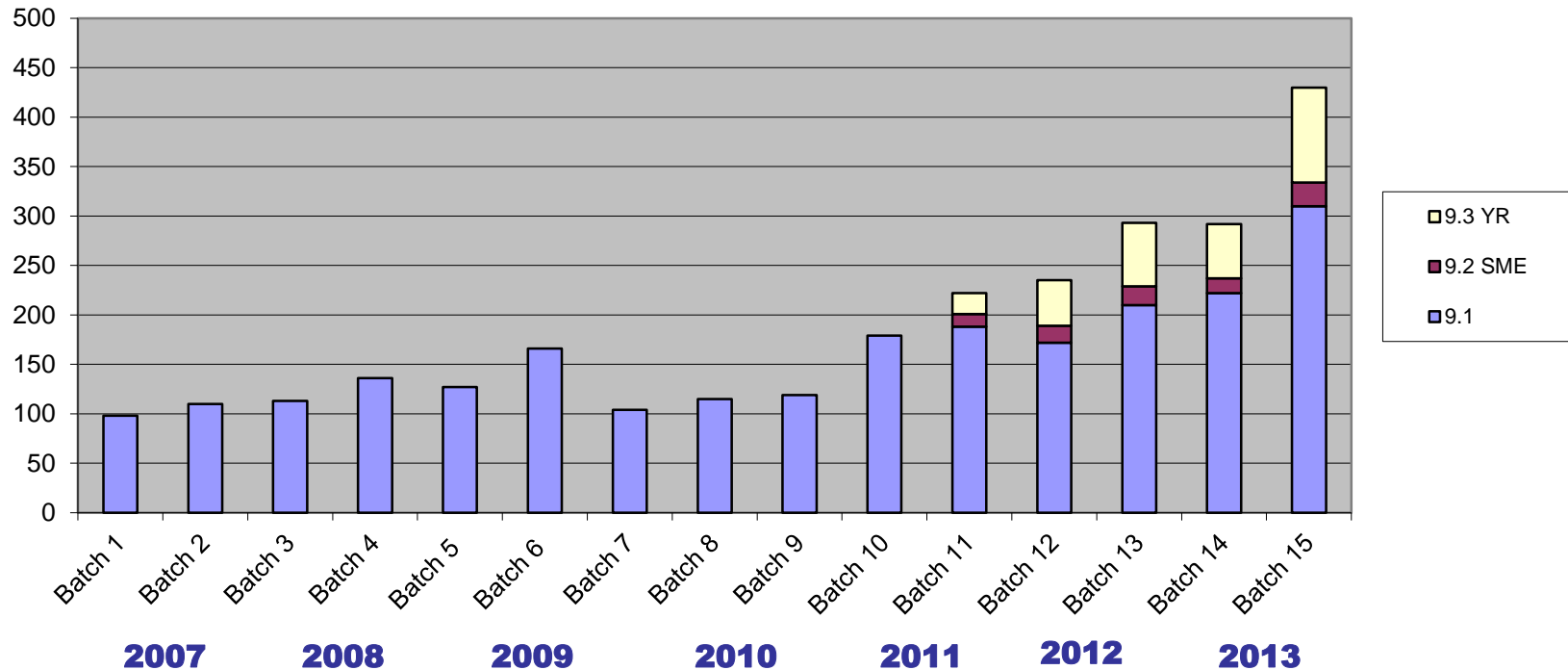
- **FET-Open Xtrack call**, a pilot to become lighter and faster

# How does operate the FET Open continuous call?



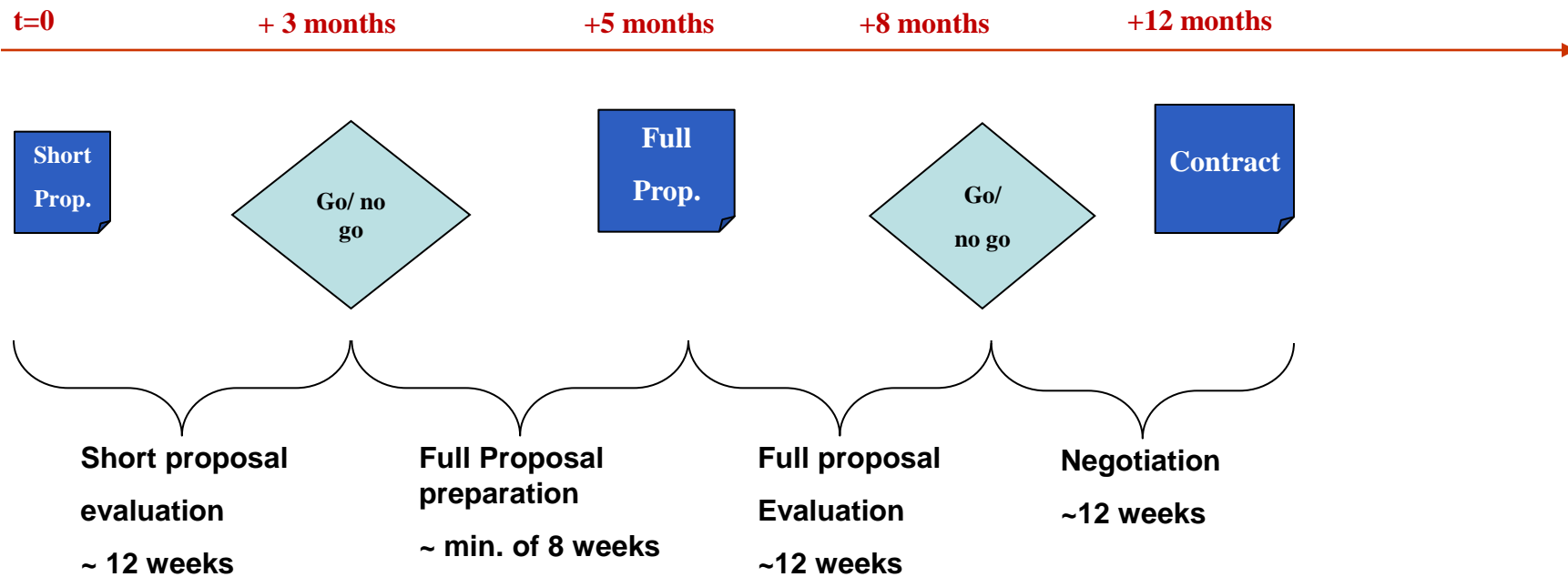
# FET-Open call overview

**~3000 short proposals received, ~2 per day in the last years.**





# Timeline



- **80% fails at short stage and get feedback within 3 months**
- **40% of the 'full' proposals submitted are funded**

# FET Open in FP7 141 Funded projects



**Evolutionary microfluidix**

**Bacterial Computing with Engineered Populations**

**Artificial Wet Neuronal Networks from Compartmentalised Excitable Chemical Media**

**Innovative Robotic Artefacts Inspired by Plant Roots for Soil Monitoring**

**Enhance environmental awareness through social information technologies**

**A closed-loop neural prosthesis for dizziness suppression**

**ICT challenges of mineral extraction under extreme geo-environmental conditions**

**Optogenetic Neural stimulation platform**

**A theoretical framework for swarms of GRN-controlled agents which display adaptive tissue-like organisation**

**Body on a Chip**

**Hyper Interaction Viability Experiments**

**Social Interaction and Entrainment using Music PeRformance Experimentation**

**Curved Artificial Compound Eyes**

**Similarity-Based Pattern Analysis and Recognition**

**Linking biological and artificial neuronal assemblies to restore lost brain functions: towards the design of innovative bi-directional neuroprostheses**

**Electronic Chemical Cell**

# FET-Open Xtrack- What is it?

*Keep the best of FET-Open but...*

*Get lighter*

- **“light end to end process” for proposers**

*Get faster*

- **Reduce time from idea to contract**

*Get more robust*

- **Combine internal scalability with high quality review**

# FET-Open Xtrack

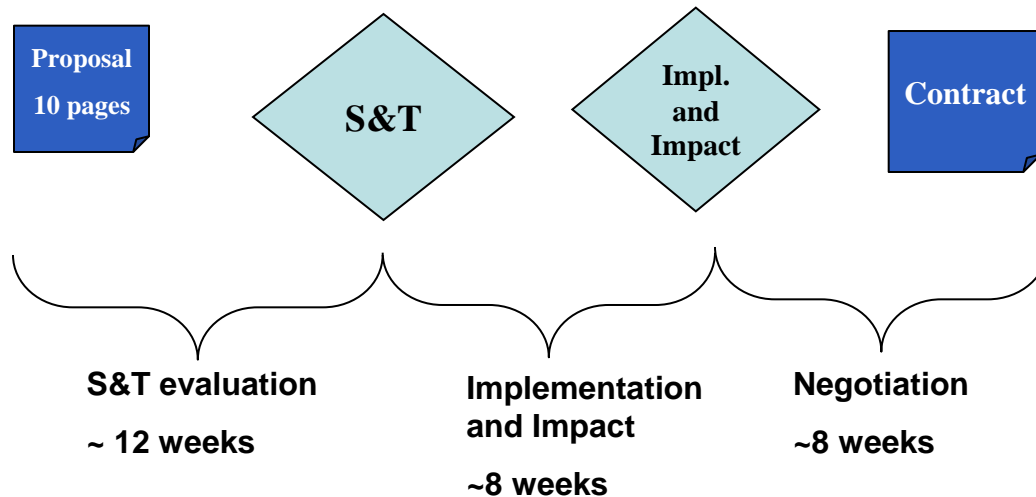
t=0

+ 3 months

+5 months

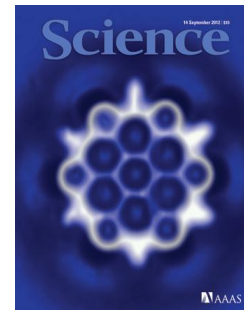
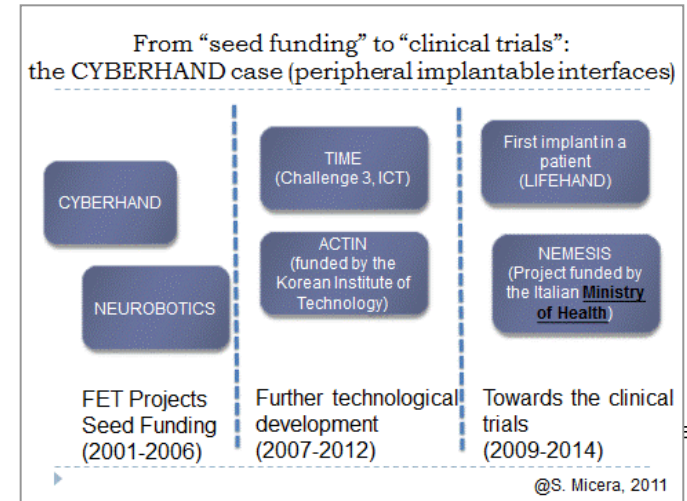
+7 months

+12 months

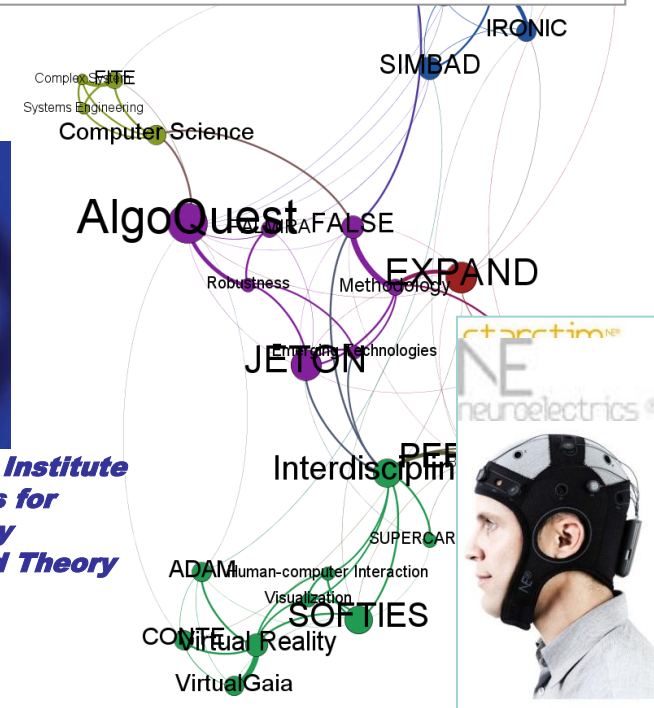


- **10 Pages proposals**
- **One step submission, two stage evaluation**
- **320 proposals received (currently in evaluation)**
- **80% expected to fail at S&T stage**

- + Popular FET-hallmark scheme
- + Numerous scientific and technological success stories
- + A source of new directions and early signals for FET pro-active
- + Attracts new disciplines and actors, including many young ones and SMEs
- + Largely academic, with some high-tech industry and SME
- + Highly competitive



**2012 Foresight Institute Feynman Prizes for Nanotechnology Experiment and Theory**



# Thanks for your attention!



[http://cordis.europa.eu/fp7/ict/programme/fet\\_en.html](http://cordis.europa.eu/fp7/ict/programme/fet_en.html)