Future Networks Research Centre
The Opportunity

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Overview

- Introduction – What is the proposed FNRC
- Introduction – Why are we discussing this now?
- Background to discussions (EPSRC) and funding context
- Importance of community perspective
- Plans for today
- Wider landscape
Introduction – What?

What is the proposed Future Networks Research Centre?

- National research and innovation centre, supporting the discovery and development of novel networking technologies, through
- strong academic-industrial partnerships
- real-world scale experimental platform for information networking researchers in academia and industry, with real-world scale data
- bridging the divide from the lab to the marketplace.
- This would be national scale research facility, open to both academic and industrial researchers from around the UK, and
- Building on and connected in to existing reference models and development labs.
Why are EPSRC here?

- We see this as an opportunity for UK research and innovation that needs to be explored.

Relevant EPSRC strategies:

- **Accelerating Impact**: EPSRC’s strategy for accelerating impact – Our role is to help make it more likely that impact will arise, that it will arise more quickly and that it will bring more benefit to the UK

- **Connected Nation**: Research to support national prosperity through supporting a future connected society and economy, addressing the following ambitions:
  
  - Enable a competitive, data driven economy
  - Achieve transformational development and use of the Internet of Things
  - Deliver intelligent technologies and systems
  - Ensure a safe and trusted cyber society
  - Design for an inclusive, innovative and confident digital society
Introduction – Why?

Relevant EPSRC strategies continued:

- **ICT Networks and Distributed Systems**: Research area strategy published Feb 2017 aims to encourage researchers working in this area to look to challenges:
  - Given multitude of applications, addressing challenges of scalability, interoperability and reliability that will be relevant in developing technologies with the most ambitious aims and societal benefit.
  - Linking to real-world test beds and use cases to guide fundamental research and generate long-term results.
  - Engaging with software engineers to manage increasing complexity in networks and network management, given increasing complexity and the widespread adoption of SDN and NFV approaches.

- **Future Intelligent Technologies**: Leading on from priorities around intelligent information infrastructures, increasing cross disciplinarily in intelligent tech from a variety of applications.
Following TI3 workshop:
Scope developed
RIIE “Option A”
RIIE “Option B”

Discussion with EPSRC ICT Strategic Advisory Team:

"RIIE Option B vision. A remotely accessible network test-bed based on commercial and experimental virtualised network functions which are adaptable and configurable by researchers. The test-bed would be connected to physical layer 1 transmission test networks, and enable the connection of real users who would use the network for their day to day communications generating real data. This would include wireless on the edge and therefore enable Internet of Things research."

Meeting at EPSRC July 2016 – the case for the initiative (scoping science and management requirements)

Workshop today:
- Wider input
- Community perspective
- Agreed recommendations

Meeting at Adastral Park September 2015 – BT capabilities

EPRSC
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- Enabling research challenges to be addressed
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However:

- Not linked to a dedicated EPSRC budget.
- Various pathways to supporting & sustaining this
- Case for supporting this is key – Research community need.
Not approaching this from a “problems to solve” perspective but an “opportunities to exploit”

Key feature of opportunity industry-academic partnership to tackle questions (in both research and innovation space) that can’t be tackled by academia or industry in isolation

This is just the start – input from you to delineate the ambition of this opportunity.

- Scientific challenges in subsequent talks to explore what this could look like.
- Important questions on governance, access, etc → maximising potential.

Key question to solve to realise this opportunity is recommendation on:

- What this should achieve
- How this should be achieved
This is your opportunity to influence the future shape of potential investment in this area.
What we want from today

- Wider understanding of key research and innovation challenges
- Discussion and debate on how such a centre can best serve the needs of UK research and Innovation
- Community ownership – People are key to success.
Current Landscape

Universities

Business

Policy
Today is about getting your input on an exciting opportunity for UK network science.

This is an opportunity to be ambitious: what can we do here that can give UK research and innovation a world lead?

We don’t have a clear route to making this a reality, but with a strong case there are many paths this could follow.

Ongoing conversation – community ownership.
Thank You