KNOW YOUR NEIGHBOURS: CONNECTING WITH EUROPE

#innovateuk14

INNOVATEUK2014
THE GLOBAL SPOTLIGHT
ON UK INNOVATION

HOSTED BY

UK Trade
& Investment

Innovate UK
Technology Strategy Board

INNOVATE UK 2014

THE GLOBAL SPOTLIGHT ON UK INNOVATION

GREAT
BRITAIN & NORTHERN IRELAND

KNOW YOUR NEIGHBOURS

CRAIG SHARP

H2020 NATIONAL CONTACT POINT

Introduction to Horizon 2020

www.h2020uk.org

INNOVATE UK 2014

THE GLOBAL SPOTLIGHT ON UK INNOVATION

HORIZON 2020 NATIONAL CONTACT POINT NETWORK

- National Contact Points (NCPs) are publicly funded (many by Innovate UK) to provide advice and assistance to UK participants within specific areas of Horizon 2020 (H2020) – www.h2020uk.org
- All member states have NCPs across Horizon 2020 calls

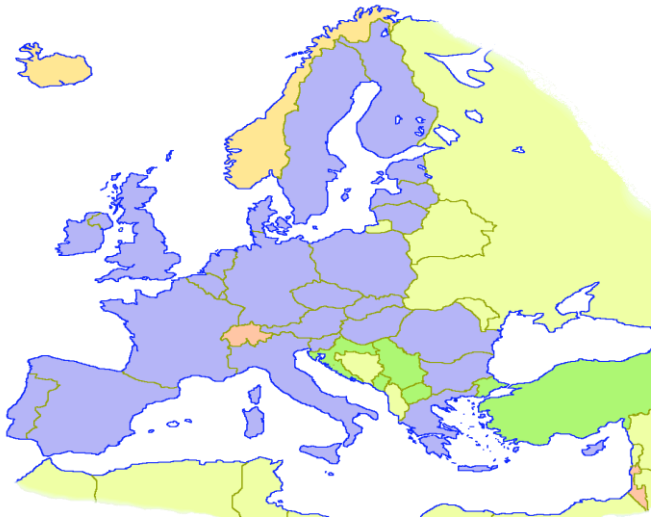
INNOVATE UK 2014
THE GLOBAL SPOTLIGHT ON UK INNOVATION

NATIONAL CONTACT POINTS – WHAT WE DO

- Commission - work programme development
- Guidance on choosing call areas and topics
- Scope queries with Project Officers
- Feedback on proposals
- Clarification of documentation and rules
- Assistance in partner search
  - through theme specific databases or across the network of other Member State NCPs
  - through network support (Knowledge Transfer Network, Enterprise Europe Network)
- Call results..

WHY EUROPEAN R&D FUNDING

Through the EU, business can gain innovation support on a scale not available within the UK. This can bring UK companies new R&D funding, the chance to collaborate with other world-class companies and institutions, and reach into the world's largest 'home' market



Horizon 2020 (2014-20) - what's new?

- Successor to FP7 (2007-13) – EU Collaborative R&D programme
- ~ €79Bn programme, much of it collaborative research/innovation
- **More innovation: through introduction of 'close-to-market actions' (e.g. prototyping, testing, demonstrating)**
- Greater SME involvement - "SME instrument"
- A single set of rules for participation and dissemination for the whole innovation chain
- Simplified funding rates for research and innovation projects
- Faster time-to-grant : to be reduced to 8 months (5 + 3)
- 2 year work programmes published (look-ahead..)

Horizon 2020 - 3 Pillar Structure

1. Excellent Science TRL 1-3 (24.4€Bn)

- European Research Council (ERC)
- Future & Emerging Technologies (FET)
- Marie Skłodowska- Curie actions
- Research Infrastructures

2. Industrial Leadership TRL 4-7 (€17Bn)

- Leadership in Enabling and Industrial Technologies
- Access to Risk Finance
- Innovation in SMEs

3. Societal (€29.7Bn) Challenges

- Health, demographic change and wellbeing
- Food security, sustainable agriculture, forestry, marine, maritime, inland water and bio-economy
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, environment, resource efficiency and raw materials
- Inclusive, innovative and reflective societies
- Secure societies

- Spreading Excellence and Widening Participation
- Science with and for Society
- EIT
- JRC

H2020 PARTICIPATION

Hi-tech SMEs:

Spin outs from universities or firms with high-tech and knowledge based products and in-house R&D capability.

Mid-tech SMEs:

With some R&D activity or that which could be stimulated and leveraged through Horizon 2020.

Academic & Research Organisations:

Experienced organisations in partnering and coordinating proposals within balanced consortia

Large companies:

With existing R&D activity or that which could be stimulated and leveraged through Horizon 2020

SOURCES OF HELP – www.h2020uk.org

- The National Contact Point network
- The UK Knowledge Transfer Networks
- Enterprise Europe Networks
- Your own Supply Chain

Horizon 2020 support information – www.h2020uk.org

Craig.Sharp@innovateuk.gov.uk

KNOW YOUR NEIGHBOURS

CLAIRE CLAESSEN
HEAD OF H2020 – KTN

CONNECTING TO EUROPE

INNOVATE UK 2014
THE GLOBAL SPOTLIGHT
ON UK INNOVATION

THE KNOWLEDGE TRANSFER NETWORK

The UK’s Innovation Network

What we do

The KTN is the UK’s innovation network. We bring together businesses, entrepreneurs, academics and funders to develop new products and services.

We help business to grow the economy and improve people’s lives by capturing maximum value from innovative ideas, scientific research and creativity

THE KNOWLEDGE TRANSFER NETWORK

Stimulating dialogue/accelerating innovation

Knowledge Transfer Network

We are eliminating silos to make it easier to assemble multi-disciplinary teams so that we can do more, and do it well.

Chris Warkup
CEO

The "half-life of knowledge" is shortening, so we must connect business with research faster than ever before.

David Lockwood
Chair

16 Industry Communities

Core thematic networks covering key application areas and underpinning technologies

17 Cross-sector Groups

Interdisciplinary programmes building communities around priority challenges

60,000+ Members

An engaged online community of innovators served by a single platform

6,000+ Delegates per year

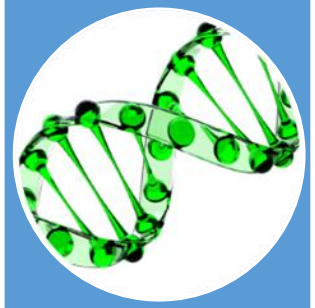
Hundreds of events bringing people together 'to make magic happen'

THE KNOWLEDGE TRANSFER NETWORK

Knowledge Transfer Network

Communities, groups and business programmes

Materials, Nano and Chemistry
Resource Efficiency and Sustainability
High Value Manufacturing



Agri-Food
Biosciences
Health

ICT
Electronics, Sensors & Photonics
Defence & Security
Space

Built Environment
Transport
Energy

Creative Industries
Digital Economy
Design

Focus is on bringing together groups of those that would not normally meet

Sustainability, H2020, International, Access to Finance, Design

_CONNECT

Knowledge Transfer Network

"The "half-life of knowledge" is shortening, so we must connect business with research faster than ever before."

David Lockwood - Chair, KTN

Connecting people who accelerate innovation

The KTN is the UK's innovation network. We bring together businesses, entrepreneurs, academics and funders to develop new products, processes and services.

We can help you develop ideas, expertise and technologies, that have the potential to be world-beating products processes and services. Central to what we do is the initiation and building of collaborations.

Chemistry

From addressing accelerating global demand for critical raw materials to opening up the bio-based products market, we are there to provide support to those who use chemistry in the widest sense.

discover **chemistry** on _connect >

Investment Collaborations

Fostering relations between private and public funders and innovators requiring investment to develop new products and grow their business.

discover _connect

More Information

Find out how the KTN can work with you.

enquiries@ktn-uk.org

@ktnuk

the-knowledge-transfer-network

Our Network

16 Industry Communities

60,000+ Members

6,000+ Annual Delegates

Cross-Sector Groups

http://www.ktn-uk.co.uk/

- SECTION B –

Why Participate?

IMPACT OF EUROPEAN PROJECTS

Knowledge Transfer Network

- *Commercial products and new process options but also:*
- *80% integrated results of projects into their innovation process*
- *69% continued with R&D collaboration after the end of the project*
- *29% continued commercial collaborations*
- *80% said the visibility and recognition of the company increased as a result of the project*
- *90% developed new collaborations*

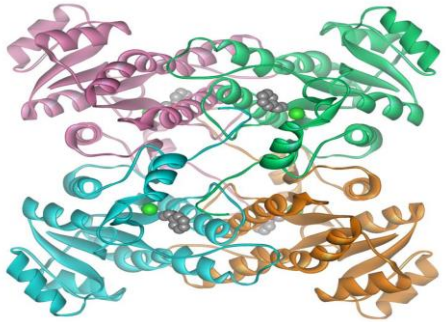
*http://www.kappa-health.org/Default.aspx

KYROBIO: *DEVELOPING BIOCATALYSTS FOR INDUSTRIAL CHIRAL CHEMICALS*

Knowledge Transfer Network

- *4 year collaborative R&D project*
- *17 partners: including Johnson Matthey, Ingenza, Prozomix, C-Tech Innovation*
- *Aims to broaden the toolbox of single enantiomer chiral chemicals that are produced by industry in Europe using biotechnological routes.*

Benefits for Consortium after 1 year of operation:



- *Commercialisation of enzyme formulation by SME partner;*
- *New commercial and supply chain relationships*
- *Presence of individual members in the sector has been increased;*
- *Network comprises owners of a large range of processes that will enable a new process development service to be developed by one of the partners.*

MIFLOW: *MICROWAVE ASSISTED FLOW REACTOR*

- *2 year applied R&D project*
- *2 partners*
- *Aims to develop a novel microwave assisted flow reactor to allow scalability of reactions with minimal process development.*

Benefits for Consortium:

- *Development of a microwave reactor ready for commercial exploitation;*
- *Creation of a body of evidence to support product claims;*
- *Demonstration of a faster and cheaper process for ionic liquids production.*

Knowledge Transfer Network

EUROSTARS

Bottom-up programme for R&D performing SMEs

Knowledge Transfer Network

Eligibility

R&D performing SME
2 partner countries
Market introduction within 2 years

Funding Rate

60% of eligible project costs, with a maximum grant budget of €360k per UK partner

Next Call

5th March 2015

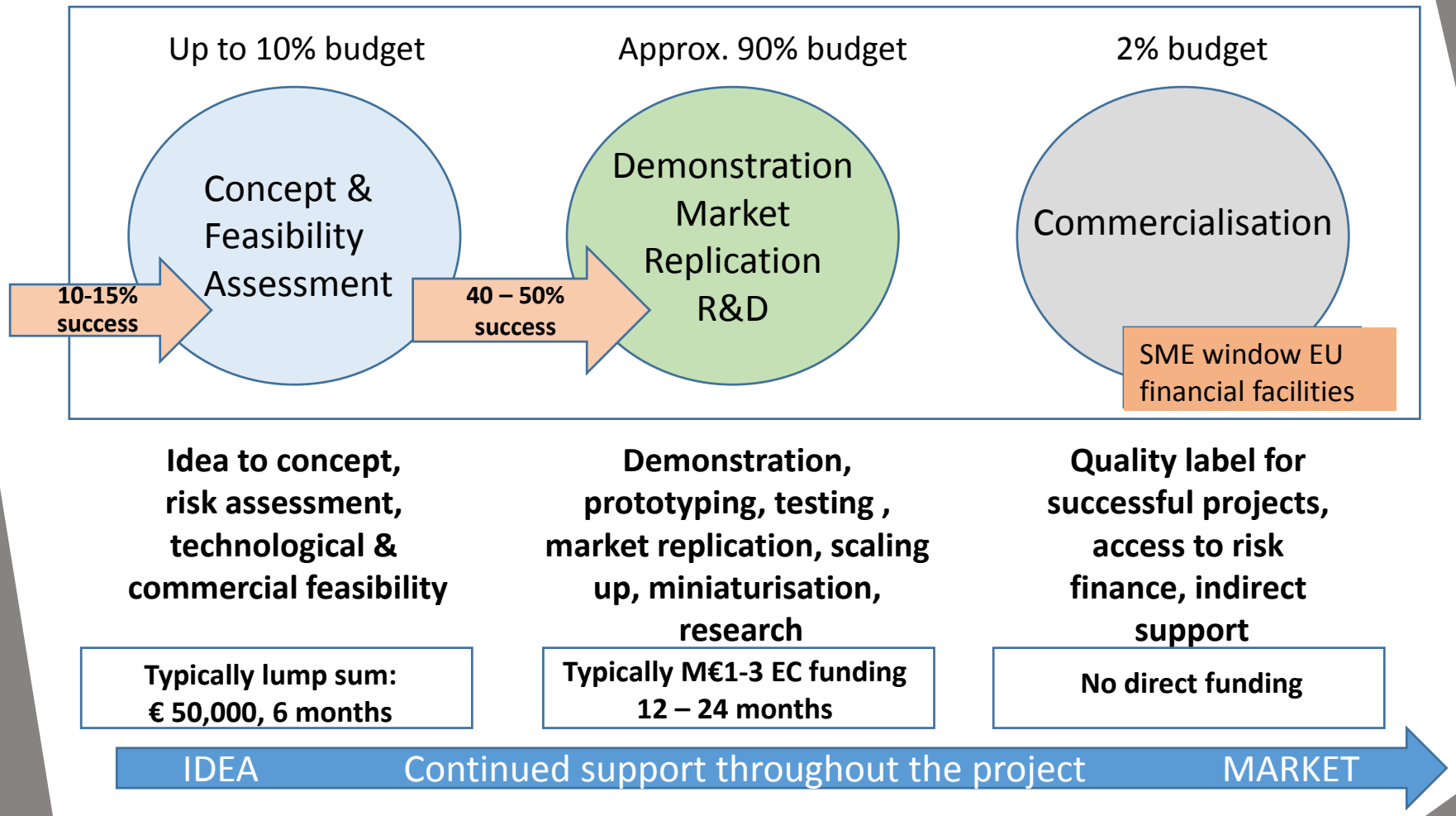
Further Information

www.innovateuk.org

www.eurostars-eureka.eu

HORIZON 2020 - SME INSTRUMENT

Knowledge Transfer Network



- SECTION C –

How KTN can help

KTN ROLE IN H2020

- **Support UK based businesses in engaging with Europe and H2020**
- **Influence the funding priorities within H2020**

by

- Working with NCPs and the EEN within the UK to optimise support to UK companies
- Building on links with the European Commission, European Technology Platforms (eg SusChem) and PPPs (e.g. BBI, SPIRE)
- Participate in projects where they support the KTN purpose and strategy (eg Co-ordination & Support Actions)
- Identifying opportunities for collaborations across sectors and along value chains

Knowledge Transfer Network

INNOVATE UK 2014
THE GLOBAL SPOTLIGHT ON UK INNOVATION

HOW CAN THE KTN HELP YOUR BUSINESS?

Knowledge Transfer Network

- We can complement the National Contact Points and the EEN by providing support in:
  - Consortium building – using our networks to find the right UK, and in selected topics, EU partners that best meet the needs of a particular project;
  - Providing sector specific advice – good understanding of business needs across all sectors;
  - Advice on proposal construction and how to produce a compelling bid;
  - Advice on the implications of being part of a Horizon 2020 project, particularly as Co-ordinator – we've done it;
  - Advice on market opportunities and project impact.

CONNECTIONS

- European Technology Platforms
- Public Private Partnerships (JTIs)
- European Innovation Platforms
- Sector focussed networks

SusChem
European Technology Platform For
SUSTAINABLE CHEMISTRY

SPIRE
Sustainable Process Industry through
Resource and Energy Efficiency

EVENTS PROGRAMME 2014 /15

Knowledge Transfer Network

HORIZON 2020

The Knowledge Transfer Network invite you to H2020

Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract. It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market. The Knowledge Transfer Network in partnership with Innovate UK, is hosting a series of support workshops and events to assist business in accessing, partnering for, and understanding the opportunities presented by Horizon 2020.

Events Announced...

Knowledge Transfer Network

10th Sep; Horizon 2020 ICT Calls 27 & 28 Briefing Event More

25th Sep; H2020 ICT 4 – 2015;

Support for a wide variety of business applying to H2020

The Knowledge Transfer Network events will provide support to a wide spectrum of businesses through a combination of information, networking, pitching, drop in surgeries & consortia building events.

Dates have already been announced for events relevant to ICT, biobased-products & materials, customised & low power computing, technologies for creative industries, social media & convergence, technologies for better human learning and teaching, materials & nanotechnology, chemistry & manufacturing, sustainable use and supply of resources.

SO WHAT CAN WE DO BETTER?

Knowledge Transfer Network

- UK industry has a lower participation in European projects than many other EU Member States

- There are two opportunities for the UK
  - to **influence** the content of the EC programmes
  - to **engage** in medium to long term collaborations which can impact UK companies and the UK economy

- Influence via European Technology Platforms or through direct contact with the European Commission

- There is good support available in the UK to help you engage

CONTACT DETAILS

Claire Claessen

claire.claessen@ktn-uk.org

+44 (0)7785 622433

The Knowledge Transfer Network

Knowledge Transfer Network

INNOVATE UK 2014
THE GLOBAL SPOTLIGHT ON UK INNOVATION

HOSTED BY

UK Trade
& Investment

Innovate UK
Technology Strategy Board

INNOVATE UK 2014

THE GLOBAL SPOTLIGHT ON UK INNOVATION

GREAT
BRITAIN & NORTHERN IRELAND

KNOW YOUR NEIGHBOURS: CONNECTING WITH EURPOPE

DR. MARK PURDIE, ASTRAZENCA

EU FUNDING TO DELIVER BUSINESS BENEFIT

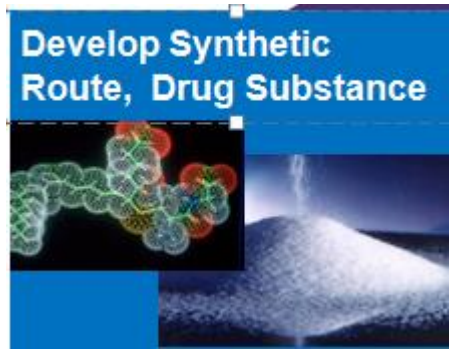
ASTRAZENECA

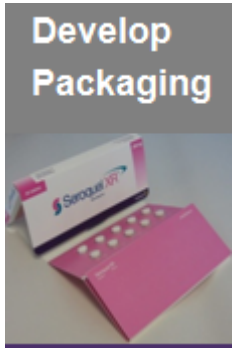
- We push the boundaries of science to deliver life-changing medicines
- ~50,000 Employees
- FTSE 100 listed company
- 2013 sales of $26billion

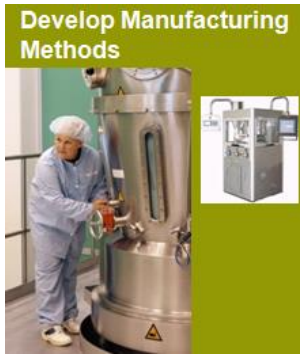
AstraZeneca

PHARMACEUTICAL DEVELOPMENT

- ~1,000 Employees
- We turn a molecule into a medicine



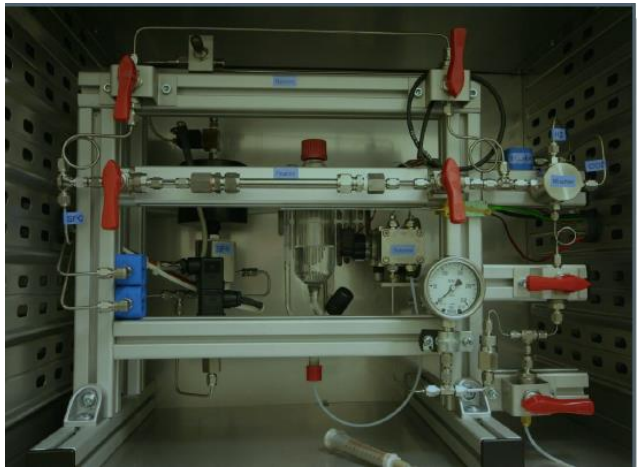




- We have been involved in several EU funded projects

SYNFLOW – FP7 PROJECT

- Innovative Synthesis in continuous-flow Processes for Sustainable Chemical Production
- 20 Partners from 8 EU countries
- €16M project overall with €11M funding from EU
- Ran from Sept 10 – Aug 14



INNOVATE UK 2014
THE GLOBAL SPOTLIGHT ON UK INNOVATION

SYNFLOW CASE STUDIES

- We were clear what we wanted to work on at proposal stage and steered these projects within the project
  - Hydrogenations and Pd cross coupling
  - Little/no input to other case studies

- Successful outcomes had clear benefits within AZ

➢ Challenging Hydrogenations
- Amide Hydrogenation (No 1 of Pharmaceutical Roundtable) => A 2
- Asymmetric Hydrogenation (Nobel Prize 2001) => A 4

➢ Pd-Catalyzed Cross Coupling
- Buchwald-Hartwig-Amination (Numerous synthetic applications) => A 1
- Suzuki-Miyaura Coupling (Nobel Prize 2010) => A 3

➢ Nitrile-Formation
- Atom-efficient access to fine chemicals and intermediates => B 5

➢ Olefin Telomerization
- Atom-efficient access to fine chemicals and intermediates => C 6

BENEFITS FROM SYNFLOW

- EU funding – we would not of done the project without it
- 3 of the 4 case studies delivered successful outcomes
  - Outcomes are now being applied on internal projects
  - Unsuccessful case study gave a clear conclusion - no further work will be done
- We worked with a number of academic/industrial groups we have not collaborated with before
  - Widens our network of contacts especially in Europe
  - We have already started other projects outside of Synflow
  - We intend to submit a Horizon 2020 proposal with some of them
- We recruited 2 people from the project
  - 1 world class academic has joined AstraZeneca
  - Internal post-doc recruited for Synflow now made permanent

THOUGHTS ON HORIZON 2020

- As with FP7 be clear what you want to achieve
  - Needs to align with your business for next 4-5 years
- Proposals
  - Meet proposed partners and be active in the submission
  - Help is available for proposal submission
- Funding
  - Simpler since all partners receive same rate of funding
  - Depending on TRL level but can be 100%
- Finance
  - Probably similar complexity to TSB project financing
- Reports/Admin ....
  - Not overly burdensome and you can plan for this in the proposal
  - Need a good project co-ordinator
- We are applying for Horizon 2020 funding

THOUGHTS ON HORIZON 2020

- As with FP7 be clear what you want to achieve
  - Needs to align with your business for next 4-5 years
- Proposals
  - Meet proposed partners and be active in the submission
  - Help is available for proposal submission
- Funding
  - Simpler since all partners receive same rate of funding
  - Depending on TRL level but can be 100%
- Finance
  - Probably similar complexity to TSB project financing
- Reports/Admin ....
  - Not overly burdensome and you can plan for this in the proposal
  - Need a good project co-ordinator
- We are applying for Horizon 2020 funding

HOSTED BY

UK Trade
& Investment

Innovate UK
Technology Strategy Board

INNOVATE UK 2014

THE GLOBAL SPOTLIGHT ON UK INNOVATION

GREAT
BRITAIN & NORTHERN IRELAND