Horizon 2020 – R&I Opportunities:
A view to the Internet of Things

Georgios I. Papadakis
H2020 National Contact Point – ICT & FET

This slideset available from: www.ictic.org/ee.html

Innovate UK

‘The Internet of Things, The future, The opportunities’
Digital 2016 - Newport, Wales - 6th June 2016
Outline

• H2020 Intro and Types of ‘Actions’
• LEIT-ICT Opportunity 2016-2017
• Internet of Things: R&I opportunities in LEIT-ICT
• Internet of Things across H2020
• IoT in the Digital Single Market (DSM)
• Towards H2020 WP 2018-2020
Horizon 2020 Funding Fundamentals

The Big Picture

• Project proposals addressing Research and/or Innovation
• Involving Partners from Multiple Countries
  – At least 3 legal entities (special cases exist)
• On Topics identified by the Commission’s Workprogramme
• In response to specific Calls for Proposals (highly competitive)
• Projects (a.k.a. Actions) receiving a Grant
• By means of a Grant Agreement with the European Commission
• Setting the framework to collaborate via a Consortium Agreement
• Fulfill Objectives and deliver Impact against set measures
Horizon 2020 – The 3 Pillars

**Societal Challenges**
1. Health, demographic change and wellbeing
2. Food security, sustainable agriculture, bio-based economy
3. Secure, clean and efficient energy
4. Smart, green and integrated transport
5. Climate action, resource efficiency and raw materials
6. Inclusive, innovative and reflective societies
7. Secure Societies

**Industrial Leadership**
- Leadership in Enabling & Industrial Technologies (LEIT)
  - ICT
  - Nanotech., Materials, Manuf. & Processing
  - Biotechnology
  - Space
- Access to risk finance
- Innovation in SMEs

**Excellent Science**
- Frontier research (ERC)
- Future and Emerging Technologies (FET)
- Skills and career development (Marie Skłodowska Curie)
- Research infrastructures (incl. e-infrastructures)
H2020 across the R&I Pathway

Excellent Science
- Basic Research
- Applied Research
- Technology Development
- Pilot activities

Industrial Leadership

Societal Challenges

Market Uptake/Deployment

Large scale demo/validation
What sort of Project??
H2020 Actions* supported by Grants

• Research and Innovation actions (RIA)
• Innovation actions (IA)
• Coordination and support actions (CSA)
• SME instrument
• Fast Track to Innovation (FTI) Pilot - IA variant
• Pre-commercial procurement (PCP) Cofund Public procurement of innovative solutions (PPI) Cofund
• ERA-NET Cofund
• ...

• “Cascading grants”* - conditioned on RIA or IA

H2020 Actions

- Basic Research
- Applied Research
- Technology Development
- Pilot activities
- Large scale demo/validation
- Market Uptake/Deployment

Research & Innovation Actions (RIA)

Innovation Actions (IA)

SME Instrument

Technology Readiness Levels* (TRLs)

The ICT Opportunity 2016-2017
### ICT in Industrial Leadership 2016-2017

<table>
<thead>
<tr>
<th>1. <strong>A new generation of components and systems</strong></th>
<th>M€</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Cyber Physical Systems, TOLAE, Smart System Integration, Smart Anything Everywhere</td>
<td>84</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. <strong>Advanced Computing and Cloud Computing</strong></th>
<th>M€</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Customised and low power computing systems, Cloud Computing</td>
<td>71</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. <strong>Future Internet</strong></th>
<th>M€</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 5G PPP Topics: 5G Phase 2 and convergent technologies, Beyond 5G, Software Technologies, Collective Awareness Platforms, Net Innovation Initiative, FIRE+</td>
<td>253.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. <strong>Content</strong></th>
<th>M€</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Big-Data PPP Topics, Media and content, Tools and technology transfer for Creative Industries, Learning and skills, User Interfaces, Gaming and gamification</td>
<td>351</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. <strong>Robotics and Autonomous Systems</strong></th>
<th>M€</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Advanced Capabilities research and take-up, System abilities, Pilots, SME-based research and benchmarks, Safety certification, Robots in smart cities, Competition</td>
<td>157</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. <strong>ICT Key Enabling Technologies</strong></th>
<th>M€</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Micro/nano-electronics technologies, Photonics</td>
<td>176</td>
</tr>
</tbody>
</table>

**Innovation and Entrepreneurship support**
- Startup Europe for Growth, Innovation Radar support, Innovation Procurement

**Responsibility and Creativity**
- Linking SSH with ICT, Linking Technology & Creativity

**International Cooperation Activities**
- China, Mexico, LAMICs

**Call - EU-Japan Joint**
- 5G Networks, IoT/Cloud/Big Data platforms in social app contexts, Testbeds on ICN

**Call - EU-Brazil Joint**
- Cloud Computing, IoT Pilots

**Call - EU-South Korea Joint**
- 5G, IoT, Federated Cloud for mobile services
## ICT Call Dates 2016-2017

<table>
<thead>
<tr>
<th>Call</th>
<th>Descriptor</th>
<th>Open</th>
<th>Close</th>
<th>M€ Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICT</td>
<td>International</td>
<td>20-Oct-2015</td>
<td>19-Jan-2016</td>
<td>2.8</td>
</tr>
<tr>
<td>ICT</td>
<td>Main 2016</td>
<td>20-Oct-2015</td>
<td>12-Apr-2016</td>
<td>460.7</td>
</tr>
<tr>
<td>ICT</td>
<td>Smart Anything Everywhere Initiative, 5G, Media &amp; Content</td>
<td>10-May-2016</td>
<td>08-Nov-2016</td>
<td>230.5</td>
</tr>
<tr>
<td>ICT</td>
<td>Main 2017</td>
<td>08-Dec-2016</td>
<td>25-Apr-2017</td>
<td>374</td>
</tr>
<tr>
<td>Joint EUB Japan</td>
<td></td>
<td>20-Oct-2015</td>
<td>19-Jan-2016</td>
<td>7</td>
</tr>
<tr>
<td>Joint EUJ Brazil</td>
<td></td>
<td>08-Nov-2016</td>
<td>14-Mar-2017</td>
<td>7</td>
</tr>
<tr>
<td>Joint EUSK South Korea</td>
<td></td>
<td>20-Oct-2015</td>
<td>19-Jan-2016</td>
<td>6</td>
</tr>
</tbody>
</table>
What about the ‘Internet of Things’ in ICT WP 2016-17?
Some context first...
IoT Reference Architecture Framework (IoT RAF)
ICT-30-2015: Internet of Things and Platforms for Connected Smart Objects (RIA, CSA)

- Interoperability framework
- Middleware & interworking APIs
- Use cases: Smart home/office, campus, stadium, urban transport, yachting

- Adaptive & Modular HW/SW Gateway
- Build Apps, Share Collect/Manage Data
- Pilots on self-tracking, env/agri monitoring, smart retail etc.

- Standardised open APIs for horizontal interoperability
- New forms of services’ co-creation
- Security, privacy & trust framework
- 3 Pilots in cities/regions - PoC of SoS platform(s)

- Condition-dependent Functional Codes (FunCodes):
  Inks, ID mgmt., printing, reading and FC-scanner
- Interoperable Platform and tools
- Pilot installations in the retail sector
  [http://www.tagitsmart.eu/](http://www.tagitsmart.eu/)

- Open cross-layer Interoperability framework
- Methodology with tools and APIs
- Use cases: Port activity management, health monitoring + cross-domain use case and field trial
  [http://www.inter-iot-project.eu/](http://www.inter-iot-project.eu/)

- Platform for IoT infrastructures
- Provide ‘Interoperability as a Service’
- Pilot use cases: Smart grid & parking, Smart energy neighbourhood, eHealth at Home

- Open ‘BIG IoT’ API and the marketplace for applications & services
- 3 Regional Pilots & Use cases in ‘smart mobility & road infrastructure
  [http://big-iot.eu/](http://big-iot.eu/)

- Interoperability framework
- Methodology with tools and APIs
- Use cases: Port activity management, health monitoring + cross-domain use case and field trial
  [http://www.inter-iot-project.eu/](http://www.inter-iot-project.eu/)

Research & Innovation Actions

[Coordination & Support Actions](http://iot-epi.eu/)
[UNIFY - IoT](http://iot-epi.eu/)
ICT-30-2015: Internet of Things and Platforms for Connected Smart Objects (RIA, CSA)

- Interoperability framework
- Middleware & interworking APIs
- Use cases: Smart home/office, campus, stadium, urban transport
  [https://www.symboiot.eu](https://www.symboiot.eu)

- Adaptive & Modular HW/SW Gateway
- Build Apps, Share Collect/Manage Data
- Pilots on self-tracking, env/agri monitoring, smart retail etc.
  [http://agile-iot.eu](http://agile-iot.eu)

- Condition-dependent Functional Codes (FunCodes):
  Inks, ID mgmt., printing, reading and FC-scanner
- Interoperable Platform and tools
- Pilot installations in the retail sector
  [http://www.tagitsmart.eu](http://www.tagitsmart.eu)

Open Calls for new partners (third parties) are expected in 2017

- Interoperability framework
- Methodology with tools and APIs
- Use cases: Port activity management, health monitoring and field trial
  [http://www.interiot-project.eu/](http://www.interiot-project.eu/)

- Interoperability framework
- Use cases: Port activity management, health monitoring and field trial
  [http://www.tagitsmart.eu](http://www.tagitsmart.eu)

- Open cross-layer Interoperability framework
- Open ‘BIG IoT’ API and the marketplace for applications & services
- 3 Regional Pilots & Use cases in ‘smart mobility & road infrastructure
  [http://big-iot.eu](http://big-iot.eu)

- Standardised open APIs for horizontal interoperability
- New forms of services’ co-creation
- Security, privacy & trust framework
- 3 Pilots in cities/regions - PoC of SoS platform(s)

- Open ‘BIG IoT’ API and the marketplace for applications & services
- Pilot use cases: Smart grid & parking, Smart energy neighbourhood, eHealth at Home

- Condition-dependent Functional Codes (FunCodes):
  Inks, ID mgmt., printing, reading and FC-scanner
- Interoperable Platform and tools
- Pilot installations in the retail sector
  [http://www.tagitsmart.eu](http://www.tagitsmart.eu)

Research & Innovation Actions

Coordination & Support Actions

- [http://iot-epi.eu](http://iot-epi.eu)
- [http://iot-epi.eu](http://iot-epi.eu)
ICT WP 2016-17
IoT and related topics - closed Jan/Apr 2016

• A new generation of components and systems
  – ICT-01-2016: Smart Cyber Physical Systems >> [RIA, CSA] €20 M
  – ICT-03-2016: Smart System Integration (SSI) >> [RIA, CSA] €18.5 M

• Future Internet
  – ICT-10-2016: Software Technologies >> [RIA] €31 M
  – ICT-12-2016: Net Innovation Initiative >> [IA, RIA, CSA] €20.2 M

• Robotics and Autonomous Systems
  – ICT-26-2016: System abilities, development & pilot installations >> [RIA, IA] €42 M

• International Cooperation Activities

• EU-{Japan, South Korea} Joint Calls
  – EUJ-02-2016: IoT/Cloud/Big Data platform in social application contexts >> [RIA] €2.7 M
  – EUK-02-2016: IoT joint research >> [RIA] €1.5 M
ICT WP 2016-17
IoT and related topics - forthcoming

• A new generation of components and systems
    [Deadline 8th November 2016]

• Advanced Computing and Cloud Computing
    [Deadline 25th April 2017]

• Future Internet
    [Deadline 25th April 2017]

• ICT Key Enabling Technologies
    [Deadline 25th April 2017]

• EU-Brazil Joint Call
  – EUB-02-2017: IoT Pilots >> [RIA] €4.5 M
    [Deadline 14th March 2017]
Is that all for IoT?
IoT beyond LEIT-ICT...

**Societal Challenges**
- Health, demographic change and wellbeing
- Food security, sustainable agriculture, bio-based economy
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, resource efficiency and raw materials
- Inclusive, innovative and reflective societies
- Secure Societies

**Industrial Leadership**
- Leadership in Enabling & Industrial Technologies (LEIT)
  - ICT
  - Nanotech., Materials, Manuf. & Processing
  - Biotechnology
  - Space
- Access to risk finance
- Innovation in SMEs (ODI under ICT)

**Excellent Science**
- Frontier research (ERC)
- Future and Emerging Technologies (FET)
- Skills and career development (Marie Skłodowska Curie)
- Research infrastructures (incl. e-infrastructures)

**Cross Cutting Activities (Focus Areas) 2016-17**
- Industry 2020 in the Circular Economy
- Internet of Things
- Smart and Sustainable Cities

A guide to ICT-related activities in WP2016-17:

H2020 WP chapter 17
IoT Focus Area 2016-217
IoT-01 & IoT-02 closed Apr 2016

To foster the take-up of IoT in Europe and to enable the emergence of IoT ecosystems supported by open technologies and platforms

Organised in three topics:

• **IoT-01-2016: Large Scale Pilots (LSPs) >> [RIA] €100 M**
  - Pilot 1: *Smart living environment for ageing well* (up to €30 M)
  - Pilot 2: *Smart farming and food security* (up to €20 M)
  - Pilot 3: *Wearables for smart ecosystems* (up to €15 M)
  - Pilot 4: *Reference zones in EU cities* (up to €15 M)
  - Pilot 5: *Autonomous vehicles in a connected environment* (up to €20 M)

• **IoT-02-2016: IoT Horizontal activities >> [CSA] €4 M**
  - Coordination of and horizontal support to the IoT Focus Area
  - RRI-SSH support to IoT

**IoT-01 LSPs RIA Projects expected to start January 2017**
**Open Calls for new partners (third parties) expected from 2018**
IoT Focus Area 2016-217
IoT-03 to close Apr 2017

- IoT-03-2017: R&I on IoT integration and platforms >> [RIA] €35 M
  - Architectures, concepts, methods and tools for open IoT platforms
  - IoT Security and Privacy

Platform considerations:
  - Connectivity and intelligence
  - Actuation and control
  - Linkage to modular and ad-hoc cloud services
  - Data analytics and open APIs
  - Semantic interoperability across use cases
  - Conflict resolution

Proposed research and innovation should take advantage of previous work and build on existing platforms, such as FIWARE, CRYSTAL or SOFIA, if appropriate
SME Instrument - ‘Open Disruptive Innovation’

The SME Instrument
SEAMLESS BUSINESS INNOVATION SUPPORT FROM IDEA TO MARKET...

Focus will be on companies proposing disruptive ICT concepts, products and services applying new set of rules, values and models which ultimately create new markets (e.g., by tackling non consumption) or disrupt existing markets

...YOUR HIGHWAY TO DELIVER INNOVATION ON THE MARKET!

Apply at any time!

6 months — 12-24 months

ACTIVITIES SUPPORTED

PROOF OF CONCEPT
✓ Prove Technical and Commercial Viability
✓ Explore IP Regime
✓ Design Study
✓ Develop Pilot Application
✓ Risk Assessment

DEMONSTRATION OF COMMERCIAL POTENTIAL via
✓ Prototyping
✓ Testing
✓ Piloting
✓ Miniaturization
✓ Scaling-up
✓ Application Development

GO-TO-MARKET
✓ EU Quality Label (Promotion & Networking with Financiers/Clients)
✓ Investment Readiness Training
✓ SME window in the EU Financial Facilities (debt & equity backed by EIB/EIF)
✓ Link to Public Procurement Networks
UK National Contact Points for H2020

https://www.gov.uk/horizon-2020#additional-information
How to get involved?
AIOTI
Alliance for Internet of Things Innovation

http://www.aioti.eu

• Launched by the EC in 2015
• Aims to create a dynamic European IoT ecosystem to unleash the potential of the Internet of Things
• Apx 500 members and 1500 high-level experts on board
• 11 Thematic Working Groups + 2 as of May 2016
• Produced WG Recommendation Papers for the IoT Focus Area http://bit.ly/1ssZVHP
• An active community of experts in S&T, legal & regulatory, and standardisation aspects pertinent to IoT developments/evolution
• Participation is presently free of charge
ICT Proposers’ Day 2016 - Prepare for Call(s) 2017

26-27 September 2016
Bratislava, Slovakia

ICT in LEIT and across H2020:
◦ Info & Networking sessions
◦ Meet the Commission
◦ Face2Face Brokerage
https://www.b2match.eu/ictproposersday2016
◦ Workshops
◦ …

Registration is open:

@ICTproposerEU
#ICTpropday
IoT within the Digital Single Market (DSM)
Internet of Things Action Plan:

1. **A single market for the IoT**: Seamless connectivity and on plug-and-play basis anywhere in the EU, and cross-border scalability

2. **A thriving IoT ecosystem**: Open platforms used across vertical silos will help developer communities to innovate. Kick-start support to IoT deployments in lead markets

3. **A human-centred IoT**: To respect European values, empowering people along with machines and businesses, with high standards on personal data protection and security, through a ‘Trusted IoT’ label

*Note: Not in scale*
IoT relevant Actions from Digitising European Industry communication

A governance framework for co-ordination of initiatives for digitising industry

- Organise a biannual high-level Roundtable of representatives of Member States’ initiatives, industry leaders, and social partners ensuring a continuous EU-wide dialogue
- Set up a yearly European stakeholder forum for wider consultation and outreach involving stakeholders from the full digital value chains

Co-investing in boosting Europe's digital innovation capacities (Digital Innovation Hubs across Europe)

- EU planned investments of €500 million in Digital Innovation Hubs (DIH) to come from H2020
  - DIH fostering "many-to-many" connections among competence centres, industry users and suppliers, technology experts and investors and facilitating access to EU-wide markets

Partnerships for leadership in digital technologies value chains and platforms

- Leadership in IoT: The Commission will invest in demand-driven large-scale pilots and lighthouse initiatives in areas such as smart cities, smart living environments, driverless cars, wearables, mobile health and agro-food.
  
The investment will address notably open platforms cutting across sectors and accelerate innovation by companies and communities of developers, building on existing open service platforms, such as FIWARE. The Alliance for IoT Innovation (AIOTI) is seen as playing a key role in achieving this goal
Towards H2020 WP 2018-2020
Strategic Programming for WP 2018-2020

**Inputs**
- Lessons learned
- Foresight
- Gap analysis
  - difference between H2020 Specific Programme and Topics in 2014-2017
- Advisory Groups (per thematic area) + CONNECT Advisory Forum
- Stakeholder consultations
- Political framework/context
- Member States
- Internal deliberations
- *H2020 Interim Evaluation* (parallel thread)
- Other discussions (e.g., European Innovation Council)

**Output**
- Strategic Programme + scoping papers
Strategic Foresight: Towards the 3rd Strategic Programme of Horizon 2020

Key trends / uncertainties

• Innovation and competitiveness
  – Energy (abundant & green vs expensive & polluting)
  – Values (economic values vs new sources of value)

• Sustainability
  – Economic growth model (linear vs circular ecological)
  – Governance: (elitist/exclusive vs participative/inclusive)

• Social change and societal challenges
  – Data ownership (individual vs commons)
  – Values (consumerist/materialistic vs non-materialistic)

• Radical opportunity spaces
  – Global governance (effective global governance vs fragmented world)
  – Individual attitudes (engaged vs opting-out)

https://ec.europa.eu/research/foresight/index.cfm
Strategic Programming 2018-2020
Approximate time-line

01-06/2016  Foresight and stakeholder consultation (Advisory Groups)
04-09/2016  Consultation Member States
10/2016     Strategic Priorities
11/2016...Q4 2017 Elaboration and adoption of work programmes
Sign-up to the NCP’s ICT & FET news channel

Horizon 2020 Registration Form

Email*

Title

First name*

Last Name*

Company/organisation*

Company Address

Country

UK Post Code - if applying from UK

Telephone

Organisation Type

Job Title

Area of Interest (Please tick the boxes that apply)

- ICT
- Future & Emerging Technologies
- Nanotechnologies
- Advanced Materials
- Space Satellite Applications
- Food & Agriculture
- Marine
- Bio-economy & Biotechnology
- Smart, Green & Integrated Transport
- Health, Demographic Change & Wellbeing
- Manufacturing
- Climate Change, Environment
- Resource Efficiency, Raw materials
- Secure Societies
- SME Instrument

Legal & Financial Rules for Participation

http://tinyurl.com/Register-h2020uk
Quick way in for ICT and FET: The Driller

### ICT ACTIONS IN LEIT PILLAR

<table>
<thead>
<tr>
<th>Objective</th>
<th>Name</th>
<th>Instruments</th>
<th>Budget (M€)</th>
<th>Units</th>
<th>Links</th>
<th>Links to ICT2015 Lisbon</th>
</tr>
</thead>
<tbody>
<tr>
<td>A New Generation of Components &amp; Systems</td>
<td><strong>ICT-01-2016</strong> Smart Cyber-Physical Systems</td>
<td>R, C</td>
<td>20</td>
<td>A3</td>
<td>Slides</td>
<td>Session</td>
</tr>
<tr>
<td></td>
<td><strong>ICT-02-2016</strong> Thin, Organic and Large Area Electronics</td>
<td>R, I</td>
<td>20</td>
<td>A1</td>
<td>Slides</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>ICT-03-2016</strong> SSI - Smart System Integration</td>
<td>R, C</td>
<td>18.5</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>ICT-04-2017</strong> Smart Anything Everywhere Initiative</td>
<td>I, C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Advanced Computing & Cloud Computing

<table>
<thead>
<tr>
<th>Objective</th>
<th>Name</th>
<th>Instruments</th>
<th>Budget (M€)</th>
<th>Units</th>
<th>Links</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICT-05-2017</strong></td>
<td>Customised and low energy computing systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ICT-06-2016</strong></td>
<td>Cloud Computing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Future Internet

<table>
<thead>
<tr>
<th>Objective</th>
<th>Name</th>
<th>Instruments</th>
<th>Budget (M€)</th>
<th>Units</th>
<th>Links</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICT-07-2017</strong></td>
<td>5G PPP Research and Validation of Key Technologies and Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ICT-08-2017</strong></td>
<td>5G PPP Convergent Technologies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ICT-09-2017</strong></td>
<td>Networking research between 5G PPP and 6G PPP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ICT-10-2016</strong></td>
<td>Software Technologies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### FET ACTIONS IN THE EXCELLENT SCIENCE PILLAR

<table>
<thead>
<tr>
<th>Objective</th>
<th>Name</th>
<th>Instruments</th>
<th>Budget (M€)</th>
<th>Units</th>
<th>Links</th>
<th>Links to ICT2015 Lisbon</th>
</tr>
</thead>
<tbody>
<tr>
<td>FET Open - Novel Ideas for radically new technologies</td>
<td><strong>FETOPEN-01-2016-2017</strong> FET Open RIA</td>
<td>R</td>
<td>84, 84, 84</td>
<td></td>
<td>Slides</td>
<td>Session</td>
</tr>
<tr>
<td></td>
<td><strong>FETOPEN-02-2016</strong> FET-Open CSA</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>FETOPEN-03-2017</strong> FET-Open CSA</td>
<td>C</td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>FETOPEN-04-2016-2017</strong> FET Innovation Launchpad</td>
<td>C</td>
<td>1.2, 1.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FET Proactive - Boosting emerging technologies</td>
<td><strong>FETPROACT-01-2016</strong> FET Proactive - emerging themes and communities</td>
<td>R</td>
<td></td>
<td></td>
<td>Slides</td>
<td>Session</td>
</tr>
<tr>
<td></td>
<td><strong>FETPROACT-02-2017</strong> FET ERANET Cofund</td>
<td>E</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>FETPROACT-03-2016</strong> FET ERANET Cofund in Quantum Technologies</td>
<td>E</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FET Proactive - High Performance Computing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>FETHPC-01-2016</strong> Co-design of HPC systems and applications</td>
<td>R</td>
<td>41</td>
<td></td>
<td>Slides*</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>FETHPC-02-2017</strong> Transition to Exascale Computing</td>
<td>R</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>FETHPC-03-2017</strong> Exascale HPC ecosystem development</td>
<td>C</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FET FLAGSHIPS - Tackling grand interdisciplinary science and technology challenges</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ICT & FET National Contact Point

Functional mailbox: NCP-ICT-FET@innovateuk.gov.uk

UK GOV H2020 Web-presence: http://tinyurl.com/H2020-InnovateUK

Georgios Papadakis
georgios.papadakis@innovateuk.gov.uk

Information Centre
www.ictic.org

This slideset available from: www.ictic.org/ee.html