Business Development in the Social Sciences and Humanities

13 - 16 May, Oxford

Day 3 – Spin-offs & Entrepreneurship

UP NEXT....

Welcome & Summary

Mark Mann & Chris Fellingham





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Spin-offs & Entrepreneurship

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OXFORD UNIVERSITY INNOVATION



An Oxford perspective on AHSS spinouts/startups Dr Mark Mann and Chris Fellingham

This morning's session



- Introduction to OUI and the Oxford ecosystem
- The nuts and bolts of our AHSS commercialisation model.
 - Will include a discussion with an academic who has been through the process
- Making an impact unit financially sustainable
- Worked example on what to do with a new project
- Working on a business plan for your impact unit.





About Oxford University Innovation

Who we are and what we do

O

Patent



 Transferring ideas through Licensing, Ventures, Social Enterprise, Services, IP and Patents, Material Sales, Clinical Outcomes, Startup Incubator, Oxford University Hospitals NHS Foundation Trust

Licensing & Ventures

• Supporting researchers and external partners to utilise academic expertise and technical services Enabling ventures to grow from concept to maturity through Seed Funds, Oxford Angels Network, Spinout Equity Management

Consulting Services Funding, Investment & Management

The pipeline and its nature



- Little in IP, so licence income at best of low value.
- Much could be trademarked methodologies.
- Disproportionately high in spinouts.
- Franchise agreements may become more common (consultancy/QC wrapped up with weak copyright IP and a trademark) delivered either through spinouts or direct from OUI (e.g. Mathematical Reasoning).
- High degree of lean spinouts and social enterprises which will require post-spin support.
- Very few patents, so confidentiality provisions become more important.

OUI's existing business model and governing principles



- 30% top-slice of licence income with £15,000 directly to OUI per express spinout licence.
- 15% top-slice from readily licensable software (almost never used)
- 10% from consultancy (which covers costs of the team, just)
- Variable equity for the University in spinouts of which OUI takes a slice of in an equity realisation of 15%.
- Newly-developed schemes should be uniform across all University divisions.

Current business model and its drawbacks



- Incentivises licence income which brings in 30%.
- Equity is likely to be tied up over long time periods ~15 years.
- Consultancy is often a "bare bones" operation which just about covers its staff costs at 10%.
- The "patent budget" is still understood to be used for IP protection only. Modest investments in a project may be easily repayable if used appropriately.
- Good commercialisation cases will have a disproportionate effect for REF compared with STEMM. No guaranteed funding from the central University.
- Current model does not recognise or charge for the value technology transfer managers add to a project.
- Some academics need TTO/KTO services more than others.



The background to AHSS Commercialisation in the UK

The stimulus



REF2021 Research Excellence Framework

Impact: 25% = £180 p.a.

- Measured through the breadth and depth of impact.
- AHSS knowledge exchange until now largely consulting. How do you measure impact?

Stimulating debate... The biggest problem with AHSS valorisation



Policy developed by a University is focussed on STEMM subjects

IP often diffuse or cannot be patented and/or the copyright is worthless.

Means confidentiality more important than normal.

Things that can be patented and are patented shouldn't be;

"shoe-horning" AHSS into a model that doesn't work.

Resourcing becomes an issue as income often only comes through licensing

Trademarking and brand building



- Think of an idea as a head start not a moat.
- Brand building is more important than IP.
- Order of importance of the brand
 - Who/team
 - The idea
 - Advantage over everyone else
- Business model is the key to making a success.
- Patents can be a crutch rather than an aid.

Result: majority will be service-based companies But this is 80% of UK GDP. Why focus on the 20%?









AHSS Spin-outs at the University of Oxford

Depth and diversity at Oxford University



Social Sciences Division

Humanities Division

Anthropology and Museum Ethnography, School of American Institute, Rothermere Archaeology, School of Art, Ruskin School of **Business School, Saïd Classics**, Faculty of **Economics, Department of** English Language and Literature, Faculty of **Education**, Department of History, Faculty of Geography and the Environment, School of **History of Art department** Linguistics, Philology & Phonetics, Faculty of **Government, Blavatnik School of** Interdisciplinary Area Studies, School of Medieval and Modern Languages, Faculty of International Development, Department of **Music, Faculty of Oriental Studies, Faculty of Internet Institute, Oxford** Law, Faculty of Philosophy, Faculty of **Oxford Martin School** Theology and Religion, Faculty of Politics and International Relations, Department of TORCH | The Oxford Research Centre in the Social Policy and Intervention, Department of **Humanities** Sociology, Department of **Voltaire Foundation**

Slicing and dicing



- Are some departments better than others? Do departments produce certain types of spinouts?
- Business Models:
 - Social enterprise hand in glove
 - Franchise
 - Know-how/Consultancy
 - Product
- Which sectors are emerging?
 - International Development
 - GovTech
 - Heritage
 - Edtech/Education



The nuts and bolts of our Spin-outs

Summary



- Culture change and diversity
- New products:
 - Lean Spinout (sunk costs)
 - Social Enterprise
 - Service agreements and franchises.
- Business Models (Interactive session)
- Skills gaps and Networks
- Funding
 - Translational Funding (broaden existing pots, coordinate regionally)
 - Seed funding (broaden angel pool, regional coordination)



Stimulating innovations

Culture Change – everyone plays a part

- Humanities Innovation Challenge
- <u>https://innovation.ox.ac.uk/university-</u> <u>members/humanities-innovation-challenge-</u> <u>competition/</u>
 - Gets people to have a low-risk, light-touch try at entrepreneurship and builds a pipeline of great ideas.
- Focus on social enterprise and social innovation. A strong focal point for social science in particular
- <u>https://innovation.ox.ac.uk/university-</u> <u>members/social-enterprise/</u>
 - It says to the academic that you don't have to work with Venture Capital and "men in suits," you can put in place the vehicle that you need to maximise your impact in a way that you want to do it.
- Hold events to bring business and academia together in a setting where academia feels comfortable.









Stimulating innovations Culture change and Diversity

- Humanities Innovation Challenge
- Drop-in sessions (example of what doesn't work)
- Networking
- Case studies
- Business engagement link
- An ecosystem to reflect our pipeline









Humanities Division current status



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Count of Project_ID by Type and Status

Status Status Exclusive License Launched Licensed Pre-Disclosure Prospect Spin-out/Start-up, established Spin-out/Start-up, pre-completion Prospect Under IP Check



FlexSR Flexible Speech Recognition

- Faculty of Linguistics, Philology and Phonetics
- Have developed a new methodology for speech recognition based on the way the human brain learns speech
- Two patents
- BUT
- Limited understanding of the commercial world.
- Common among most academics, particularly in the Humanities.
- This is, in effect, a traditional tech spinout, however.





Social Sciences current status



Divisional Dashboard - Social Sciences ~ Portfolio







Count of Project_ID by Type and Status

Status 🕒 Exclusive License 🕒 Launched 🔴 Licensed 🥚 Pre-Disclosure 🜑 Prospect 🔵 Spin-out/Start-up, established 🧠 Spin-out/Start-up, pre-completion 🔴 Spin-out/Start-up, pre-completion - launch to investors 🔵 Under IP Check





Oxford University Innovation's new products and new approaches.

- Lean spinout
 - spin out a company that doesn't need investment for the price of filing a patent.
 - Charge for post-spin support.
- Social enterprise spinouts.
 - Companies Limited by Shares.
 - Companies Limited by Guarantee.
- Service agreements
 - Research-backed methodology that is proven to work, published and recognised by the field.
 - Franchise the spinout/company to deliver the methodology on your behalf. Can be trademarked.
 - Charge for quality control. Withdraw the franchise if corners are being cut. This PROTECTS the methodology.



Lean Spinouts

Lean Spinouts



Spinning out a company for the price of a patent

- Key characteristics
- Standard docs
- TTO/KTO Pays for incorporation
- No investment
- Bootstrappable
- Set them up with template contracts f
- Ready to go service
- Potentially part-time
- Provide advice to grow.
- Paying for them and models for doing so



Introducing from School of Archaeology: Richard Allen



Lean Spinout

Spin a company out for the price of filing a patent



- Not all companies need investment to get going. Service-based companies for instance.
 - PalaeoPi (SocSci) is an example of a project where investment wasn't required.
- Two standard sets of documents, one for shares companies and one for guaranteed companies.
- OUI will pay for the spinout costs:
 - Legal for spinout docs
 - £2750 Lawyer X
 - £3000 Lawyer Y
 - +first template contracts ~£500 per document
 - Accountants
 - £1400 Local one who does the high street
 - £1750 Chain of accountants
- A line is put in the Articles of Association to pay that money back. You can do this in a way that enables the company to get self-sufficient first before paying it back.
- These lean spinouts may or may not be social enterprises.
- There is a £60k budget to cover this area for a year at Oxford University Innovation.









Problem that it solves and why it's a good fit for AHSS

- Brand and ethical positioning mission statements.
- Tax reliefs
- Structure and governance
- Takes resource to manage shares and membership. Advantages and disadvantages.
- The decision tree
- University involvement (inverse to mainstream?)

- Academics generally not in it for the money.
- They are motivated either by researching a problem and solving it.
- They are motivated by seeing those results making an impact on the world.
- Most don't want to deliver the impact themselves.
- Many solutions are not best delivered by a "for profit" – International Development, Geography, Law, Anthropology…
- We've developed a standard set of docs to create social enterprise spinouts. Now building capacity.





What is a social enterprise? PS: this is our definition

- A social enterprise is a business that applies commercial strategies to maximize improvements in financial, social and environmental well-being—this may include maximizing social impact alongside profits for external shareholders.
- Specifically, this purpose is enshrined in a clause (5.2) in the Articles of Association of the **business** where each of the Founders and University/OUI has the power of veto over changing it.
 - In practice, University/OUI should not agree to changing the purpose unless the Founders are completely comfortable with it.
- It is not:
 - A charity
 - Something that **won't make any money**.
- It might however:
 - Be a "not for profit"
 - Return money to the Department to do more research
 - Not "make enough money" for OSI to be interested in it.




Social Enterprises. Where they sit.



The business model spectrum revisited



Source: Adapted from J. Kingston Venturesome, CAF Venturesome, and EVPA.

What company types are we missing?





What is a Social Enterprise? Limited Companies (UK)



- There are two types of company: companies limited by shares (CLSs) and companies limited by guarantee (CLGs).
- CLSs have a "share capital", which is a nominal figure used to represent the total net assets of the company. Shares are issued to shareholders, who become the owners of the company. The shareholders' potential liability is limited to the amount of their investment.
- CLSs are divided into private companies and public limited companies; the latter are subject to particularly stringent accounting standards. Many public limited companies offer their shares to the public by being listed on the stock market.
- By contrast, CLGs do not have a share capital and the members (equivalent to the shareholders in a CLS) give a nominal guarantee to cover the company's liability, normally limited to £1. By not having a share capital, the CLG brand has been traditionally associated with charities, trade associations and not-for-profit companies.
- As both are companies, many of the features of CLSs and CLGs are the same or similar. The impact of the different legal forms is most clearly felt when considering the financing options, some of which require a share structure and are therefore unavailable to some organisations

What is a Social Enterprise? Community Interest Companies (CIC) - UK



Fundamentally, CICs are normal companies – they can be established either as CLGs or as CLSs. However, CICs have some particular features to safeguard the social mission, namely:

- A CIC has to carry out activities which fulfil a "community purpose". This purpose will be defined on applying to set up the CIC.
- A CIC also has a lock on its assets. This prevents profits from being distributed to its members or shareholders other than in certain limited circumstances (for example, a CIC which is a CLS provides the flexibility for shareholders to receive limited dividends).
- The CIC form allows for a lock on the company's assets while allowing the board of directors to be paid; for this reason, it is an increasingly popular vehicle for social enterprises where the social entrepreneur establishing the organisation wishes to remain in control and receive a salary from it. CICs cannot be charities.
- CICs are regulated by the CIC Regulator, which is intended to be "light-touch". A CIC is required to file a community interest report each year, which will include details of how it has pursued the community interest and involved stakeholders.
- CICs can be registered with Companies House in the same ways as normal companies, with the completion of an additional form setting out the community interest and how it will be pursued.

Brief recap: How the hell do you choose which one?





- Lean spinouts
- Companies Limited by Shares
- Companies Limited by Guarantee
- Community Interest Companies
- There is flexibility and you should emphasise that with this variation there are multiple correct solutions BUT
- You can make a first stab at it by asking the following 3 questions.

Question 1:



- Does the company have social or environmental objective that it wants to protect?
- Yes?
- Social Enterprise.
- No?
- Not Social Enterprise.



Question 2:



- Is it your intention to sell the company at some point in the future?
- Yes?
- Company Limited by Shares
 - If you aren't going to "exit" the company why would anyone invest in it?
 - PS: Tax saving on SEIS (50%) is greater than SITR (30%) so not a hard and fast rule.
- No?
- Company Limited by Guarantee
 - Loans, bonds and grants are your only option here.



Question 3:



• Does the company need funding to get started?

• Yes

- Bespoke spinout (which could be a Community Interest Company, but may not be)
- No?
- Lean Spinout.



3 questions means 8 potential combinations (2³)





The Oxford University Innovation Products in Social Enterprise

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- There are multiple potential company structures, but:
- We don't want to be spending ages working out which one.
- Lawyers charge a lot of money trawling through all the combinations. You also want flexibility for future tax breaks.
- Companies can convert into CICs in the future (and charities if need be) but that decision does not need to be made now.
- The biggest choice is the choice between a shares company or a guaranteed company. This should be done on the basis of whether it is likely to be an investment vehicle or not.
- Solution:
- 2 sets of standard docs for social enterprise, both of which can convert into a CIC at a later stage if need be for:
 - Companies Limited by Shares
 - Companies Limited by Guarantee



OxWater What it needs is a...

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- A box of electronics on the back of a hand pump to measure how it is being used + machine learning to infer when a pump is ABOUT to break
- This was patented EU & US
- "You could apply this to the oil industry..."
- The academics involved wanted to make a social impact and were not interested in oil.
- They started a company without our help.
- Now we are trying to help it grow.
- Idea protected but in the wrong place and there is not much point in protecting it in the place it is used.





Service Agreements and Franchises

Service agreements and franchises Interactive session – Reasoning First





Home > For University Members > Engaging with Social Sciences > Reasoning First: mathematical reasoning in Year 2

Reasoning First: mathematical reasoning in Year 2

Many children struggle with numeracy (mathematics), and fall behind their classmates at school. The Reasoning First programme, developed by Professor Terezinha Nunes and the Children Learning Research Group from the Department of Education, has been shown to have a positive impact on pupils' numeracy ability, equating to three additional months' progress. The programme is designed to promote children's quantitative reasoning, understanding the relations between numbers, and being able to use them to solve problems as part of developing their understanding of the logical principles underlying mathematics.

The programme includes online games, classroom exercises, training materials and guides. Terezinha and her team have trained Year 2 teachers from seven schools in Suffolk, introducing them to the programme, explaining the concepts, and allowing them to explore the learning activities for themselves. The Oxford team also trained a Work Group Lead from the participating Maths Hub, which in turn was supported in the delivery of the programme by the National Centre for Excellence in the Teaching of Mathematics (NCETM) and the Education Endowment Fund (EEF).

School children from these seven schools will use the programme over the next three months. The lessons include electronic resources, such as PowerPoint, which the teacher uses for whole class teaching, and online games that the children can access at school and at home. The Work Group Lead will provide further support to the teachers through a school visit during the period in which they are



Business Models

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Business Models Interactive Session

- The standard model in STEMM
- No standard business models for AHSS
 - Typically solve soft problems not hard problems/no right to exist
 - Requires time investment to work this all out for each case and people with the skills to do it.
- Examples (Chris Fellingham to lead).
- Selling to government and techniques for doing so.





Skills gaps and networks

Skills gaps and networks

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- Software, business acumen.
- 2 strategies: build team around them (requires a network) or train up academics to do themselves (may not fit with their role)
- Software: Pay 3rd party supplier expertise outside company, or bring skills into company.
 Software dev needs incentive – not always available (equity e.g. which may cause issues)
- Networks underpin both. Needs investment in time to build up. Pound shoe leather and drink a lot of red wine. Thinking laterally – alumni, previous founders and investors, OxLEP etc.





Funding

Translational Funding Seed Funding

- What do you need it for?
 - Regional coordination
 - Testing products in market before spinning out
 - Software development (no skills)
 - Startup funding for workshops to test a product
 - Workshops with regional stakeholders
 - Travel costs
- Where to get money from
 - Research councils (impact funding) lobby first.
 - UCSF broaden existing pots
- Regional coordination for pipeline
- Social impact interest? Foundations, trusts, angels etc.









<u>Home</u> > <u>UCSF</u> > The University Challenge Seed Fund (UCSF)

The University Challenge Seed Fund (UCSF)

The University Challenge Seed Fund scheme aims to assist university researchers successfully transform good research into good business, to bring university research discoveries to a point where their commercial usefulness can be demonstrated and the first steps taken to ensure their utility. The primary focus is the exploitation of science and engineering research outcomes.

Key points/focus:

The Seed Fund can help the commercialisation process in a number of ways by funding activities such as:

- access to managerial skills
- securing or enhancing intellectual property
- supporting additional R&D

Type of fund: Oxford University funds

Institute / Awarding Body:

UCSF

Amount:

£2,500 to £250,000

Next Call for Applications:

Open call, rolling deadlines, please contact Oxford University Innovation for details.

IP Commercialisation obligations:

Fund investments must offer the prospect of a financial return. Each award is made under the terms set out in the pro forma Offer Letter. The normal Decrees and Statutes will apply when

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Social Impact Translational Funding

GCRF Sustainable Impact Fund

Context

Many University of Oxford research outputs have the potential to solve social, environmental or cultural problems. To complement the toolkits and associated support services Oxford University Innovation (OUI) provides for social enterprise we launched a pilot translational fund for social impact projects – the OUI SE2020 Fund. We're delighted to say on the back of the pilot we are opening another call with funding from the Global Challenges Research Fund (GCRF).

The Fund aims to support ideas and inventions emerging from University research, which seek to address development issues with approaches to develop and implement products, processes, services and technologies in a development context. These can be relevant to any development challenge and can be aimed at the public and/or private sector.

Remit

This call for GCRF Sustainable Impact Fund is supported by the University's <u>Global Challenges Research Fund</u>. Consequently, to qualify for this call, the project must promote the economic development and welfare of developing countries (<u>DAC List of ODA recipients</u>) as its primary objective.

- Activities that may be supported include, but are not limited to:
- Proof of / feasibility studies to establish the viability of an approach
- Prototyping or demonstrators
- Scale-up testing and development work
- Generation of additional data to demonstrate the credibility of a technology or methodology (but not further research into the







ESRC Impact Acceleration Account

University of Oxford has been awarded £1.1 million through the ERSC Impact Acceleration Account to fund knowledge exchange and impact activities undertaken by researchers from April 2019 to March 2023.

The majority of funding will be channelled into academic-led impact and knowledge exchange activities, awarded on a competitive basis.

Management of the Oxford IAA is delegated to the Social Sciences Division, to administer on behalf of the University and support is available to social scientists across the institution. Prof. Mark Pollard as Associate Head (Research) will act as Academic Lead and Chair of the IAA.

Come back soon to find out the latest opportunities through ESRC IAA.

Seed funding

Find the right type of i.nvestor, don't try and get a bio-investor to pivot







Making a business unit sustainable

How to make business unit sustainable



- Charging
- Sunk costs
 - Where to get money from
 - Grants
 - Government
 - Research Councils
 - Philanthropists
 - Alumni
 - Investors
- Lean on incubator and other regional infrastructure



Sustainability

Partner up with other institutions to pool resources

- Needs infrastructure and support.
- More "organic" companies and social enterprises benefit from a fully-functioning ecosystem.
 - Share best practice
 - Combine pipelines
 - Expand networks
 - Pool talent
 - Channel funding
 - Channel resources
- Does your university have an incubator?
 - We are expanding our incubator's services
- Massive outreach from us to the community and other universities





Potential sources of target income for TTO/KTO Short answer: no up-front ways of charging

- A percentage of an IP-service bundle. A franchise.
- A percentage of revenue when a company grows to a particular size to go back into the pot so we can do it again.
- Consensus in Europe appears to be that this is capped. Up to you!
- Grants from the central University and elsewhere.

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How income model looks



- You are going to lose money in the short term. There is no way to avoid it.
- The question is how quickly you can become sustainable and what model best fits your institution.
 - Do you want to make a profit?
 - Do you want to maximise impact?
 - Are the two different?







Worked Example: An ethics questionnaire.







Curry, O. S., Mullins, D. A., & Whitehouse, H. (2019). Is it good to cooperate? Testing the theory of morality-as-cooperation in 60 societies. *Current Anthropology*, 60(1).

Same values, different priorities





Seven moral rules

	Family	 Help your family Love, care, protect 'Blood is thicker than water'
	Group	 Help your group Loyalty, unity, solidarity 'United we stand, divided we fall'
	Reciprocity	 Return favours Trust, reciprocity, gratitude 'One good turn deserves another'
	Bravery	 Be brave Heroism, courage, generosity With great power comes great responsibility'
	Deference	Respect your superiorsHumility, obedience'Blessed are the meek'
	Fairness	 Divide disputed resources Equity, bargaining, compromise 'Let's meet in the middle'
TRESPASSING	Property	 Respect others' property Property rights, theft 'Possession is nine-tenths of the law'



Business has shown interest. There is a market



Example I:A call centre business



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Effective Ethics Meet Oliver

- Developed a questionnaire asking questions about a person's ethical construct.
 - Questions not hugely unexpected quite obvious
 - Uses anthropological theory to characterise the moral framework based on the answers.
- Could it be protected by a patent?
- How best to protect the questionnaire?
 - Wants to protect as he talked about it at a conference and people were interested in his outcomes.
- Where is the value?





What could you do with it?



How to be better

..

- Targeted training
- Bespoke operational change
- Code of ethics
- Moral messaging
- Effective CSR



- What are the options?
- Is there IP? If so, what is it worth?
- What questions do you need to ask to get the most effective outcome?
13 - 16 May, Oxford

Day 3 – Spin-offs & Entrepreneurship

UP NEXT....

Case study exercise session





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Lunch

12.45 – 13.45





13 - 16 May, Oxford

The Next AESIS Events



AESIS





17-18 October 2019 Washinton DC, United States

The Annual Conference: Impact of Science

Understanding causalities, correlations and pre-conditions for the different dimensions of societal impact of science

The Next SSH Conference: Impact of Social Sciences & Humanities On Society

Optimising and assessing societal impact of social sciences and humanities by engaging with government, industry and the public as a whole

13 - 16 May, Oxford

Day 3 – Spin-offs & Entrepreneurship

UP NEXT....

Creating Value at the Social Science Research Park (SPARK)

Rick Delbridge







Creating value at the Social Science Research Park: Interdisciplinary research networks and the co-creation of knowledge

Professor Rick Delbridge Dean of Research, Innovation & Enterprise Cardiff University

http://www.cardiff.ac.uk/innovation/campusinvestment/innovation-central



- Introducing SPARK
- Why build a physical space?
- What is the ethos and mission of SPARK?
- How does this fit with an Innovation and Enterprise agenda?
- Practical steps in creating value, nurturing collaborations and business development



Innovation Campus – phase 2 (exp. mid 2021)

Innovation Central:

- Social Science Research Park
- Innovation Centre

Translational Research Facility:

Cardiff Catalysis Institute

Institute for Compound Semiconductors



The Significance of Space in Knowledge Creation, Innovation and Inter-disciplinarity

Nesta...

SOCIAL SCIENCE PARKS SOCIETY'S NEW SUPER-LABS

Adam Miss and Mick Definition

Throughout history people have created new spaces for the production of knowledge. This is because, in general, the creation of human knowledge, notwithstanding the Eureka moments of extraordinary individuals, is fundamentally a social process - an exchange of ideas which needs a forum, a context, a place in which to work, from the libraries and academies of classical antiquity and the monasteries of the Middle Ages, to the universities and innovation labs of today...

Innovation requires the production and communication of tacit knowledge, an interchange between two or more people involving dialogue and debate, challenge and co-operation. This works best when people are in the same physical space, working on a shared problem, and have formed a sense of trust and shared enterprise or 'communal exchange'



The Significance of Space in Knowledge Creation, Innovation and Inter-disciplinarity

Nesta...

SOCIAL SCIENCE PARKS SOCIETY'S NEW SUPER-LABS

Adam Price and Res Dellarday

At the centre of SPARK as a concept is the idea of co-creation: people working together across disciplines and across professional boundaries to study, learn about and solve some of the most pressing problems we face today. The first necessary condition for successful collaboration is physical proximity. Thomas J. Allen's (1977) famous discovery at MIT in the 1970s, the so-called Allen curve, demonstrated an exponential relationship between distance and the regularity of communication between engineers: someone six feet away from you was four times more likely to talk to you regularly than someone 60 feet away, someone on a different floor was unlikely to speak to you, and someone in a separate building you probably never met at all. Proximity influences not just the quantity, but also the quality of interactions.



What are the expected benefits of our innovation approach?







- Translation of research excellence into economic and social benefits and development of an enterprising and innovation-focused culture
- A great vehicle to generate impact, enhancing our academic profile and local, UK and international reputation – responding to global issues
- Better opportunities for student engagement with industry and support for entrepreneurship and enterprise education
- A significant contributor to the city-region and national economic development effort
- Development and enhancement of the University's physical infrastructure to encourage the co-location of RD&I activities of our strategic partners
 - **Distinctive facilities to foster high-quality collaborations and partnerships** with business, industry, government organisations and other HE institutions



The Role of Universities and Notions of Value

Various typologies and models of university 'engagement' have been devised in an attempt to identify the best ways of capturing the relationship between the 'engaged university' and its regional environment:

- The **ivory tower** model whereby the institution is detached, which encourages 'retreat from the world to optimize considered reflection';
- The **non-partisan** model in which the institution is not totally detached but is circumspect about its involvement 'being "above" the conflict is seen as safer than being "drawn into" the conflict';
- The **service** model whereby the institution takes a paternalistic approach to its engagement ensuring that the 'power, status and discretion rest exclusively with the institution';
- The **outreach** model which is similar to the service model except that there is a more organised approach to engaging with the community, although 'knowledge transfer is seen to be largely one way'.
- The **engaged** model, which is based on 'equal exchange between the academy and the community, and rooted in a mutually supportive partnership that fosters a formal strategic long-term collaborative arrangement'.



Growing Significance of the Societal Impact of Research

What is Research Impact?

Impact was introduced to the Research Excellence Framework (REF) in REF2014. Impact is defined as an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia. Considered a beneficial addition to the REF and will be worth 25% in the REF2021 assessment. This has informed university policy and strategic mission statements. It has also increasingly shaped science policy narratives and (to some extent) funding...

New funding stream for 'Impact Acceleration'

REF2021

Assessment of case studies presenting the underpinning research, evidencing the impact and describing the pathways to delivering that impact

Previous cases publicly available https://impact.ref.ac.uk/casestudies /



Valuing Research: The Various Forms of Research Impact

Beneficial changes in:

- **1. Understanding and awareness**
- 2. Attitudes
- 3. Economy
- 4. Environment
- 5. Health and wellbeing
- 6. Policy
- 7. Other forms of decision-making and behaviour change
- 8. Culture
- 9. Other social impacts
- **10. Capacity or preparedness**

https://www.fasttrackimpact.com



Underpinning Assumptions

Importance of:

Interdisciplinary research Societal-challenge focus Collaboration and co-creation

Physical proximity Inclusive conception of 'value' and 'impact'

Building from strengths 'Fit' with local context Wider institutional, policy and funding context



Underpinning Assumptions

Importance of:

Interdisciplinary research Societal-challenge focus Collaboration and co-creation

Physical proximity Inclusive conception of 'value' and 'impact'

Building from strengths 'Fit' with local context Wider institutional, policy and funding context How does this list compare to your key assumptions?

Anything missing?



Innovation Central - Innovation Centre





The Innovation Centre will be the University's front door to business. It will locate strategic partners alongside start-ups, the University's business engagement, student enterprise and other entrepreneurship activities.

- Recreational spaces
- Exhibition space
- Visualisation suite
- Computational social science lab
- Secure data facilities
- Behavioural lab
- Innovation lab

- 2,900m² of lettable space
- 29 office units
- 8 laboratory units
- Shared facilities laboratory based
- Hot desking
- Meeting rooms
- Social/catering facilities



Innovation Central - Social Science Research Park (SPARK)



SPARK will co-locate researchers with key stakeholders, supporting and developing innovative knowledge-based clusters (for example, crime and security, civil society, public health and public services innovation).

 Concept developed with strategic partners including Nesta, Cardiff Council, Welsh Government, Office of National Statistics, IBM and the ESRC.



- To generate economic, environmental and social value through codeveloping innovative and effective solutions to societal challenges.
 - Will create a global leader of translational social science research.



"... partnerships ... co-creation ... a physical home ..."



Social Science Research Park, Cardiff: <u>http://www.cardiff.ac.uk/social-science-research-park/facilities</u> Venture Lab Humanities, Amsterdam: <u>https://www.folia.nl/international/104446/venture-lab-humanities-causes-controversy</u>





Are your organizations creating new spaces for public engagement, innovation, impact and IDR?















Space helps but is not sufficient





- New ways of working
- Implications for academic staff?
- Implications for professional services?
- Implications for university systems and processes?
- Implications for collaboration and partners?



Delivering Societal Problem Focused, Interdisciplinary Research

- Collaboration across heterogeneous sets of actors
- Shared problem definition
- Shared language and theoretical concepts
- Iterative processes of dialogue, research and intervention across research partners
- Responsive and agile support

• Investing in the spaces and systems needed to deliver a social science-led approach...



How will SPARK work?





- Physically bring together theorists and practitioners in new ways to spark the ideas that will lead to transformational change
- Prototype solutions to societal challenges at pace, allowing new ideas to be tested in situ
- Produce knowledge and public value which is social science-led and oriented to societal benefit
- Catalyse more innovation-oriented social science and a more socially-oriented system of innovation
- Give practitioners new ways of meeting the needs of a changing society at grand challenge and 'mission-scale'

Developing a Mission-based approach to addressing Societal Grand Challenges



For example







Public Services Innovation Lab for Wales Labordy Arloesedd Gwasanaethau Cyhoeddus Cymru

SECIPHer

Development and Evaluation of Complex Interventions for Public Health Improvement A UKCRC Public Health Research Centre of Excellence



Children's Social Care Research and Development Centre

Canolfan Ymchwil a Datblygu Gofal Cymdeithasol Plant W/SERD



Crime and Security Research Institute Sefydliad Ymchwil Trosedd a Diogelwch

Wales Centre for Public Policy Canolfan Polisi Cyhoeddus Cymru



Sustainable Places Research Institute

Sefydliad Ymchwil Mannau Cynaliadwy CARDIFF UNIVERSITY PRIFYSGOL CAERDY

Data Innovation Research Institute

Sefydliad Ymchwil Arloesedd Data



ESRC Wales Doctoral Training Partnership Partneriaeth Hyfforddiant Doethurol Cymru ESRC



Welsh Economy Research Unit

Yr Uned Ymchwil i Economi Cymru





How significant is interdisciplinary, problemfocused research?

- Research funding initiatives
- Societal Challenge programmes
- Impact Accelerator Funding (beyond KE)
- Catalyst for new ways of working
- Opening up new partnership opportunities



Small group discussion

- How does this compare to practices at your institution?

- Would such an approach work at your institution, in your context?





- Brings together Cardiff University social scientists and Nesta's innovation expertise
- Helps public service organisations change their capacity and systems for supporting the process of innovation and measuring change
- Helps people to develop and test ideas, including through new innovation networks and funds in Wales.
- Studies the patterns, causes and impacts of public service innovation



Public Services Innovation Lab for Wales Labordy Arloesedd Gwasanaethau Cyhoeddus Cymru





ARLOESI ER MWYN ARBED INNOVATE TO SAVE

What it is

Innovate to Save is a new partnership between Welsh Government and Y Lab (itself a partnership between Cardiff University and Nesta), to accelerate innovation in public services in Wales.

The programme is ambitious - seeking to tackle some of the most complex issues currently facing our public services - and at the same time generate cashable savings.

The 'Innovate to Save' model is new, blending different kinds of finance and intensive support to achieve this goal.

What we're doing

Innovate to Save runs across three phases

Pre-Application Support February - May 2017

Helping to develop high-quality, innovative applications

Briefing sessions - providing information about the programme and a chance to meet the team

Practical workshops - to provide advice, tools and support for ideas in development

Support from the Programme Delivery Team - to facilitate new partnerships, critique and develop ideas and provide guidance and information about the programme

For more info visit: bit.ly/I2SWales

e-mail: angharad.dalton@nesta.org.uk or follow: #I2SWales Research & Development July 2017 - January 2018

Enabling, prototyping, testing, evaluation and iteration of novel, risky and ambitious ideas

Grant funding between £5,000 and £15,000

Research and innovation support from the Y Lab team

Non-financial support and workshops covering a range of topics including, modelling savings, capturing and analysing data and managing organisational change



Implementation February 2018 onwards

Supporting the implementation, evaluation and scaling of new ideas that show the capacity to improve services and generate savings

Interest free, unsecured loan finance

Research and innovation support from the Y Lab team

Non-financial support and workshops covering a range of topics including, modelling savings, capturing and analysing data and managing organisational change





CARDIFF UNIVERSITY PRIFYSGOL CAERDYD LOGIC MODEL - WHAT ARE THE INTENDED OUTCOMES AFTER EACH OF THE PROGRAMME STAGES AT THE FOUR LEVELS (Organisation, Network, Individual, Idea)







The 'Wheel of Innovation'





Key Principles of the 'Innovation System'

- Place-based and informed by institutional priorities and local context
- Applied with an inter-disciplinary emphasis on societal challenges and public value
- Collaborative with local, national and international partnerships at the heart
- Importance of social relationships, a sense of shared enterprise and understanding
- Investment in shared facilities and spaces, an emphasis on co-location of partners
- Ambitious and innovative!



Creating Value through Collaboration and Partnership

- What are the implications of co-location?
- Can we move beyond a transactional approach?
- Who to partner with?
- Expectations of them, and they of us?


Principles of Membership/Co-location

•Overarching strategy is that there should collective interest to centres/institutes and the organisation should provide benefits to multiple centres/institutes within SPARK

•Contributors to research, dissemination and impact activity

•Due diligence (e.g. there may be organisations that we do not want to associate ourselves with)

•Potential for linking of resources (e.g. practice, policy delivery, contributions in-kind)

•Relevant expertise (e.g. in research cycle. E.g. think-tanks). Dissemination partners

•Potential for joint authorship and co-investigators on research funding applications

Potential for international collaboration

•For larger organisations, the expectation would be that they would occupy a space within the building that can be used by a variety of different people from their organisation



Perceived benefits for collaborators

- Simplifying the way that organisations access our research and researchers
- Research collaboration and access to expertise
- Building capability and capacity
- Joint posts
- People exchange opportunities (both ways)
- Access to CU resources/hiring of facilities
- Graduates
- CPD



Core components of a membership model

Value-based approach...

- Tiered membership (eg virtual, hot-desk, dedicated space)
- Menu of options (eg PhD sponsorship, guest lectures, access to seminars, research, students)
- Nurturing a sense of community

Owned and managed by SPARK?



An Example: National Composite Centre, Bristol University

- 6 multinational organisations
- Individual and Collaborative member directed research
- All individually represented on the Centre Board

Tier 2

Tier 1

- 20 large and medium sized organisations
- Individual member directed research
- All represented by 1 representative on Centre Board

Associate

- c20 organisations (mainly SMEs)
- No fee, but tend to provide in kind contribution to same value as Tier 2 membership





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The makers of Business Model Generation and Stralegyzer



Final Plenary Discussion

- Challenges in engaging partners?
- Incentives in encouraging co-creation?



Business Development in the Social Sciences and Humanities

13 - 16 May, Oxford

Day 3 – Spin-offs & Entrepreneurship

UP NEXT....

Coffee & Tea Break

15.15 - 15.45





Business Development in the Social Sciences and Humanities

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UP NEXT....

Interactive Exercise on connecting regional and local stakeholders

Rick Delbridge

















Interactive Exercise on connecting regional and local stakeholders

A place-based approach to understanding opportunities in your local innovation ecosystem







Cardiff University

- Located in the capital city for Wales, we are an ambitious and innovative university with a bold and strategic vision, international outlook and strong civic mission.
- Our world-leading research, including our £100M portfolio of research grants, was ranked 5th amongst UK universities in the 2014 Research Excellence Framework for quality and 2nd for impact.
- We provide an educationally outstanding experience for our 30,000 students (87% student satisfaction) and our graduates are highly sought-after by employers (95% graduate employability).





Cardiff Business School - The Public Value Business School

- We are a world-leading, research-intensive business and management school with a proven track record of excellence across the full range of accounting, economics, management, operations and strategy.
- We are proud to be the world's first Public Value business school, committed to delivering both economic and social improvement through interdisciplinary teaching and research that tackles the grand challenges facing the world today.
- By embracing interdisciplinary working with academic colleagues, business partners and the third sector, we believe we can help find solutions to a range of social ills and reframe how people think of business management.





Who are our key local partners?

- Welsh Government
- Cardiff Council and Cardiff City Region
- > NHS
- BBC Wales
- Local Authorities
- Future Generations Commissioner
- Office for National Statistics
- > Admiral Insurance
- > IQE





- Objectives of the fund
- The high level aims of the Strength in Places Fund are:
- To support innovation-led relative regional growth by identifying and supporting areas of R&D strengths that are:
 - driving clusters of businesses across a range of sizes that have potential to innovate, or to adopt new technologies;
 - in order that those clusters will become nationally and internationally competitive.
- To enhance local collaborations involving research and innovation. Building on the underpinning regional economic impact role of universities, research institutes, Catapults and other R&D facilities (such as Innovation and Knowledge Centres IKCs); and engaging those businesses at the forefront of delivering economic growth through innovation within the identified economic geography.





- The specific objectives for the SIPF are:
- Funded activities contribute towards significant, relative regional economic growth we define 'relative' economic growth as having a significant impact locally that closes the gap between that region and the best nationally.
 - These activities must be in line with UKRI's mission, where the focus is on supporting those businesses and research
 organisations at, or near to the frontier of the economy.
- Excellent research and high-quality innovation is completed, or underway as a result of funded proposals.
- Collaborations between local businesses, research organisations and local leadership are enhanced as a result of the funded proposals.
- The evidence base around the impact of locally targeted R&D spending in the UK is improved. This will be assessed from a programme-level perspective.
- Funded proposals deliver good value for money relative to the area being supported, and in terms of additionality.





- Wales
- CS Connected
- Lead organisation: Cardiff University
- The semiconductor industry is one of the most productive sectors of the global economy; in the US its contribution to real economic growth was \>7x its share of nominal GDP (Semiconductor Industry Association, 2014 Review). It punches above its weight in terms of driving innovation, and the technology underpins high value manufacturing supply chains that are becoming increasing important for national self-sufficiency. Our SIP project will consolidate a rapidly emerging Compound Semiconductor (CS) Cluster in South Wales, and drive new linkages with wider UK industry.



Cardiff Business School

Ysgol Busnes Caerdydd



- Since the vision was defined in 2015, a wide range of new initiatives have been announced with an astounding sense of collective purpose and pace of delivery:
- 2015
- Announcement of new Institute for Compound Semiconductors with a Translational Research Facility on the Cardiff University Innovation Campus to house \>100 researchers by 2020, supported by UKRPIF, ERDF, and WG. Establishment of Compound Semiconductor Centre Ltd, a Joint-venture between Cardiff University and IQE Plc with 78 staff dedicated to CS materials research.
- 2016
- Announcement of the Compound Semiconductor Applications Catapult, which will scale to ~100 highly skilled applications engineering specialists by 2020. Award of the EPSRC funded Future Manufacturing Hub in CS Materials, led by Cardiff to address the challenges of manufacturing scale up of novel CS technology.
- 2017
- Establishment of a CS Foundry as the first flagship project of the Cardiff Capital Region City Deal, to house a large-scale CS materials foundry operated by IQE Plc (creating a further 500 direct highly skilled jobs by 2023) and the HQ of the CSA Catapult. Acquisition of a Silicon wafer foundry by a local consortium backed by Welsh Government with a view of deploying capacity to CS activities. The facility was designated for closure in 2017 by its then owner InfineonAG, hence this deal saved 470 highly skilled jobs in a new entity called Newport Wafer Fab.
- The project will accelerate the growth of the Cluster by adopting an innovation-led economic growth approach, focused on wealth creation opportunities and aligned to the needs of businesses in the region.
- CSConnected will focus on science and innovation support underpinning the chip-scale integration of multiple components in Optoelectronics, Power and 5G; 2. Provision of training to enhance skills across the region through a CS Skills Academy collaboration between HE & FE; Establishing the Cluster on the international stage by attracting direct foreign investment within the CS supply chain.



Interactive session

Working in pairs:

- Identify the key characteristics of your institution
 - research strengths, facilities, networks, capacity to innovate
- Identify the key local partners
 - sectors, facilities, networks
- Identify an opportunity/mission/societal challenge that is relevant to your institution and your region
 - nature of the opportunity, types of value to be created, resources and capabilities needed
- Develop the initial steps in exploring this opportunity
 - who will be the key collaborators (internally and externally), what relationships and resources are in place, what resources are potentially available, what mechanisms are needed...?

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UP NEXT....

Recap & remaining questions

Chris Fellingham





Business Development in the Social Sciences and Humanities

13 - 16 May, Oxford

The Next AESIS Events



AESIS





17-18 October 2019 Washinton DC, United States

The Annual Conference: Impact of Science

Understanding causalities, correlations and pre-conditions for the different dimensions of societal impact of science

The Next SSH Conference: Impact of Social Sciences & Humanities On Society

Optimising and assessing societal impact of social sciences and humanities by engaging with government, industry and the public as a whole