Commercialising Research

• What is commercialisation?
• Motivation for researchers to be involved
• Research value vs. commercial value
• Keys to successful commercialisation
  – Understand your customers
  – Timing is everything!
  – Intelligent persistence
What is Commercialisation?

• Research commercialisation = creating or enhancing a commercial business with research

• Paths to market:
  – Researcher-led spin-out
  – Researcher transfers technology
    • To new start-up
    • To established business

• All require researcher to customise research for target customers
Commercialisation: Motivation for Researchers

- Funding requirement
- Additional funding
- Alternative career path
- Additional benefit to society
Research Value vs. Commercial Value

• Successful researchers run successful research businesses
  – Product: publications
  – Customers: researchers
  – Valuable product creates opportunities for customers
  – Value statement: abstract
  – Currency: citations

• Successful commercial businesses also create opportunities for their customers

• What are the keys to creating commercial value from research?
Understand Your Customers
Agilent “Champagne” Optical Switch

• 1997-1999: “Champagne” developed at HP/Agilent Labs
• 1999-2001: new business unit develops prototype product
• **2002: new business unit closed. Why?**
• End customers: telcos
• Opportunity: lower-cost new networks
• End of telco boom = no new networks = no Champagne value
Timing is Everything!
Ofidium 100 Gbit/s Optical OFDM

• 2004-2008: optical OFDM developed at Monash University
• 2008-2010: start-up Ofidium develops product demo
• 2011: investors re-focus Ofidium on IP sale. Why?
• End customers: telcos
• Opportunity: lower-cost networks (100 Gbit/s)
• Industry aligned behind alternative technology = no Ofidium 100 Gbit/s value
Customer Understanding, Timing, Persistence

Calient 3D MEMS Optical Switch

- 1996-1999: 3D MEMS optical switch tech developed at UC Santa Barbara
- 2002: telco bust, end of Calient v1
- 2005: Calient v2 targets US FTTH
- 2008: too late! End of Calient v2
- 2012: Calient v3 targets data centres
- **2014+: Calient dominates data centre reconfiguration**
- Customers: mega-data centre operators
- Opportunity: low-cost, low-power flexibility
Customer Understanding, Timing, Persistence

CSIRO-EMClarity E-Band Radio

• 2004-2006: CSIRO develops 2 Gbit/s E-band radio demo
• 2007-2011: E-band regulations, components
• 2013: product developer, EMClarity
• 2015: product deployment
Commercialising Research

• Many reasons for researchers to drive commercialisation of their research
• Successful commercialisation = creating opportunities for customers
• Keys to successful commercialisation
  – Understand your customers
  – Timing is everything
  – Intelligent persistence