Research and Capturing the value of IP

Marcus Bolger
Senior Commercial Manager
Deakin Research - Commercial
Overview

• Commercialisation 101
• Keys to attracting investment
• How to increase the value of IP
• Tips and tricks
Deakin University

• 1974 - established
• Regional university
• Strong links with local community, government
• Forged close links with local industry from the outset eg Ford, GM, Holden, CSIRO, SMEs
• Research is “closer to the market”
Penicillin – a lesson

Howard Florey
Ernst Chaim

Pfizer deep – deep tank fermentation method

Fleming (1928) → Florey and Chaim (1938) → Pfizer (1941 - 44)
Commercialisation 101

- Exploitation of intellectual assets for financial or economic reward

- Development of an idea/invention to the stage where it provides a financial return

- Transfer of knowledge and innovation into high-value products, services and jobs.
When research results are interesting or exciting

- Who is likely to benefit?
- Society? - My organisation? - me?
- Are the results of commercial value to anyone?
Should I protect what I have?

• If potentially valuable, need to protect your IP against exploitation / use by others

• Patents are the principal form of protection for innovation/developments in technology, science, and medicine
Capture the value of your IP

Essential to:

• Consider commercialisation issues early

• **NOT** make public in any way before considering protection issues
Market issues

• What customer problem does it solve?
• Who are the competitors?
• How big is the market?
• What is the **Value Proposition**?
  - what benefits are we selling
  - at what price
  - with which customer inputs
  - over what timeframe
Determining commercial value

• Is there a market for it? Where? When?
• What else is there in the market like it?
• How much would it cost to make?
• How much would someone be willing to pay for it?
• Are there any barriers? eg patents
What next?

• Who would be the first customers? (ie. who would buy tomorrow?)
• What would be the expected short term cash flows?
• What is the likely market penetration?
• What are the channels to market?
• What is the IP strategy?
• What further R&D is required?
Where are your customers?

NASA time lapse photograph of Earth at night

http://apod.nasa.gov/apod/image/0208/earthlights02_dmsp.jpg
Commercialisation Strategies

- Manufacture, market and distribute yourself (fully integrated model)
- Start-up/spin-out company
- Joint Venture (JV)/cooperative arrangement
- Licence out – can lead to an upfront payment and an ongoing income stream
- Licence in/cross-licence
- Assign (ie sell patent rights)

Historically, commercially successful outcomes from scratch are:
10% inspiration
90% perspiration
Keys to attracting investment

• Broad IP protection
• Substantial world market
• Understanding of competition
• Sound commercial strategy
• Experienced management - PPP
## Value chain

<table>
<thead>
<tr>
<th>Stage</th>
<th>Discovery research</th>
<th>Proof of concept</th>
<th>Product development and testing</th>
<th>Market testing Early regulatory approval</th>
<th>Final development, Regulatory approval manufacturing &amp; marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds</td>
<td>Pre-seed/seed: $50-500k</td>
<td>Angel: $500k-3M</td>
<td>VC: $3-10M</td>
<td>$10-50M (IPO/trade sale)</td>
<td>$100M +</td>
</tr>
</tbody>
</table>

### Risk to Investors

- **High**: Universities/Research institutes
- **Start-up companies/SMEs**: Increase Commercialisation $$$
- **Large/multinational companies**: Low

Ref: Amanda Jones Watermark
'Proof of concept' and 'industrial prototyping'

- Deakin University has built a Future Design and Manufacturing facility including a 3000m$^2$ Proof of Concept building.

- Will advance Deakin's research model of co-location and collaboration with industry.

- Will “de-risk” and add commercial value.
Publish and Perish

• Publication or use of the invention before lodging a patent application may totally destroy the validity of your patent

• If you need to disclose the invention to a third party before a patent application is filed, arrange a Confidentiality Agreement first
Commercialisation Tips and Tricks
Tips and Tricks  #1
Follow the money

• Need to conduct research that is close to the market - more applied than pure
• Educate researchers/inventors on IP and early publication risks
• If research doesn’t have commercial interest, expand research expertise into an area where there is a market

Menkes  ➔ Alzheimers

• Move research up the Value Chain
Tips and Tricks  #2
Develop a culture of innovation

• Enthuse potential inventors
• Celebrate and reward successful commercial outcomes
Tips and Tricks #3
Develop Partnerships

• Network vigorously
• Develop close working relationships with universities, industry partners, government
• Collaborate, look at the bigger picture
• Always strive to exceed expectations, on time, on budget
• Build trust ➔ mutual long term relationship
Building Trust

• The foundations of trust are:
  1. frequent communication
  2. managing expectations

• Setting out a plan of what you will do, and regularly communicating progress

• Delivering to Milestones on time, on budget and, desirably, exceeding expectations
Success comes from collaboration of large and small.