



MedTech BEST



UNIVERSITY OF LEEDS

Business and Entrepreneurial Skills Training for Medical Technology

Taster Session

Dr Mike Raxworthy

**RAEng Visiting Professor in Medical Technology Innovation & Translation
University of Leeds**

Academic Champion: Professor Joanne Tipper

What is innovation?

15 innovation experts give us their definition

Innovation

- What is innovation?
- Why does it matter?
- How does it differ from invention?

Innovation is:

"Creativity is thinking of something new.

**Innovation is the implementation of
something new"**

Paul Sloane


@PaulSloane

Innovation is:

"the implementation of creative ideas in order to generate value, usually through increased revenues, reduced costs or both"

Jeffrey Baumgartner

@creativeJeffrey

 idea to value.com

Innovation is:

**anything that is
new, useful, and surprising**

Drew Boyd

@DrewBoyd

The ultimate definition of innovation

Executing an idea which addresses a
specific challenge and achieves value for
both the company and customer

Innovation

- What is innovation?
- Why does it matter?
- How does it differ from invention?

Innovation

- What is innovation?
- Why does it matter?
 - Benefits customer
 - Benefits to economy
 - Benefits to society
 - How companies stay competitive
- How does it differ from invention?

Innovation

- What is innovation?
- Why does it matter?
- How does it differ from invention?
 - Not interchangeable, not synonyms
 - Invention is the creation of a product or introduction of a process for the first time
 - Innovation introduces the concept of 'use'
 - Innovation is doing something with an invention to make it useful – translation to make it available to the customer or an improvement to an existing product or service
 - Patent is evidence of invention but usefulness not proven at that stage

<http://keydifferences.com/difference-between-invention-and-innovation.html>

Innovation

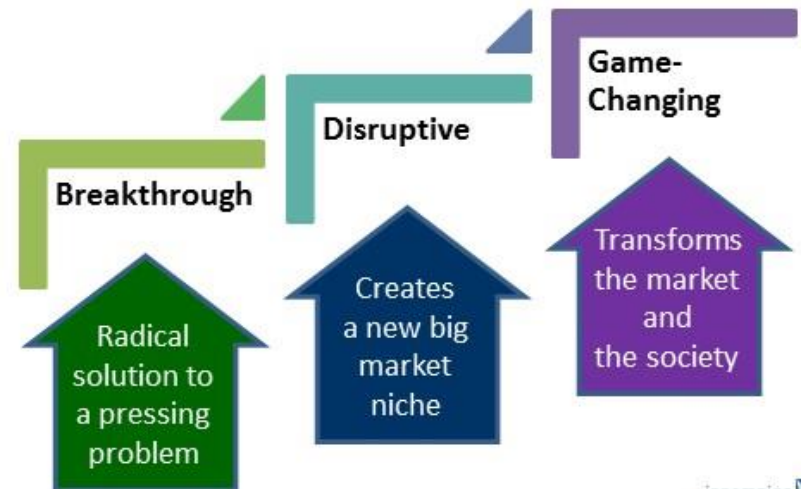
- Over-used term?
- Radical Innovation or 3M concept?
 - ‘creative response’ – Radical Innovation
 - ‘adaptive response’ – Incremental Innovation

(Schumpeter ‘The Theory of Economic Development’, 1912)

- Both needed!
"phenomena incidental to running a firm" and
"phenomena incidental to creating a new one"



3 Levels of Radical Innovation



Innovation



- Radical Innovation encouraged by RAEng
“There is an apparent and ever growing need for radical innovation in the 21st century [in the UK]”
“Practices need to be embedded in UK industry and academia”
- Understanding the customer (or end-user) is critical
 - Unmet clinical (or other!) need identification is a painstaking activity!



- Drivers for innovation?
 - Ensure thorough understanding of customer needs and deliverables
 - Competitive market place
 - Societal and demographic trends
 - Financial and market conditions
 - Regulated or resource-limited environment
 - Government policies and support
 - Combination – eg NHS pressures



Med Tech & Devices

Global Markets and UK Industry

Global market

UK Industry GVA

Total >£1200bn

Engineering £280bn

>\$500bn

Medical
technology

£18bn

\$75bn

MSK Implants
+ biomaterial
devices

£2bn

↑ \$25bn

Regenerative
devices

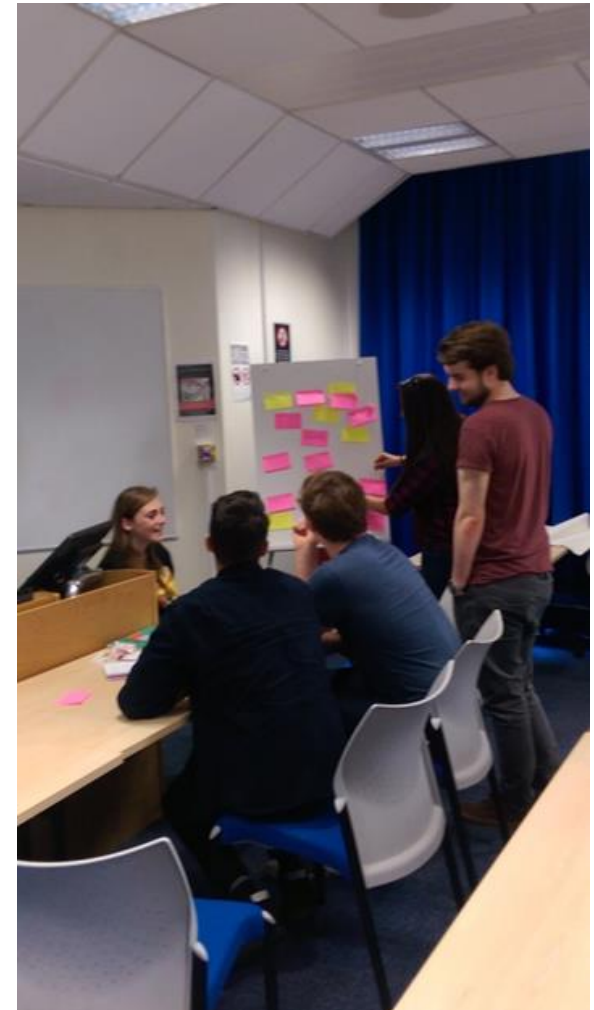
Our vision

↑ £1bn

by 2020

Innovation and MedTech BEST

- Industry has a need for “innovation-ready” graduates
- IKC-Regener8 in dialogue to understand needs of industry (especially SMEs) for work force-ready graduates and post-graduates
- One of intended deliverables of MedTech BEST
- Other technical, soft-skills and employability benefits

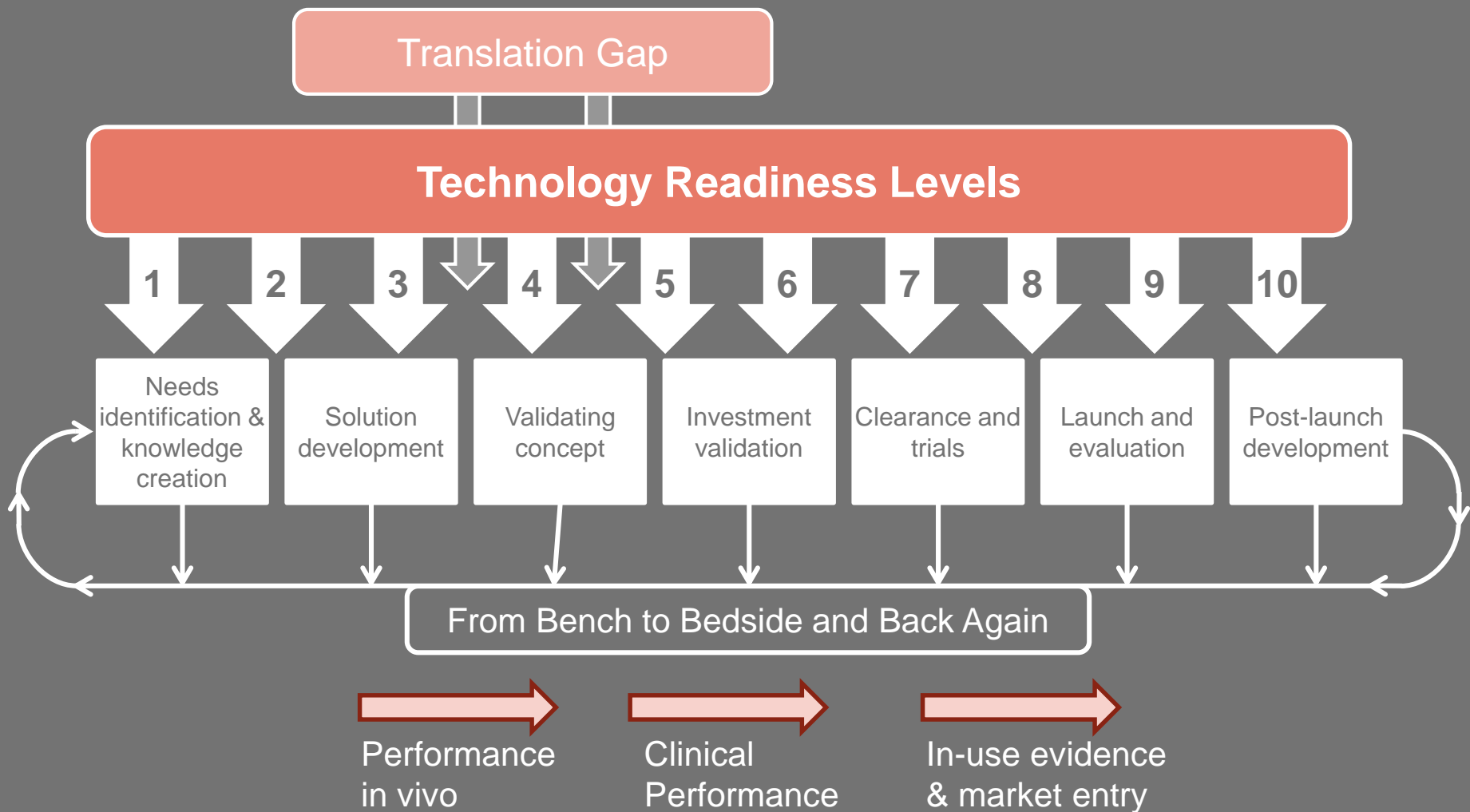


MedTech BEST

- Competition
- Working in teams of 4 or 5 to....
- Develop a MedTech product concept – to solve a verified clinical need. **Hypothetical but plausible** and grounded in real science to address a real market
- Each team member to take on a role
- Sessions led by industry and sector specialists
- Mentors assigned to teams
- Concluded with pitch for “investment” – best business case and pitch will win!

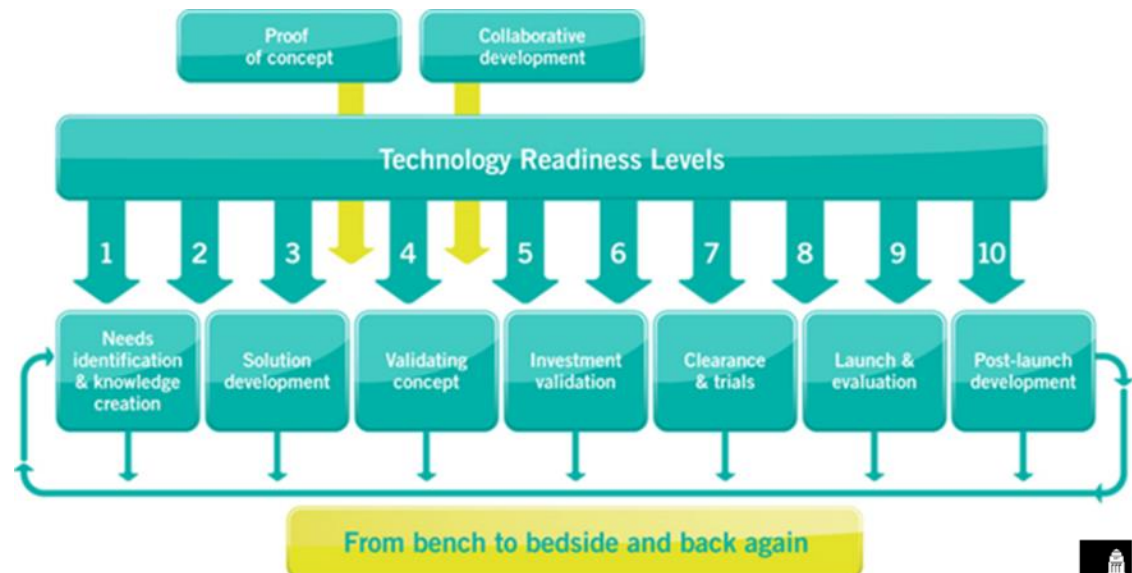


Translation to clinic and market



What will be covered?

- Idea generation & lead concept selection
- All components of a Business Plan
How will you translate your idea to the market?
- Product - Essential features and benefits
- Clinical need addressed
- Sales & marketing
- Team/advisors
- Operational plan
- Deal structure
- Exit strategy



Contributions from Industry/Sector Experts

- Intellectual Property
- New Product Development Process
- Managing R&D Projects
- Barriers to translation
- Market and competitor analysis
- Sources of funding
- Engaging with investors
- Judging panel

Langleys



What we ask participants to do

Attend:

- Sessions on Business Plan topics
- Sessions to run late afternoon/early evening October to December

Work:

- In your teams outside of sessions
- Work with your assigned mentor

What we ask participants to do

Prepare:

- Short Business Plan – the source document
- Investment Memo/Opportunity Note – made available to the judges
- A pitch!
 - 15 minutes with slides
 - All team members to take a slot (in role)
 - Seeking investment to commercialise product
 - To convince panel of how wonderful their product, company and team is
 -and how they can't afford to miss out on the opportunity!



MedTech BEST:

Business and Entrepreneurial Skills Training

22 March 2017

Grand Pitch Final

High Level Judging panel:

Tony Morgan

IBM and Visiting Prof

Marcus Orton

CEO of start-up Swabtech

Ana Avaliani

Head of Enterprise at RAEng

Jo Dixon-Hardy

Director of Medical

Technologies IKC

Colin Glass

Senior Partner, WGN

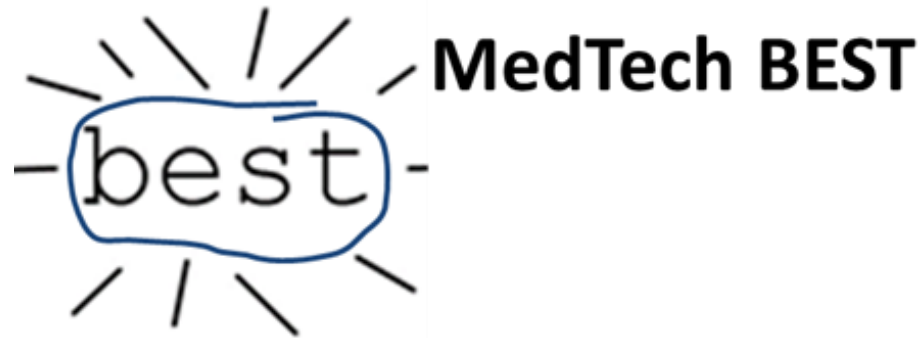


Judges will have 5 minutes each for questions

Pitch Final 2017



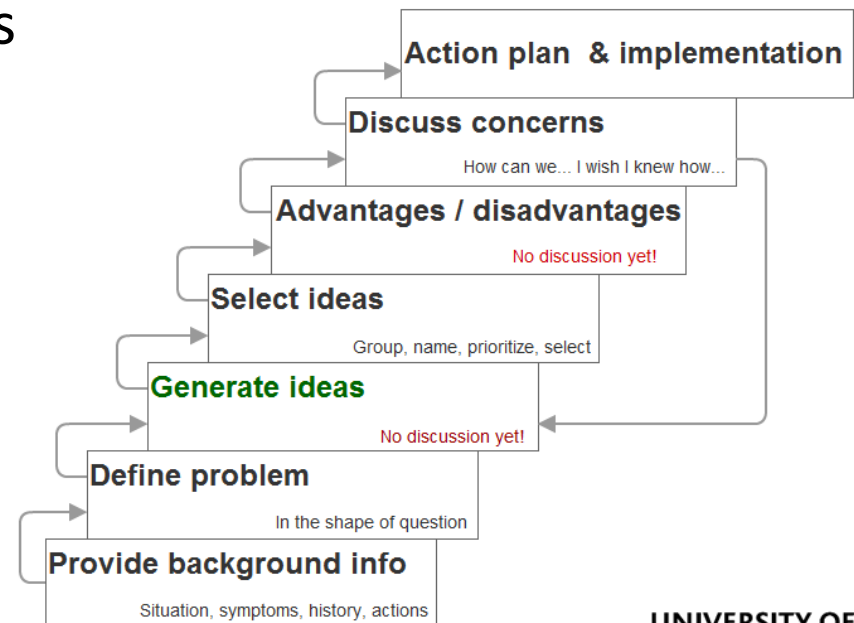
And the winners are – Clearing[®] from Engineer Ltd



Brainstorming Exercise

- **Brainstorming** is a group creativity technique by which efforts are made to find a conclusion for a specific problem by gathering a list of ideas spontaneously contributed by its members.
 - The term was popularized by Alex Faickney Osborn in the 1953 book Applied Imagination (Wikipedia)

Brainstorming Process



Next Steps

- Sign up – make sure we have your contact details
- Depending on numbers and interest over the next couple of weeks, we will schedule sessions starting in October
- Sessions will be late afternoon/early evening or lunchtime – we will try to mix these to allow everyone that wants to to participate
- You are welcome to email me with any feedback
- Hope to see you on MedTech BEST!





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