H2020
Future and Emerging Technologies (FET)
FWO-FNRS Workshop

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Future and Emerging Technologies
European Commission
FET mission

- To turn Europe's excellent science base into a competitive advantage by uncovering radically new technological possibilities
- To turn Europe into the best place for collaborative research and innovation in future and emerging technologies

New Knowledge

New technologies and their applications
About FET: from FP7 to H2020

Different initiatives with shared values

- Proactive top-down – developing topics and communities
- OPEN bottom-up – exploring Flagships large scale – addressing grand scientific challenges
- Foundational
- Long-term visionary
- Collaborative
- High risk
- Technological innovation
- Across disciplines
Call FET-Open: novel ideas for radically new technologies

- 'Open is open'
  - All technologies, no thematic restriction
- FET gatekeepers define the kind of research that FET is looking for
  - Scope defined by the 6 gatekeepers
  - Bottom-up, but targeted - not blue sky research
  - Collaborative research

Project size: 2 to 4M€
- 1 step submission
- 16 pages proposal (not anonymous)

<table>
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<tr>
<th>Deadlines</th>
<th>30/09/2014</th>
<th>31/03/2015</th>
<th>29/09/2015</th>
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<tr>
<td>Budget</td>
<td>77 M€</td>
<td>38,5 M€</td>
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**Long-term vision**: a new, original or radical long-term vision of technology-enabled possibilities going far beyond the state of the art

**Breakthrough S&T target**: scientifically ambitious and technologically concrete breakthroughs plausibly attainable within the life-time of the project.

**Foundational**: the breakthroughs must be foundational in the sense that they can establish a basis for a new line of technology not currently anticipated.

**Novelty**: new ideas and concepts, rather than the application or incremental refinement of existing ones.

**High-risk**: the potential of a new technological direction depends on a whole range of factors that cannot be apprehended from a single disciplinary viewpoint.

- This inherent high-risk has to be countered by a strongly interdisciplinary research approach, where needed expanding well beyond the strictly technological realm.

**Interdisciplinary**: the proposed collaborations must go beyond current mainstream collaboration configurations in joint S&T research, and must aim to advance different scientific and technological disciplines together and in synergy towards a breakthrough.
Building on FET interdisciplinary research

- biorobotic prosthesis
- algorithms and software
- implant surgery
- clinical and neurophysical protocols

Restored real-time sensory feeling

Nebias-Project.eu

Example
From science to future technologies
FET-Open RIA, first batch WP2014-15:
640 eligible proposals, 77M€

~24 projects to be retained for funding

- Energy Transport Environment: 120
- Bio-Robotics and HCI: 109
- Electronics Telcom Optics Hardware Sensors Devices: 94
- Computer Science Bioinformatics Complexity Data Mining: 68
- Nano scale science Quantum Physics Astrophysics: 63
- Materials Chemistry: 78

In evaluation
From now on…

- **Be ambitious, follow your 'dream' and have fun**
  - Your proposal is just a starting point
  - Don't write it for 'us', but for people like you
  - Deliver what you want or need, not what you think 'we' want

- **Consortium as embryonic ecosystem**
  - There are no hidden expectations from our side
  - No cosmetic roles – keep it simple
  - Work with the best (don't just read their books)
  - Novelty probably starts here

- **Collaborate, collaborate, collaborate...**
  - Write your proposal together
  - Collaboration driven by joint goals and mutual learning
  - Explore new ways of working/learning together

- **Communicate**
  - Scientific publications
  - Social network, active presence in the media, engage beyond scientific community
The 'FET Spirit' in 12 paradoxes

'Excellence' in EU-funded research

- Publish
- Curiosity
- Solid methods
- Disciplinary focus
- Do it for Europe
- Concrete results
- Learn
- Be responsible
- Work with the best
- Scientific excellence
- Work hard
- Persevere

'Excellence' in FET research is also...

- Influence
- Be a rebel
- Creative approaches
- Involve the young
- Cross boundaries
- Question excellence
- Do it for yourself
- Have fun
- Change
- Broad vision
Thank you for your attention!

FET in H2020 website:

Participant portal:

FET current Work Programme call text:

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