

(Ideal) Impact Implementation

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Considerations when pursuing an Impact agenda [1]

- What is driving your focus on impact?
 - Is there a government or institutional policy requirement for you to support or consider impact and ensure is it *presented* ?
 - Do you wish to use the knowledge about impact to inform future research/ investment decisions to *increase* the impact ?
- The source of the drive towards impact will have consequences:
 - If organisational or external then this will influence funding (ie the likelihood and level of, and access to)
 - If the drive is individually focussed then it is likely that funding will need to be generated as part of a research/innovation programme

Considerations when pursuing an Impact agenda [2]

- Adopt a staged approach, don't try and address all the challenges/issues associated with impact on one go.
- Some aspects of the impact agenda should be straightforward but many organisations still do not have sufficiently effective mechanisms, organisation processes, or staff engagement/reward systems to maximise impact. Fix these problems first.
- Do what can be done quickly and target areas of an institution if there are limited resources.
- Don't be reticent about using impact indicators
- Remember 'best is the enemy of the good' (Voltaire 1770 - quoting an old Italian proverb)

Considerations when pursuing an Impact agenda [3]

- Adopt a sector based approach to impact
 - This is not necessarily the same as disciplinary or faculty focussed
 - Multidisciplinary working is essential for success
 - Most likely to enable access to post-research funding
- Ensure that success in Impact is appropriately rewarded:
 - Try to ensure that the pursuit of impact is 'mainstreamed' and not seen as an 'add-on' activity
 - Be aware of the risks of award ceremonies and 'impact' prizes
 - Embed impact in promotion criteria to senior academic posts
- External organisations and outsourcing can make an essential contribution to success in impact

Impact Indicators

Impact Indicators

- Consider the activity for which you wish to measure impact; this will influence the impact indicators you may choose to use, if you wish to be selective
- For example in a University some indicators of impact (eg the number of requests or interactions with external organisations), may not distinguish between the impact of teaching, research, or specialty experts. It will however be an indicator of impact of the overall University itself.
- Use accessible data and verifiable data
- Start by considering/measuring some aspect of impact using the straightforward indicators
- Ideally indicators should be measured prospectively

Lead Indicators and Qualifiers

Lead indicators reflect the opportunity to create impact eg:

Number of patents

However these can obscure the actual situation. It is possible to have an extensive portfolio of patents which have not been licenced or sold, and therefore have actually not produced any impact. Hence there is a need for *qualifiers* for lead indicators which become important to reflect impact eg:

Number of disclosures

Number of patent applications

Number of patents granted (National or International)

Annual income of patent portfolio from IP licences

Five yearly income from the sale of patents

Lead indicator:

Contribution to Policy

Qualifiers:

The level of impact that the policy could have (ie international, national, regional or professional policy)

Research evidence or opinion based contribution?

Is the contribution one of many references or key evidence which underpins components of the policy?

Contribution to the writing/editing of the policy?

Author of the policy?

Role in implementation of the policy

All this can be validated by the organisation responsible for creating the policy

Surrogate Indicators

- Some data/information relevant to impact are either confidential, difficult to acquire, and often are generally not verifiable.
- Use an accessible and verifiable indicator that is a suitable surrogate for this parameter
- An example is job creation, which would be a valuable impact indicator, but it is very difficult to access.
- A useful *surrogate indicator* is the number of new companies/organisations

Lead indicator:

Number of new companies/organisations

Qualifiers

Number of new companies/organisations with a financial turnover of more than €100k per annum

Number of new companies/organisations with a financial turnover of between €100k and €500k per annum

Number of new companies/organisations with a financial turnover of over €500k per annum

This information is accessible from published company/organisational accounts

Levels of Impact Indicators: Sector Specific in Medicine and Health

Sector Specific Impact Indicators – Medicine and Health

High Level Indicators – Examples

- Epidemiologically adjusted Mortality Rates
- QALYs (Quality Adjusted Life Years)
- Human Development Parameters (IQ etc)
- Clinical Effectiveness (this has a specific definition in medicine and health)
- Economic Cost Effectiveness
- Change in national policy

All supported by high quality evidence

Sector Specific Impact Indicators – Medicine and Health

Intermediate Level Indicators – Examples

- Clinical Efficacy (this has a specific definition in medicine and health)
- Measurable change in clinical practice (and its magnitude)
- Survival rates
- Patient response and reaction (eg reduced discomfort/stress)
- Cost reduction
- Change in local/regional policy

All should be quantifiable and verifiable

Sector Specific Impact Indicators – Medicine and Health

Preliminary Level Indicators – Examples

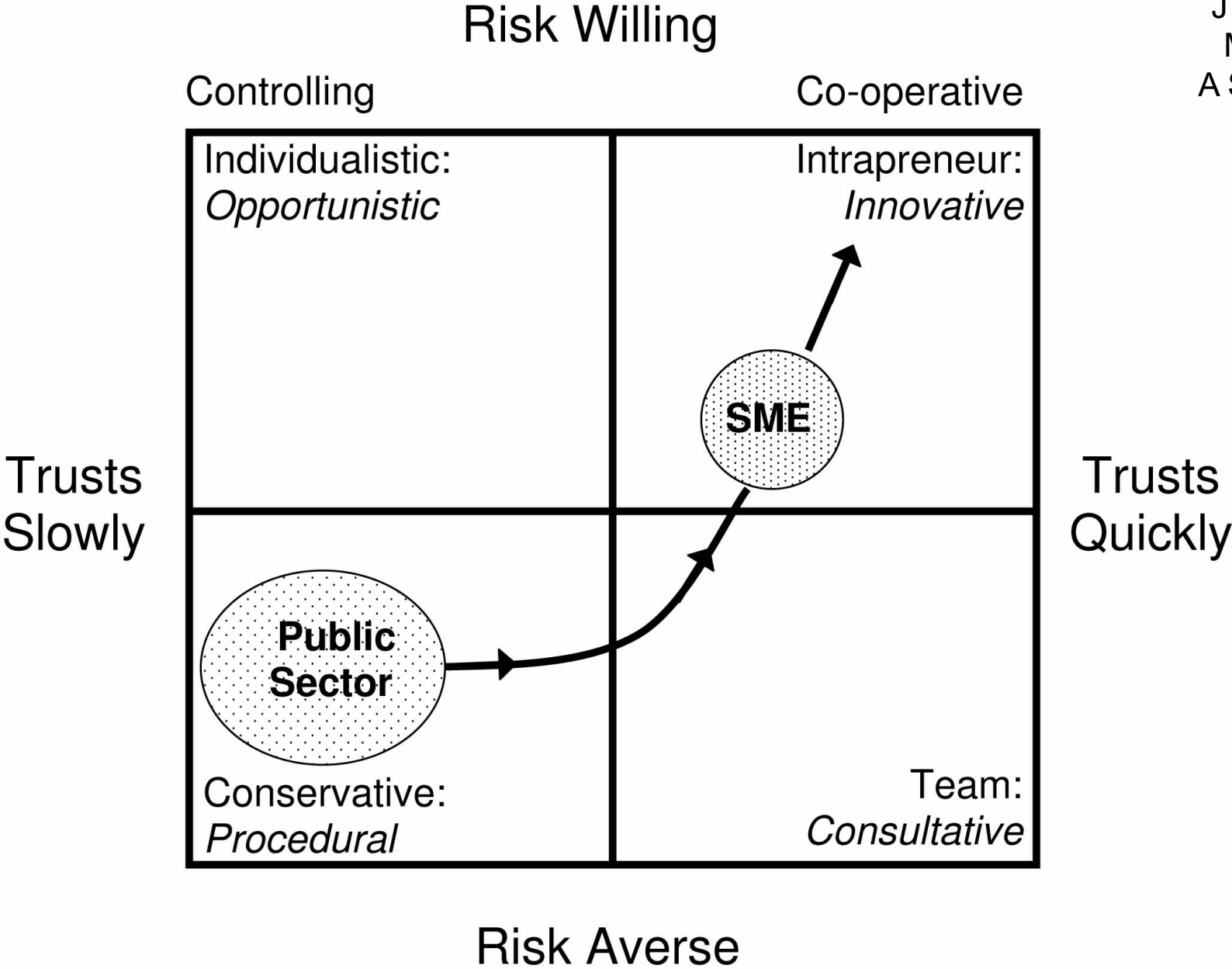
- Potential clinical efficacy
- Potential change in clinical practice
- Preliminary changes in survival rates
- Preliminary patient response and reaction
- Predicted cost reduction
- Change in departmental/institutional policy

These measures of ‘impact’ are unlikely to be rigorously quantifiable or verifiable

Organisational Psychology

Organisational Behaviours

- Characteristics of organisations which have underpinned their success for many decades, can be a barrier to new ways of working.
- Activities such as knowledge transfer, multidisciplinary working, impact are therefore treated as an ‘add-on’ with the status of a limited time initiative, with the consequence that it does not become embedded in the organisation, except occasionally in the very long term.
- A University or Institute’s governance framework, value system and business model may be ideally suited to support traditional research, but may be far less suited for the pursuit of many of the components of the impact agenda.



Option 1: Change the University or Institute's governance framework, value system and business model to make them more suited to the pursuit of the impact agenda.

> Impractical, and makes no business sense.

Option 2: Create, or adapt an existing unit, within the University or Institute to address the challenges/restrictions that are present within the organisation.

> Common approach, but does not resolve most problems

Option 3: Create a separate stand alone organisation with the appropriate governance structure and business model to facilitate selected key components of the impact agenda.

> I suggest this is an option worthy of consideration, particularly if a sector specific approach is adopted

The importance of the business model

- If you work in a large organisation you will always hear the phrase ‘there’s no money’.
- This is not true, there is always money. What is meant is that there is no money available to be spent on what you are proposing.
- If there is alignment between an organisation’s business model and your proposal, then funding might be forthcoming.
- Don’t assume that any new *strategy* or *policy* is necessarily aligned with the underlying *business model*.
- To pursue effective knowledge transfer / commercialisation / impact, an organisation was needed with the right business model.

**Creation of an independent 'not for profit'
company to stimulate impact**

The problem in 2000

- In the Medical and Healthcare Sector, large amounts of research/innovation activity was not resulting in useable output and therefore no obvious patient benefit.
- This was true in Universities, Hospitals and University Teaching Hospitals
- There were many obvious organisational barriers which restricted such activity
- There was also lack of corporate support (ie it was not a core activity and therefore had a low priority) and little or no in-house expertise for such activity
- As ever, there was no money, because this activity did not fit in with either a University's or Hospital's business models.

Societal Impact

More

- ✓ ● Stronger economy
- ✓ ● New companies
- ✓ ● Exports
- ✓ ● Jobs
- Stronger society
- ✓ ● Better Health
- Better Education
- ✓ ● Independence in old age

Less

- Inequalities
- Poverty
- ✓ ● Sickness and disease
- ✓ ● Unemployment
- ✓ ● Social care burden
- Crime/violence/terrorism
- Pollution
- Climate change



medipex[®]

improving patient care

Medipex formed in 2004

- 5.5 million population
- 15 Hospitals, including the 2 largest teaching hospitals in Europe
- 100,000 employees across the healthcare sector
- €6.8 billion annual spend
- 9 universities
- Combined annual health R&D income > €102 million



Medipex Business Model

- Medipex's 'not for profit' company structure enables it to be accepted as a catalyst for innovation by both the public and private sectors, and trusted by investors
- Overseen by a Board of experienced Non-Executive Directors using a private sector governance model

MA Smith and R Clark; Commercialisation of innovations from the UK national health service; Int J Technology Transfer & Commercialisation 2010, 9(3), 238 - 254

MA Smith and AP Starkey; The utilisation of private sector governance paradigms for the development and implementation of innovations in the public sector; Innovation Science 2010, 2(3), 103 – 111

- It has operate successfully and sustainably since 2004, and has credibility with commercial companies, including SMEs, industry, hospitals, community health organisations, universities and specialist professionals



Medipex

Identify ideas

Assess ideas

Develop ideas

Commercialisation
strategy

Funding Assistance

Project management

Business Support



Commercial sector
Medical & healthcare
Manufacturing



Public Sector
Hospitals & Universities
Community Health



Specialists
Law, Finance, IP,
Research

- Medipex supports the development, protection and commercialisation of medical and health related innovations
- Supports the development and protection of non-commercial innovations
- Provides independent and impartial advice to hospitals, community healthcare, organisations, universities and industry
- Supports partnerships and networks
- Develops relationships with potential investors, licensees and funders
- Seeks to make a significant and positive impact on both health and the economy.

Medipex Activities

Turning ideas into new products and services

- Identify ideas and support Innovation Strategies in Organisations
 - Innovation groups and Innovation Champions
 - IP policies and processes
 - Captures new ideas of potential commercial value
 - Innovation Competition
- Assess new ideas
 - Verifying clinical need
 - Review the evidence underpinning the innovation
 - Consider the IP landscape including freedom to operate
 - Market research and competitor analysis

Medipex Activities

Turning ideas into new products and services

- Development of innovative idea
 - Advise on the need for further research/investigation
 - Guide inventors in the need for development required before commercialisation
 - Identify and support partnerships
- Commercialisation strategy
 - IP advice and protection
 - Product development plans
 - Advice on regulatory affairs and clinical evaluation
 - License or company formation
 - Input into business plans

Medipex Activities

Turning ideas into new products and services

- Assistance with obtaining funding
 - Preparation of grant or seed-corn funding applications
 - Links with external investors and other larger funding organisations
 - Identification of commercial partners

Medipex Activities

Turning ideas into new products and services

After a commercial deal and/or funding is secured, Medipex can still bring value to a project:

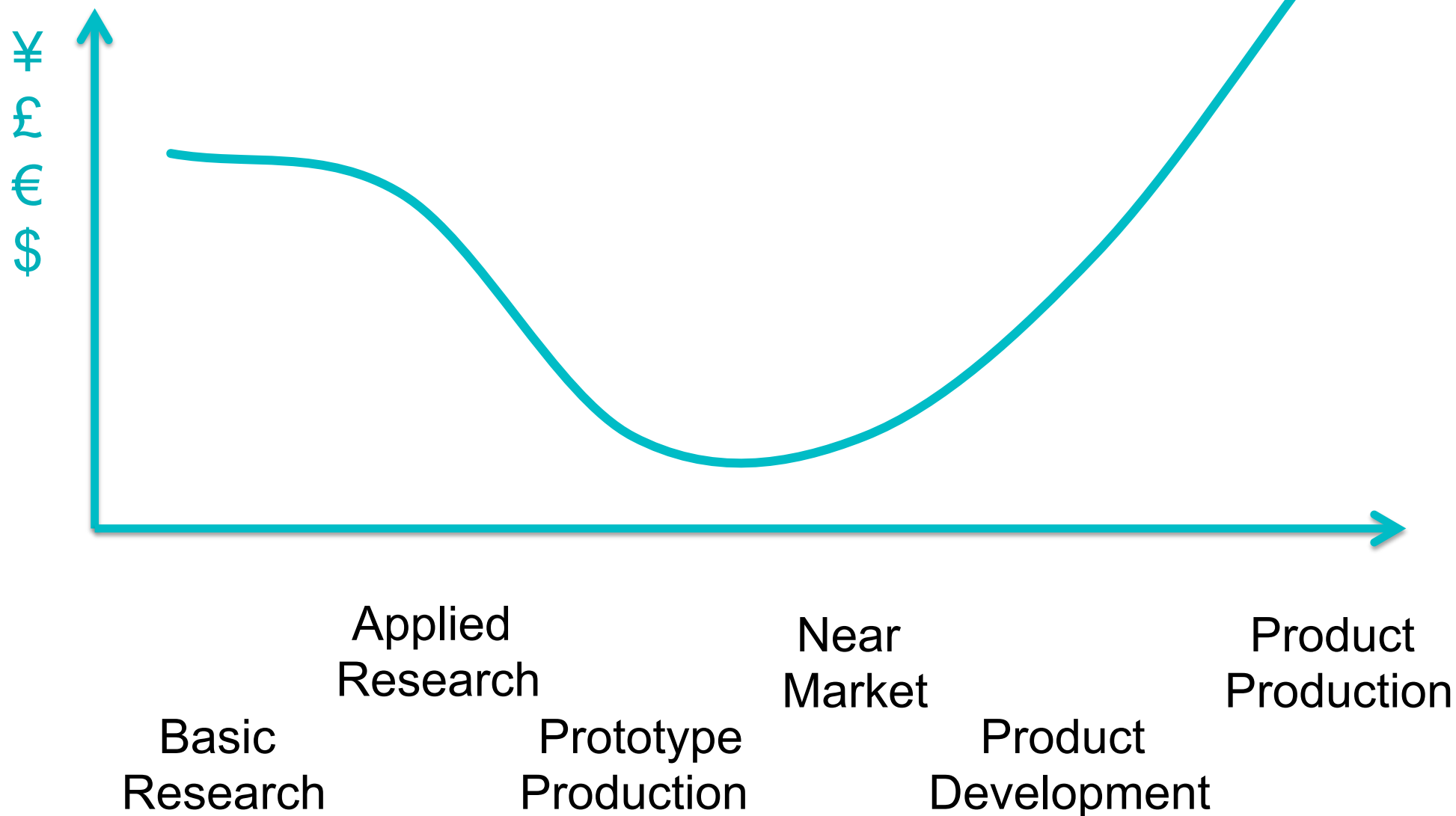
- Project Management:
 - Medical device product development
 - Technical documentation and risk management
 - Pre-clinical and clinical investigation
- Business Support
 - Sales & Marketing
 - Contract management
 - Investment and growth support

Investor Liaison

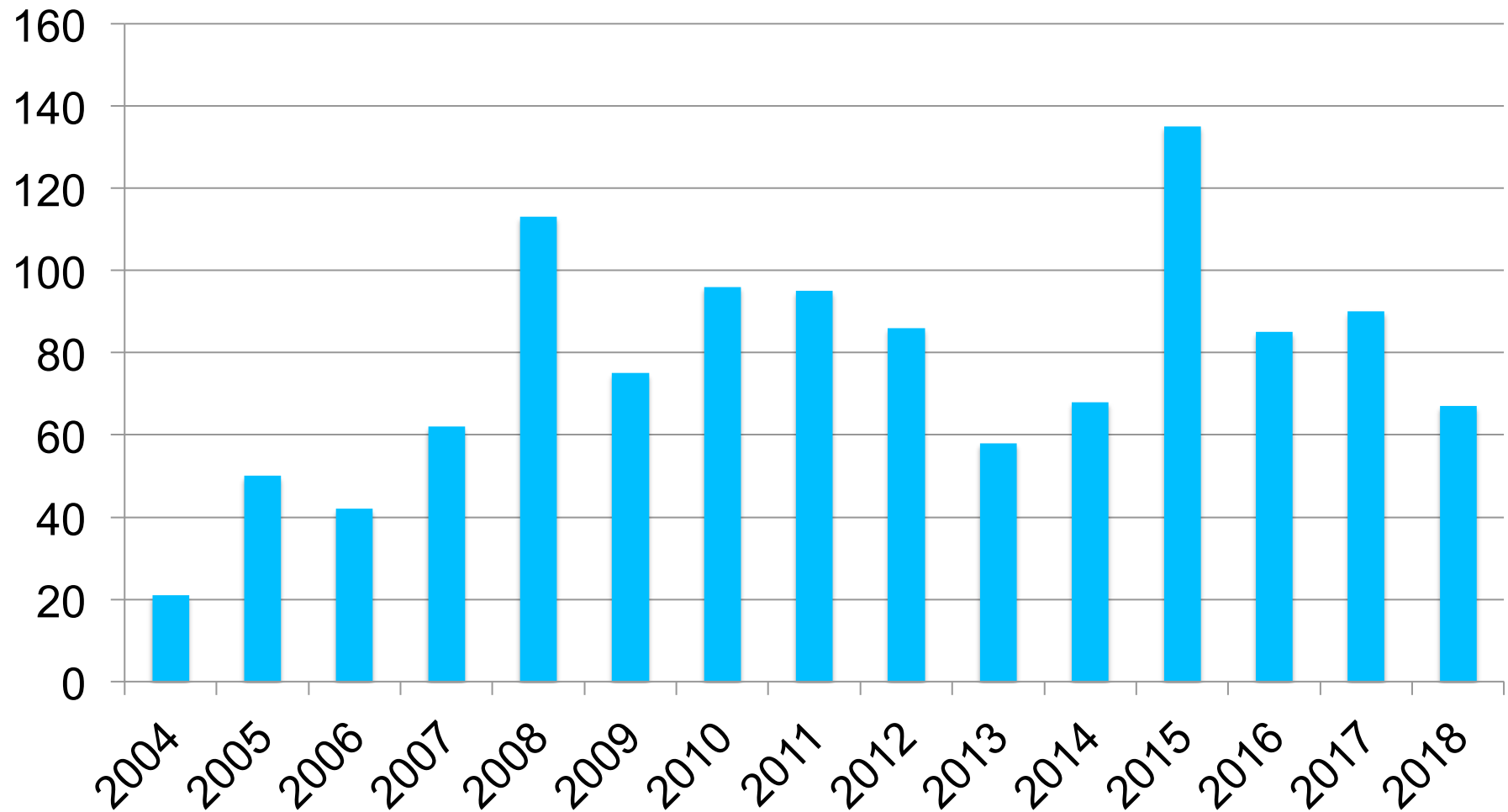
- As Medipex is a not for profit company it is able to establish relationships with small and large investors
- It currently has close links with two investor groups actively looking for projects; there is regular interaction to pitch projects
- Promotion of investable projects to these and other investors also provides useful feedback to steer route forwards



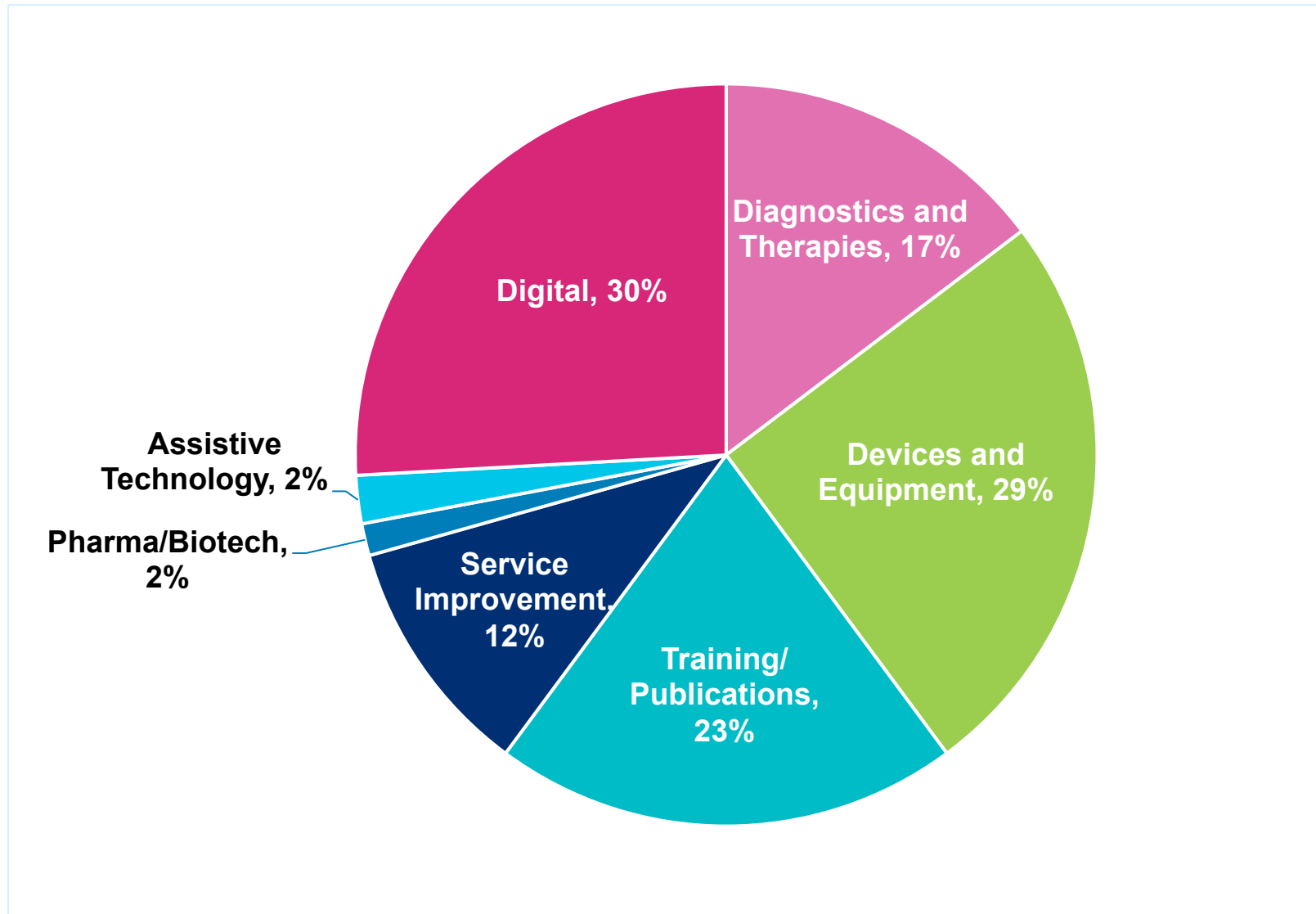
Availability of Finance



New innovative ideas each year



Currently active projects (n=124)



Medipex output

- Medipex negotiates and finalises, on average, ten commercial deals per year, both licensing deals and spin-out companies.
- Medipex has supported innovators in successful obtained grants with a total value >£25m over the last five years
- Medipex is expanding geographical base and covering a larger proportion of the UK

Organisation at the public/private sector interface

Operating model which resolves governance issues

- Don't assume an organisation can change its culture. There is an audit culture in large organisations and public sector organisations which mitigates against (i) risk and (ii) failure.
- Seek to operate within a more appropriate risk appetite, recognising the relationship between **Risk** and **Trust**
- Need a critical mass of expertise
- Utilise special purpose vehicles
 - operate using appropriate governance
 - operate in the appropriate risk/trust environment
 - manage the interface between sectors
 - provide incentivisation to influence culture change

Evolving new ideas in the pursuit of Impact

- Universities and the commercial sector could operate in a more sophisticated way than a simple transactional approach. **Trust versus Trading** is important for effective and sustainable working.
- Universities and institutes operate within a public sector governance model and the commercial sector operates differently. The utilisation of **Special Purpose Vehicles** can enable private sector governance to be implemented in interactions with the public sector.
- **Co-creation of innovation** is an important part of partnership working; this is more than simply multidisciplinary collaboration. It becomes increasingly important when optimising the impact of research.

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ADVANCING & EVALUATING THE SOCIETAL IMPACT OF SCIENCE



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