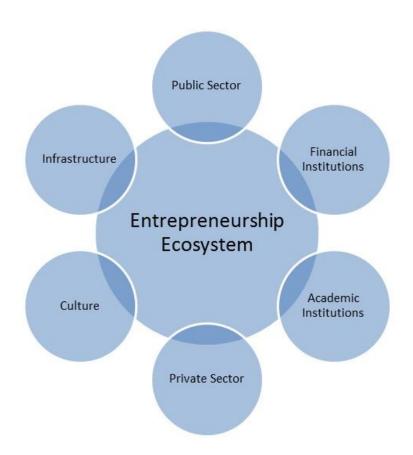




Introduction

- Much of the research on Entrepreneurial Ecosystems (EEs) is static
- How do they emerge and grow
- Need a time dimension
- Need a focus on process





Entrepreneurial recycling

- Entrepreneurial recycling is a key process in the emergence and growth of EEs
- What is entrepreneurial recycling?
 - "The recycling of the wealth created by successful entrepreneurs along with their associated learning"
 - Normally follows an exit event, typically the sale of their business
 - Other equity stakeholders in the business may also engage in recycling – e.g. senior management team, investors (business angels, VCFs)

Examples of the process

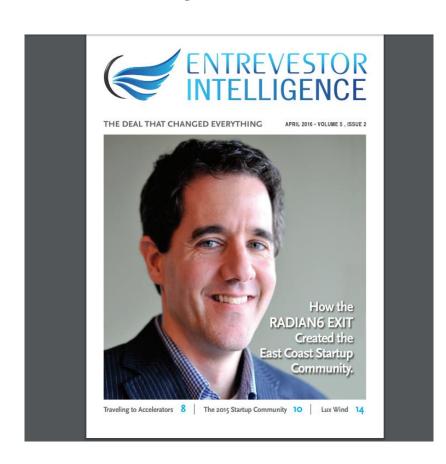
- Mason and Harrison (2006 Regional Studies) case studies of entrepreneurial recycling in Scotland.
 - Serial entrepreneurs:
 - Ron Hamilton: Award (sold to Bausch and Lomb) and Daysoft
 - David Sibbald: Atlantech (sold to Cisco) and Sumerian Networks
 - Business angels
 - Ian Ritchie: OWL (sold to Panasonic) (as a BA he has personally invested in over 40 start-ups)
 - Martin Ritchie: Spider Systems
 - Venture capital fund
 - Eddie Anderson: Objective Software Technology and Pentech Ventures
 - Institution builders
 - Martin Ritchie: Connect Scotland
 - Entrepreneurial philanthropy
 - David Sibbald



- Entrepreneurial recycling not confined to the lead entrepreneur
 - e.g. Spider Systems
 - all four founders have become serial entrepreneurs and business angels;
 - two senior managers have also become entrepreneurs
- Entrepreneurs may have to work for the acquiring company for a period of time (often a requirement of the sale) before they are free to engage in recycling activities. But this up-skills them.

Impacts on the entrepreneurial ecosystem

- Current research on EE in Atlantic
 Canada which demonstrates the
 transformative effect of
 entrepreneurial recycling on a
 regional entrepreneurial ecosystem
- Case of Radian6
 - Founded in 2006
 - Quickly became the pre-eminent company in the world analysing social media
 - Sold in 2011 to Salesforce.com for US\$276m in cash and US\$50m in stock
 - IRR of 142%
 - Multiple of 228
 - · A 'mega' exit by any definition
 - Won the CVCA's 2011 'Deal of the Year Award'





- By attracting Salesforce.com it has established the fastest growing software company in the world to set up shop in New Brunswick – Creating leading edge jobs, developing top tech and business talent.
- The entrepreneurs have engaged in further business start ups, angel investing and philanthropy (e.g. funded a chair in social entrepreneurship at UNB)
- Rewarded a group of angel investors who have gone on to form East Valley Ventures which has made over 30 investments in businesses in the Maritime Region,
- It helped to finance Propel ICT the regional accelerator which is now based in all four provinces in Atlantic Canada: has graduated 49 startups since 2011

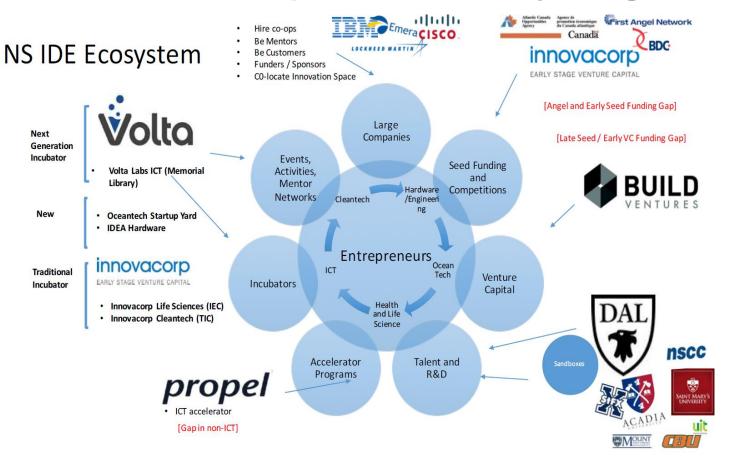


- Enabled an early stage institutional investor to extend its local investment activity: its original investment of \$326,973 returned \$9.25m.
- Encouraged other ICT start-ups: the sector has grown 8% in New Brunswick
- Established New Brunswick as an ICT centre
- Signalling effects to other out-of-region investors

Another Canadian example

- Halifax-based Golnstant sold to Salesforce.com for \$76m
 - Young company 20 employees
 - Acquired less than a year after raising \$1.7m in VC
- Jevon MacDonald
 - Serial entrepreneur his latest company has raised \$15m in VC
 - Institution builder co-founder of Volta Labs in Halifax a "start-up house"
 - Active angel investor
 - Thought leader
 - Role model
- Gavin Uhma
 - Serial entrepreneur
 - Founded a start-up immersion course at Cape Breton University: four start-ups came out of the first cohort.
 - Role model
- Innovacorp Government of Nova Scotia VC fund got a significant return on 9 its \$100,000 investment which has been re-invested

Significant elements in the Nova Scotia EE are the outcome of entrepreneurial recycling





But why exit?

- Exit as strategy
 - Entrepreneur: build to sell
 - Investors: need harvest events
- Opportunistic
- To overcome growth constraints e.g. finance, credibility
- Entrepreneur wants to sell
 - Stress
 - Escape
 - Career benefits
- Investor (angel) wants to sell
 - Investment fatigue

Influences on entrepreneurial recycling

- The size of the exit is critical
 - Small acquisitions generate limited wealth hence limited finance is available to be recycled
 - The companies which are small/young when they are acquired will have generated limited learning for their entrepreneurs and senior management team
 - May truncate ambition/vision of entrepreneurs in next venture
 - Small exits will have little signalling effects
- Who are the investors
 - Business angels and government VCs likely to recycle locally
 - VCFs could re-invest anywhere



The most effective entrepreneurial recycling come from 'Blockbuster' entrepreneurs

- The case of (Sir) Terry Matthews major role in Ottawa's emergence as a major technology cluster
- Born in 1943 in South Wales (UK)
- Education and early work experience in telecoms
- Moved to Ottawa in the late 1960s to join Northern Telecom (Nortel)
- Started Mitel in 1972 with Michael Cowpland
- IPO in 1985 (NYSE) sold to BT in 1985
- Matthews founded Newbridge Networks
- Cowpland founded Corel

- Newbridge Networks sold to Alcatel in 2000 for \$7.1bn –
 Matthews stake was \$1bn
- Re-acquired Mitel in 2000 took it private, reinvented it as a broadband company, went public in 2011, sold to a private equity company in 2016
- Involved directly and indirectly in starting over 100 new companies in the telecoms sector
 - His own companies: e.g. March Networks (IPO 2005),
 Bridgewater Systems (acquired in 2011 for \$215m), Ubiquity
 Software (acquired for \$150m), Convedia (acquired in 2005 for \$155m)

- As angel investor (invested personally in over 80 companies)
- Via the Newbridge Networks affiliates programme
- Via his two venture capital companies Celtic House and Wesley Clover
- Property investment
 - Golf course, hotel and office towers in Ottawa
 - Celtic Manor in South Wales
- Collaborated in funding an accelerator in Ottawa
- Created substantial wealth for others:
 - E.g. Mitel initially funded by family, friends and initial employees
 - \$1 share grew to \$2.5m
- Former employees of his companies have gone on to start₁₅ and join tech businesses.

summary

- Matthews has played a huge role in Ottawa's emergence as a tech cluster in the 1990s and 2000s both directly and indirectly
- Critique
 - His early recycling was mainly focused on Ottawa but over time had a more geographically diverse focus
 - Many of his companies have had global operations
 - He has built and then sold the companies he created many now have little or now presence in Ottawa. Good timing?
 - His expertise was in telecoms: Is he still relevant in a digital era?

The other side of entrepreneurial recycling – what happens to the acquired business?

Positive

 It is able to grow as a result of the injection of managerial and financial resources by the acquiring company and access to its resources (e.g. distribution networks)

Negative

- hollowed out relocation of its management activities to the acquiring firm's other locations, leaving just the R&D
- Closed down and its activities are migrated to the acquired firm's other locations
- Asset stripped IP is moved away
- Outcomes depend on motivations for acquisition, size of acquired company and its geographical embeddedness 17

Is there a role for Government?

- Government VCFs need to adopt an exit-centric approach to their investing
- Encourage business angels to adopt an exit-centric approach to their investing
- Treatment of tax on capital gains
- Develop post-exit 'aftercare support for acquiring companies

Research Agenda

- Research on ER fits into two broader research themes
 - Entrepreneurial exits
 - Entrepreneurial ecosystems
- Various units of analysis
 - The (lead) entrepreneur
 - The wider team
 - The investors
 - The entrepreneurial ecosystem
- Some questions
 - Who recycles, who doesn't?
 - Motivations for ER, for type(s) of ER, for not doing ER
 - Types of exits that are most/least effective for ER
 - Relationship between extent of ER and the nature of the EE
 - Capturing the wider outcomes of ER for the EE (ripple effects)
 - Embeddeness of ER: can EEs import exited entrepreneurs from other locations to ¹⁹ recycle?