

Business and Entrepreneurial Skills Training for Medical Technology/Medical Engineering

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RAEng Visiting Professor in Medical Technology

Innovation and Translation

University of Leeds

Academic Champion: Professor Joanne Tipper

15 February 2017

MedTech BEST

Objectives

- Training in business skills needed for translation of MedTech research into the clinic and market
- Learn about how to put a business plan together and how to make a pitch
- Learn about what makes a good (successful) product
- Learn about the barriers to translation of MedTech
- Compete with other teams
- Have fun!

MedTech BEST is running as a pilot this year but already attracting interest for use in broader programme in 2017-2018

MedTech BEST

Ways of Working

- Work in teams of 5
- 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
- Mentors assigned
- Industry and sector specialists will be contributing to future sessions
- Competition (with prizes)!



MedTech BEST



UNIVERSITY OF LEEDS

Business and Entrepreneurial Skills Training

Schedule

Wednesday 2 November – launch; training in idea generation and selection, elements of a business plan (Mike Raxworthy)

Wednesday 16 November – Visit to Venturefest Yorkshire in York

Wednesday 7 December – IP, FTO (Fiona Kingscott); Venturefest feedback; work with mentors

Wednesday 25 January 2017 – product development pathway, project and risk management (2 x industry experts), work with mentors

Wednesday 15 February 2017 - market analysis; team/board roles;

Wednesday 1 March 2017 – barriers to translation; sources/types of finance (with industry expert); produce investment memo (work with mentors); practice pitches (in own group)

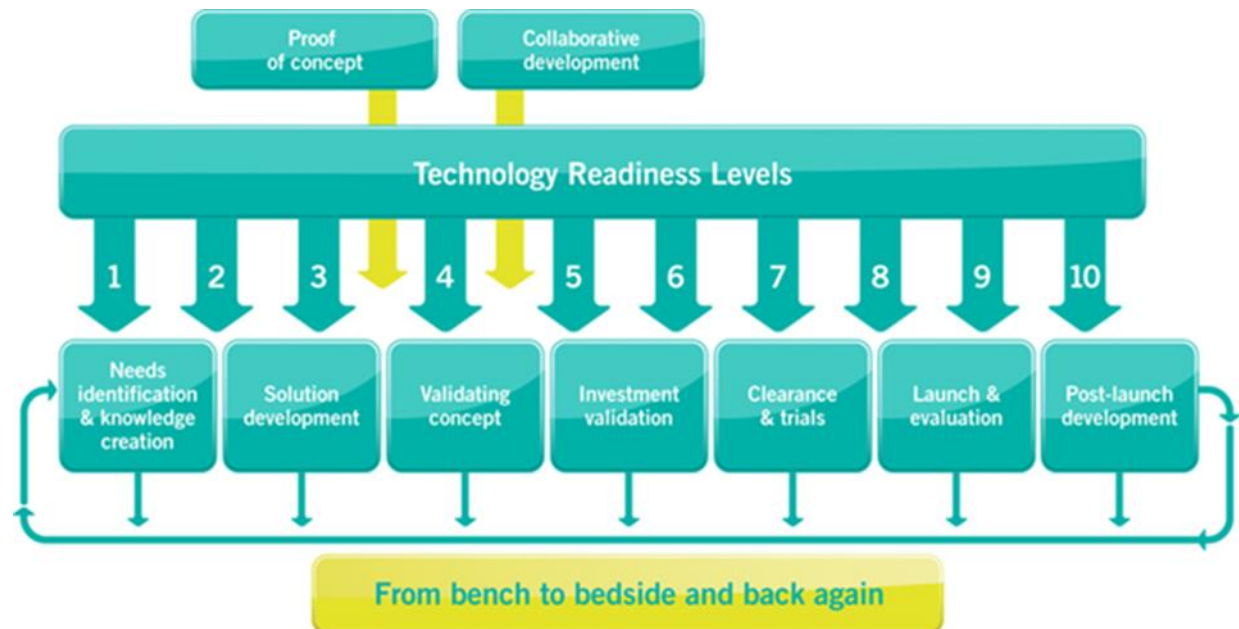
Wednesday 22 March 2017 – Grand Pitch Final!



Elements of a Business Plan

Product Development

- How will you translate your idea to the market?
- Essential features and benefits
- IP



Elements of a Business Plan

Management Team – For MedTech BEST

- You will need to cover:
 - CEO/Managing Director
 - Finance Director/CFO
 - R&D Director/CTO
 - Sales and Marketing Director
 - Operations Director/COO
 - Possibly
 - Strategic Marketing Director
 - Business Development Director

Elements of a Business Plan

- Your pitch will need to cover all of these – in around 15 minutes total!
- You will develop the Business Plan over the course of this training
- Expect to meet up with your team (and possibly your mentor) frequently!

Elements of a Business Plan

Industry experts covering:

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

Langleys



25 January 2017

- Based on what you've heard today, work on
 - What stage of product development you presume to have reached and
 - What you will need to move your product along the translation pathway to the market...from bench to bedside
 - What resources you will need
 - People, facilities, investment (and how much), skills (use consultants or recruit to bring in-house?), time to market
 - What selling price market will bear – and what margin (profit) you expect to make



MedTech BEST:

Business and Entrepreneurial Skills Training

22 March 2017
Grand Pitch Final

High Level Judging panel

- Industry – large companies and start-up
- Academics
- Professional Body

Promoted regionally
Good audience expected
Prize for winning team



RAEng is helping with

- Award for winning pitch
- Judge for Pitch Panel
- Funds to support pitch finalists (travel bursary, Amazon vouchers...)



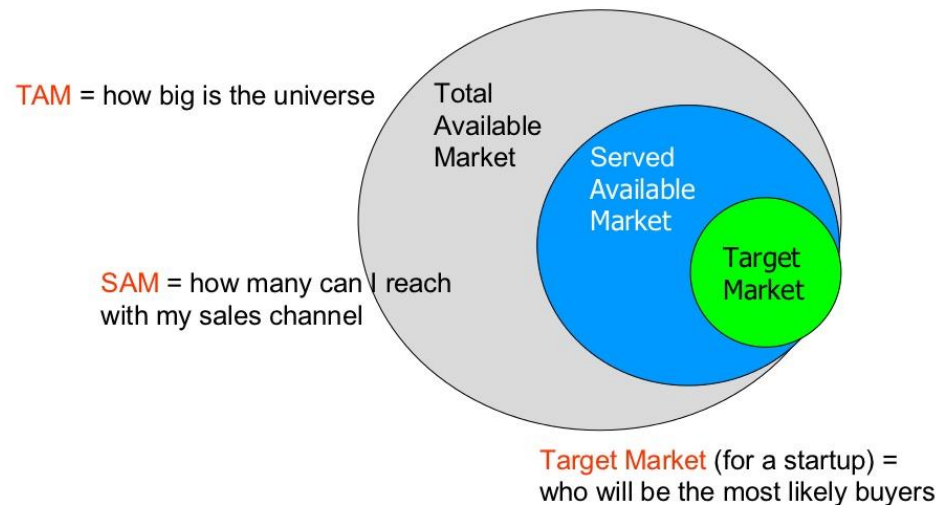
Market Analysis

- Key part of any business plan – demonstrates your expertise in your particular market and the financial attractiveness of the market
- It is a quantitative and qualitative assessment of a market:
 - Size of the market (volume and value)
 - Customer segments and buying patterns
 - Competition
 - Economic environment in terms of barriers to entry and regulation.
- Objectives - to show investors that:
 - you know your market
 - the market is large enough to build a sustainable business
 - your product can gain sales in the market (disruptive, superior quality/effectiveness, reduces cost of treatment)

Size of Market

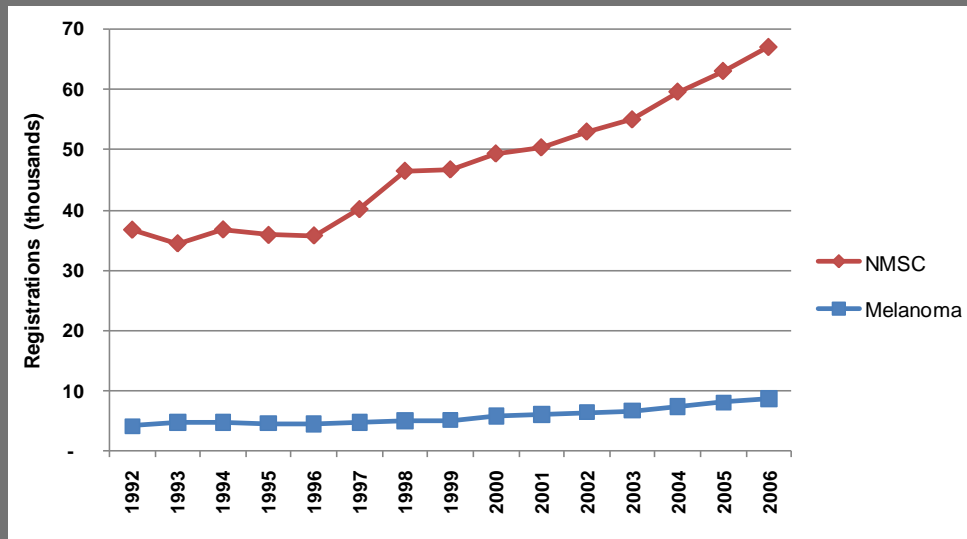
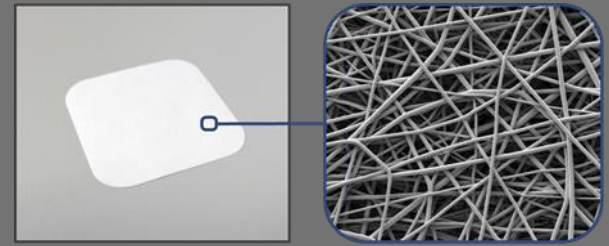
- Size of the market (volume and value)
 - Source of information (market reports, market research – commissioned, build from source info – number of procedures, number of clinical specialists, number of patients)
 - Total market
 - Addressable market
 - Target market

Total Available Market, Served Available Market, Target Market



Clinical need - skin cancer

- Major clinical need – “epidemic”
- Global numbers have been rising by $\geq 5\%$ pa since 1960s
- Increase in procedures estimated to be 7% pa to 2011



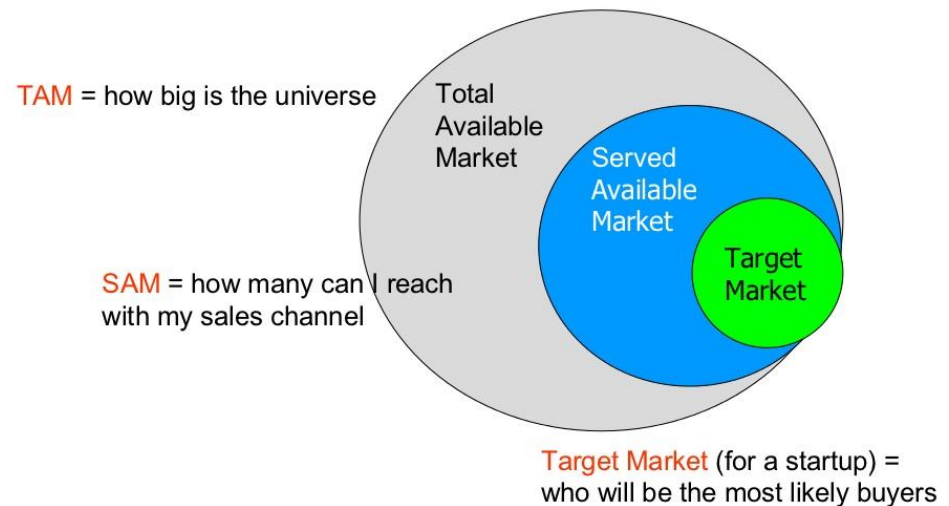
Non-melanoma skin cancer registrations in England 1992-2006. Data from www.statistics.gov.uk

- Around 100,000 cases pa in UK; more than 50% of all cancers in US

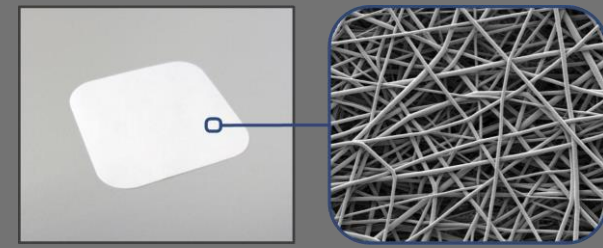
Competition





- Which products and companies currently serve this market?
- How are purchase decisions made?
- Who is the customer?
- Advantages/disadvantages of your solution?

Total Available Market, Served Available Market, Target Market



Competition for EktoTherix Tissue Repair Scaffold

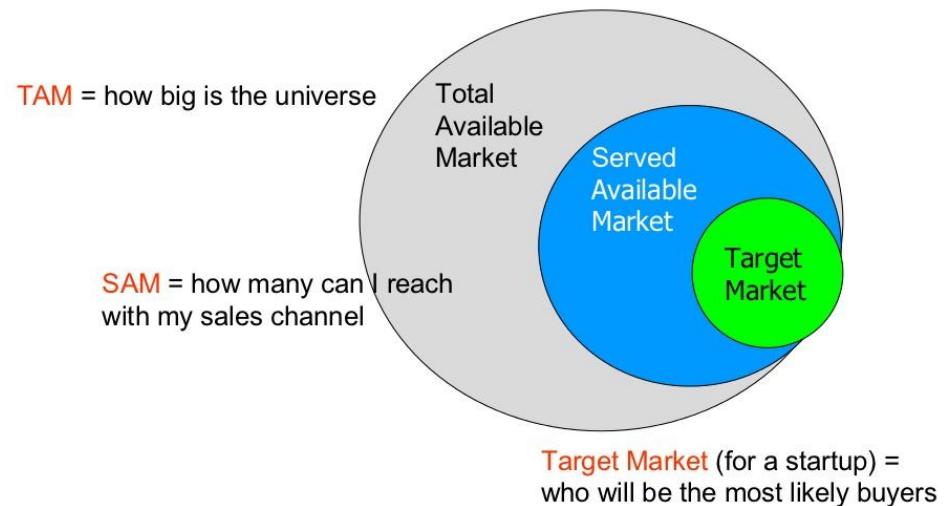


Category		Examples	Characteristics	Neotherix advantages
Biologic		AlloDerm, Oasis, Integra, Permacol	Human or animal processed tissue Expensive	Convenience Cost No ethical barriers No risk of adverse reaction
Synthetic		Suprathel, Novoskin, Univ Akron	Pre-launch or limited reach	Focus on skin cancer rather than burn or diabetic wounds
Cell-seeded		MySkin, ICX-SKN (Intercytex)	Active wound healing	Simpler regulation No service element No cellular component (added complexity)
Surgical repair		Plastic surgery	Gold standard Creates 2 nd or 3 rd injury Additional treatment stages Expensive	Convenience and cost Simpler treatment pathway Dermatologist retains control Spare secondary site of injury Clinically equivalent?

Route to market

- Consider sales channels – how are you going to get the product into hands of customer?
- Direct sales
 - Sales force
 - Online
- Distributor
- Licence deal with existing player

Total Available Market, Served Available Market, Target Market



Route to Market

- Strategic alliance with one of existing players in acute wound/medical dermatology market to commercialise EktoTherix
- Neotherix will also realise value of development **pipeline** through licence deals
- Barriers?

