Innovation Funding in New Zealand

1. Introduction/scene setting.
2. Research Methods.

3. HVMS SME experience,
   • application process,

4. Wider funding industry,
   • the funding gap,
   • criteria anomalies,
   • ‘state of play’,
   • crowd funding.
Innovation Funding in New Zealand

• Based on
  – Sept 2014 draft paper now with Unitec epress for review.
  – Discussions with Callaghan Innovation since July 2014 releasing report.
  – More feedback from RFO, HVMS.
  – Recent changes (August 2014) in funding scene.
Research Context NZ 2012 - 2014

(Successive) Government Policy,
Shift NZ economy to more HVMS / added value.
Latest iteration : Business Growth Agenda.

NZ Government support for innovation / R&D / HVMS,
X4 positive economic externality
entirely R&D co-funding grants (unusual within OECD).
HVMS SME BA5 = not happy

MSI – MBIE – Callaghan Innovation (2013)
Opportunity for change / What is the change?
Method

• Research stance (loosely) “critical realist”

  – “to construct hypotheses about a . . . real domain of. . . . generative mechanisms that can produce patterns of events.”

• Entities (such as mechanisms) may exist without our knowing.
• All access to the social world is subjective.
Method

• ‘Who got Funded’ MBIE database.
  – All recipients from 2009 – 2012
  – Screened to fit HVMS category
    • Also screened out software/IT dominance.
    • Left in some larger firms to get size comparison.
  – Final list of 200 nationwide.
  – Called by region, in alphabetical order.
    • Auckland / Wellington / Waikato / Christchurch

– (Who did not get funded = not available.)
HVMS SME sample
(all received funds from MSI in 2009-2012)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Number</th>
<th>Size range (employee count)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceuticals</td>
<td>2</td>
<td>3 - 300</td>
</tr>
<tr>
<td>Software</td>
<td>3</td>
<td>5 - 80</td>
</tr>
<tr>
<td>Hi Tech manufacturing</td>
<td>3</td>
<td>7 - 25</td>
</tr>
<tr>
<td>Engineering</td>
<td>3</td>
<td>5 - 40</td>
</tr>
<tr>
<td>Niche manufacturing</td>
<td>2</td>
<td>1 - 10</td>
</tr>
<tr>
<td>Electronics</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

14 semi-structured interviews with CEO or similar
Other agencies sample

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Funding Agency Staff</td>
<td>5</td>
</tr>
<tr>
<td>Independent funding consultants</td>
<td>2</td>
</tr>
<tr>
<td>Venture Capital industry spokesperson</td>
<td>1</td>
</tr>
<tr>
<td>Strategic Investment Partners</td>
<td>3</td>
</tr>
<tr>
<td>Callaghan Innovation Staff</td>
<td>3</td>
</tr>
</tbody>
</table>

14 semi structured interviews with CEO / Managers / Funding Advisors / Consultants
HVMS SME / Govt. findings
(apply to MSI applications – not CI)

• Difficulty of application,
  – ‘significant obstacle’ to SME / ‘necessary hurdle’ to Govt.

• Role of consultants,
  – necessary to SME / ‘unwanted middlemen’ to Govt.

• SME ↔ Govt. relationship,
  – highly variable, depended on individual, not policy.
  – inconsistency of Govt. over time.
Industry Structure

We thought this . .

MBIE
Callaghan Innovation
ATEED/GW/CDC

Vertically integrated & cohesive process.

conflict

HVMS applicant

We found this . .

MBIE
Callaghan Innovation

confusion

ATEED/GW/CDC

conflict

Consultants

trust

HVMS applicant
Why so different?

• Perceptions,
  – SME take the application as ‘factual’ (binding)
    • but cannot see the future (= stress).
  – Govt. agencies see it as ‘indicative’ (non-binding)
    • Used to dealing in a dialogue based bureaucracy

• Process,
  – SME want ‘this opportunity’ funded (now)
    • time is money / race to market.
  – Govt. agencies like to build relationships (next time)
    • lack of urgency / qualifying client.
Public-private risk-reward analysis
(conceptual diagram – no data)

Government

Upside (reward)
- +ve externality (tax revenue, GDP + employment)
  - Decreases with every $

Downside (risk)
- no R&D result, sale offshore, ‘picking winners’ PR
  - Increases with every $

Rewards move this way

HVMS SME

Upside (reward)
- first mover adv. sales & profits ROI + sale offshore
  - Increases with every $

Downside (risk)
- no R&D result, sale offshore
  - Decreases with every $

Risks move this way
What is the application process for?

• Government
  – Reduce political / negative PR risk.
    • no serious attempt to measure results.
    • ‘get the money out the door’ = job done.
    • ‘business led’ application process.

• HVMS SME
  – Increase entrepreneurial opportunity.
    • Increase funding for project.
    • Access expertise for project.
One Common Complaint

• The funding gap
  – “no money for product & market development”
  – “no money for capability development”

• NZIAS 38 definitions apply to R&D funding,
  – Research . . original & planned investigation . . new scientific or technical knowledge . .
  – Development . . application of research findings . . to plan or design . . for production of new or . . improved products . . . . before the start of commercial production or use.

  – Commonly expressed as ‘technical stretch’.
Enter Callaghan Innovation
“single front door to the innovation system”

• **mission:**
  “. . . accelerate the commercialisation of innovation by firms in New Zealand . . . ”

  “. . . help businesses turn ideas into internationally marketable products and services more quickly and successfully.”

• Callaghan Innovation is going to be a key player in the Business Growth Agenda.
2013 – a busy year

• February 2013
  – Callaghan Innovation established as crown entity
    • Funding, advice, research (400 IRL staff included)

• August 2013
  – New suite of co-funding products (approx $150 million)
    • Growth grant / $300K in R&D for 2 yrs / 20% co-funding
    • Project grant / new to R&D / 30 – 50% co-funding
    • Various undergrad. & post grad. internships

• October 2013
  – Transition arrangements for applications in place.
Does CI represent a shift in thinking?

• Too soon to say.
• E.g. funding criteria problem cf PGP.
  – Primary Growth Partnership . . . cover education and skills development, research and development, product development, commercialisation, commercial development and technology transfer. . . . must be anchored in New Zealand, and . . additional to existing initiatives and work programmes - that is, beyond business as usual.

• Recommendation.
  – Apply similar criteria to business R&D funding.
Focus of R&D remains on products

• Doblin model –
  – types of innovation = 10, product innovation = 1.

• 21st century business success is coming from
  – business model (no funding).
  – new customer engagement strategies (no funding).

• Recommendation.
  – Apply broader (PGP) criteria to business R&D funding.
So where to get funding from?

Company Size

<table>
<thead>
<tr>
<th>$100 mil</th>
<th>$10 mil</th>
<th>$1 mil</th>
<th>$100K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idea</td>
<td>Plan</td>
<td>Prototype</td>
<td>Beta</td>
</tr>
<tr>
<td>3 F’s</td>
<td>Co-funding grants</td>
<td>Angel groups</td>
<td>Funding gap</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

Company Stage

Idea | Plan | Prototype | Beta | Sales
The funding gap remains

Angels, Angel groups, and VC are looking for,
- high growth business and a five year exit plan.
- ‘elite’ businesses – probably only 5% qualify.
- GFC shadow effect.

NZTE support is too late to have impact.
- “come back when you have $3 million turnover”

Banks are not going to fund ‘potential’.
- HVMS businesses can be slow starters.
A closer look at the funding gap
(shaes are indicative only)

- External
- 100%
- 50%
- 30%

- Internal
- 100%
- 50%
- 70%

Below the line = cost for business
Above the line = funding assistance

CI co-funding (sliding scale)

$3 mil. t/o

Market validation

Prototype

Market development

Beta

Sales

Export-sales

NZTE support
Is marketing important?
Yes . . and especially for NZ HVMS SME

– tyranny of distance
  • Market research/validation
  • Market development
    ‘land, be focused, go deep and don’t spread yourself around’.
    ‘depth of your pockets determines how long you can persist’.

– “crossing the chasm”
  • Technical products reaching mass markets is challenging.

– “prototypes left on the shelf” (widespread comment (?))
State of Play

• Worse (before it gets better?)
  – Callaghan funding now targets 40%, not 50%.
  – uncertainty for applicants has increased.
  – focus remains ‘technical stretch’ & product R&D.
  – funding gap arises from criteria excluding marketing.
  – CI ‘lost’ 400 of 1000 applicants in 2013 process.

• Callaghan Innovation still to get going . . ?
  – still making key appointments in early 2014.
Crowd funding
New Development: August 2014

- Two licenses given so far by FMA.
- Up to 2 million can be raised as equity.
- Much lower cost of raising capital for business.
  - 135 staff hours (start to finish)
- Risk falls on investor (no prospectus).
- Partnering:
  - Crowd funding matched by angels / VCs / once target is reached
- Power of the crowd?
• Snowball Effect
  – links to the Icehouse / quality assured businesses

Renaissance Breweries
  117% / $700,000 / closed in 60 days / 287 investors / average $2500.

The Patriarch
  80% / $239,000 (goal $300,000) / 16 days left / 114 investors / average $2100.
• Pledgeme
  – More open to businesses/compliance assured.

  – H2Explore (hovercraft supporting cycle tourism in MtCook natl park)
    • Goal $250,000 / two months to go / $1000 so far /1 investor / average $1000.

  – Techvana (computer museum)
    • Goal $250,000 – $750,000 / two months to go / $3100 so far /13 pledgers / average $240.
Will crowdfunding support R&D?

• Renaissance breweries - a microbrewery
• The Patriarch – a movie
  – Both well supported, both mainstream.

• H2Explore – innovative tourism experience
• Techvana – innovative computer museum idea(?)
  – Both struggling for funds, both ‘out there’.

• The crowd (by definition) is not the cutting edge.
Will crowdfunding support marketing?

CI co-funding (sliding scale)

$3 mil. t/o

$\text{No value - All risk}\\\text{Small amounts (potentially)huge returns}$

$\text{Some IP value – high risk}\\\text{Small amounts (potentially)very good returns}$

NZTE support

Idea Plan Prototype Beta Sales Export-sales