

# Innovation Revisited

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# Let's take a closer look

1. Miller & Cote on Innovation Games
2. Critical Innovation Elements at Various Life Cycle Stages of Knowledge Intensive SMEs
3. Legislation re Hostile Takeovers



# Innovation Policy Staff Have the Toughest Job in the World

Politicians see Innovation as synonymous with high-quality job creation in an era where youth unemployment stands at critical levels

# Presentation Overview

This part of my presentation describes the results of an extensive survey of knowledge-based SMEs in western Switzerland undertaken in late 2011 by platinn an agency charged with operating an SME coaching network throughout the region.

It describes the key vectors for SME innovation and the life cycle stages for knowledge – based SMEs illustrating how various innovation elements wax or wane in importance depending on the life cycle stage.

It also characterises those elements where the SMEs believed themselves to be the most competent and those where help is required.

# The SME Life Cycle

## Pre -Industrial Firms

### Creation

Feasibility  
Proof of Concept  
Prototype  
Demonstrator  
Pilot Client

### Industrialisation

Scaling production for  
market segments  
Build supply chain  
Distribution  
M&A

### Project Completion

Individual Client Solutions  
Project – Service Mode

## Industrial Enterprises

### Expansion

New markets  
New distribution  
channels  
Organisation and  
Resources  
Management

### Consolidation

Optimisation  
Restructuring  
M&A

### Renewal

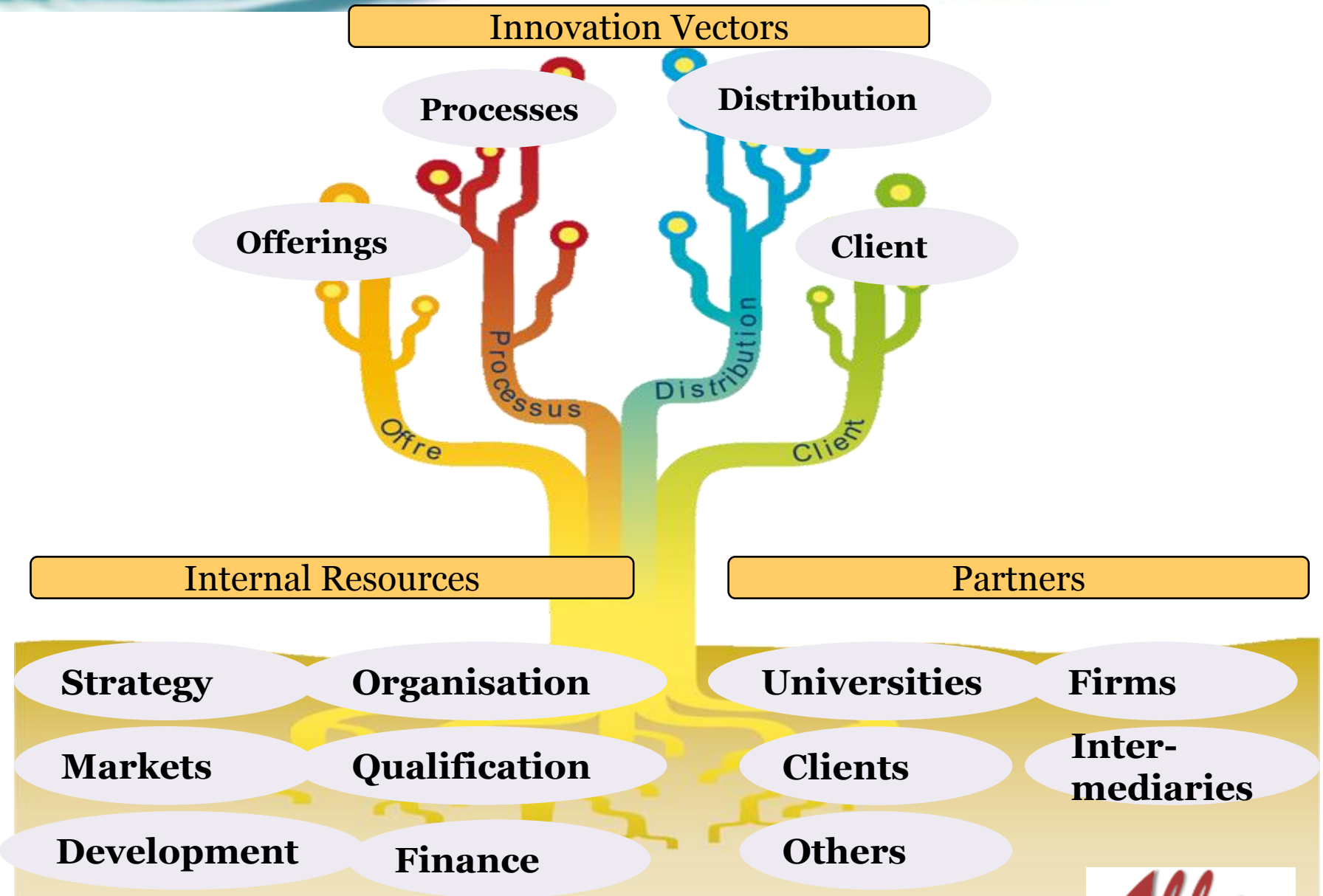
Diversification  
New Offerings  
New Client Segments  
“Lead Customers”

# SME Needs in their Life Cycle Context

| # of firms by Life Cycle Stage | A... De...            | 1. Creation | 2. Project Completion | 3. Industrialisation | 4. Expansion | 5. Renewal | 6. Consolidation |
|--------------------------------|-----------------------|-------------|-----------------------|----------------------|--------------|------------|------------------|
| 9                              | 1. Creation           | 0           | 9                     |                      |              |            |                  |
| 61                             | 2. Project Completion |             | 30                    | 31                   |              |            |                  |
| 17                             | 3. Industrialisation  |             |                       | 1                    | 16           |            |                  |
| 41                             | 4. Expansion          |             |                       |                      | 14           | 11         | 16               |
| 122                            | 5. Renewal            |             |                       |                      | 45           | 29         | 48               |
| 29                             | 6. Consolidation      |             |                       |                      | 5            | 8          | 16               |
| 279                            |                       |             |                       |                      |              |            |                  |

|              |            |
|--------------|------------|
| <b>Total</b> | <b>279</b> |
|--------------|------------|

# SME Needs by Innovation Vector

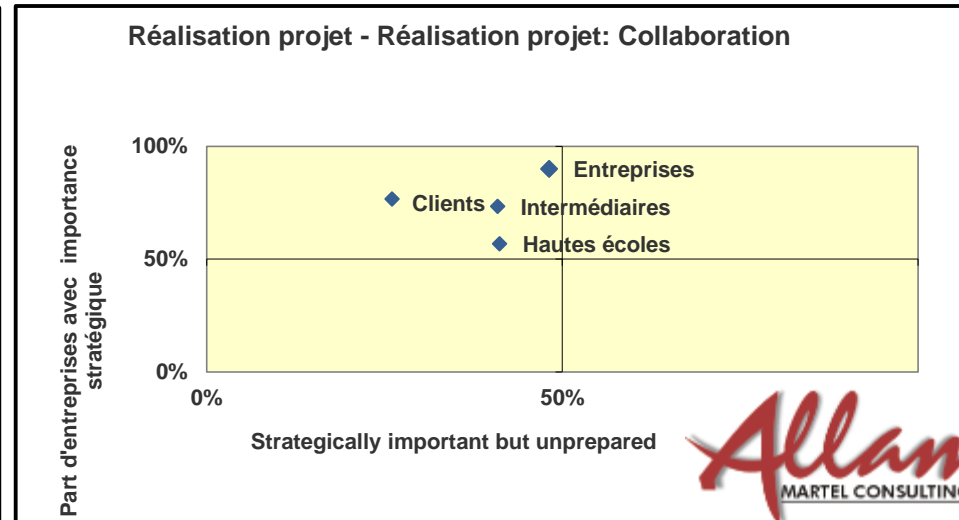
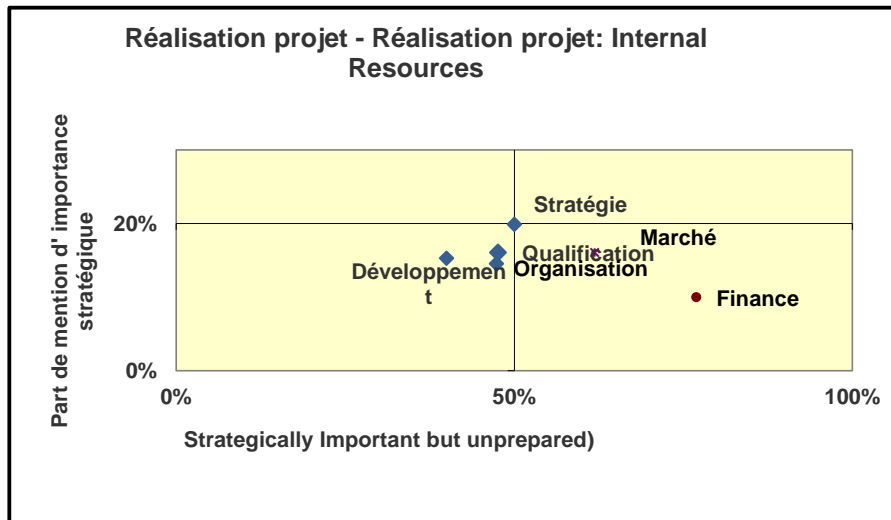
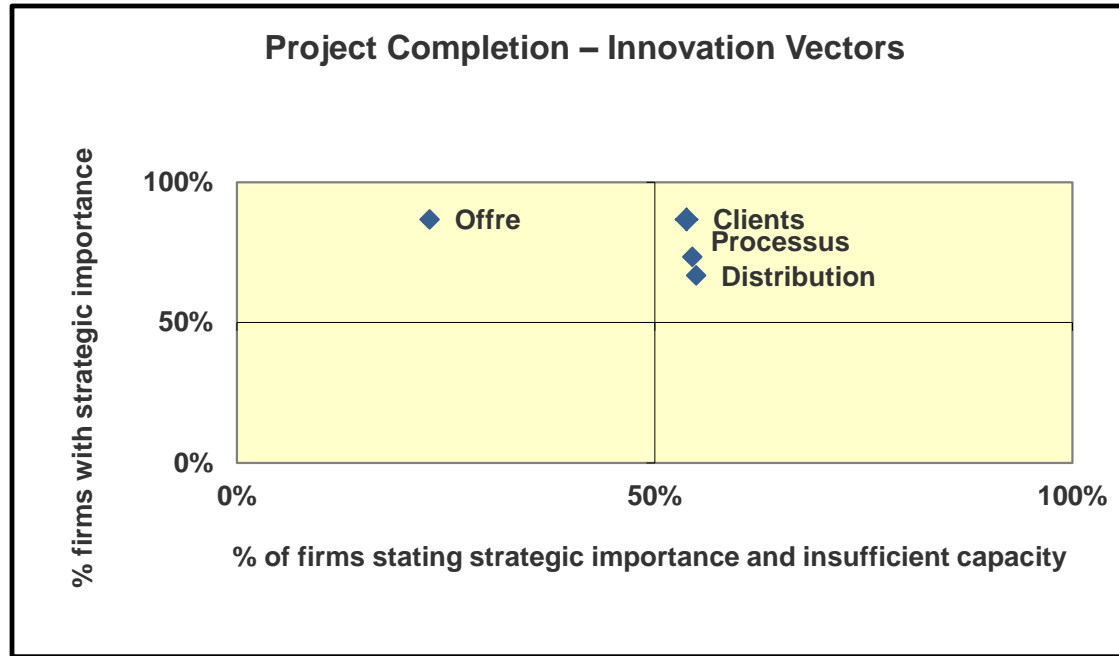




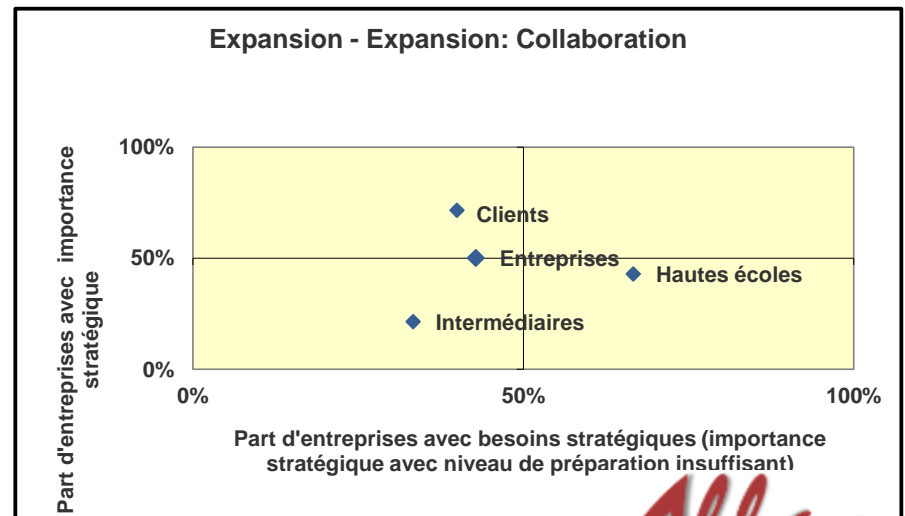
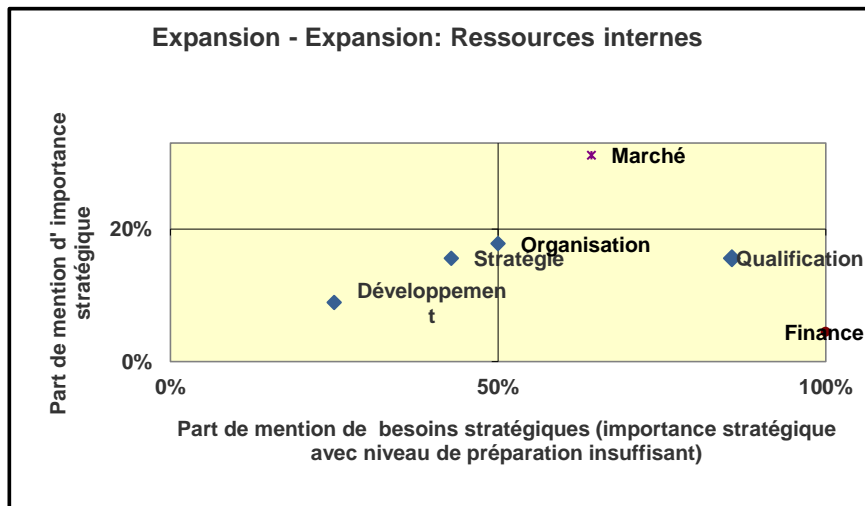
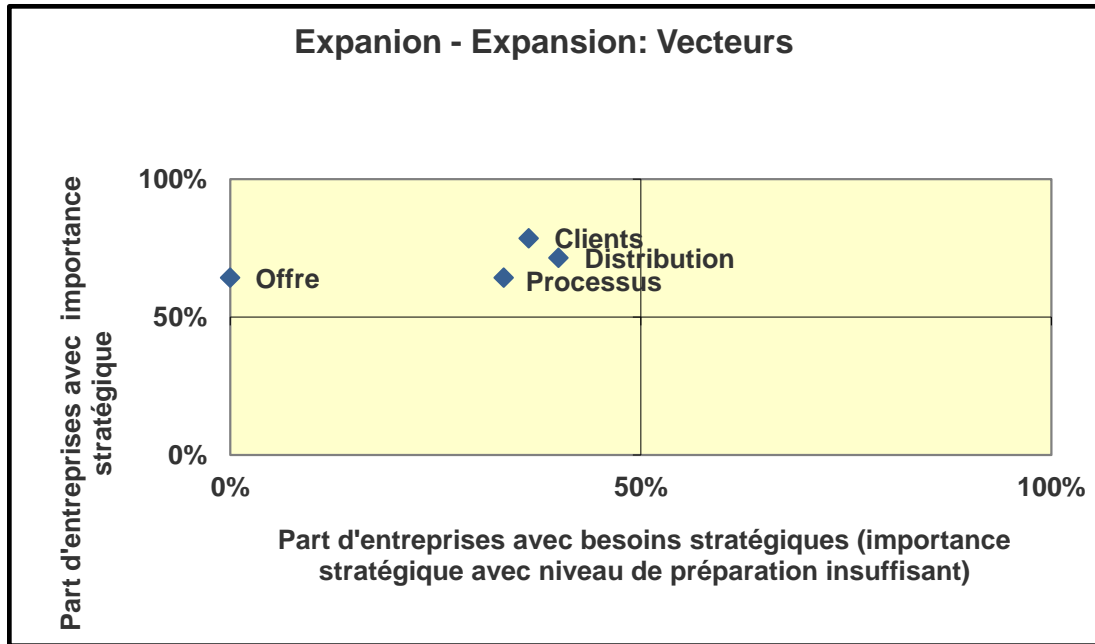
## Results by Life Cycle Stage



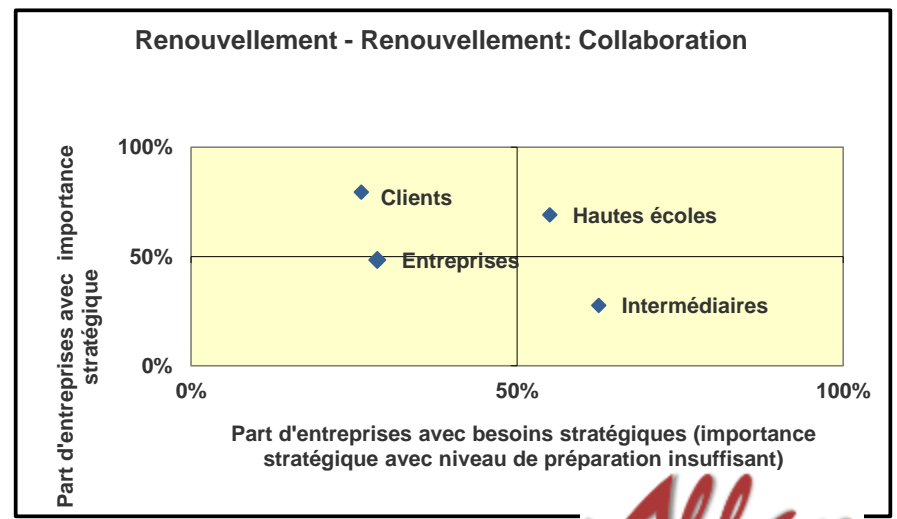
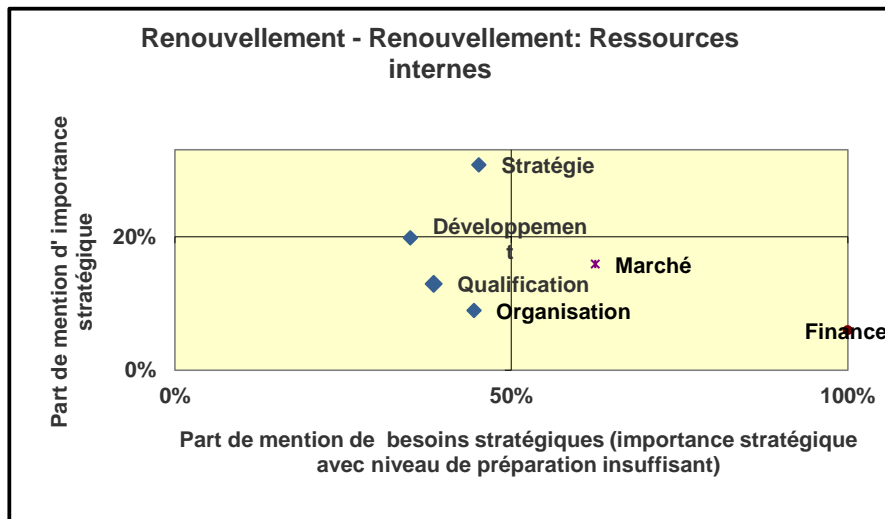
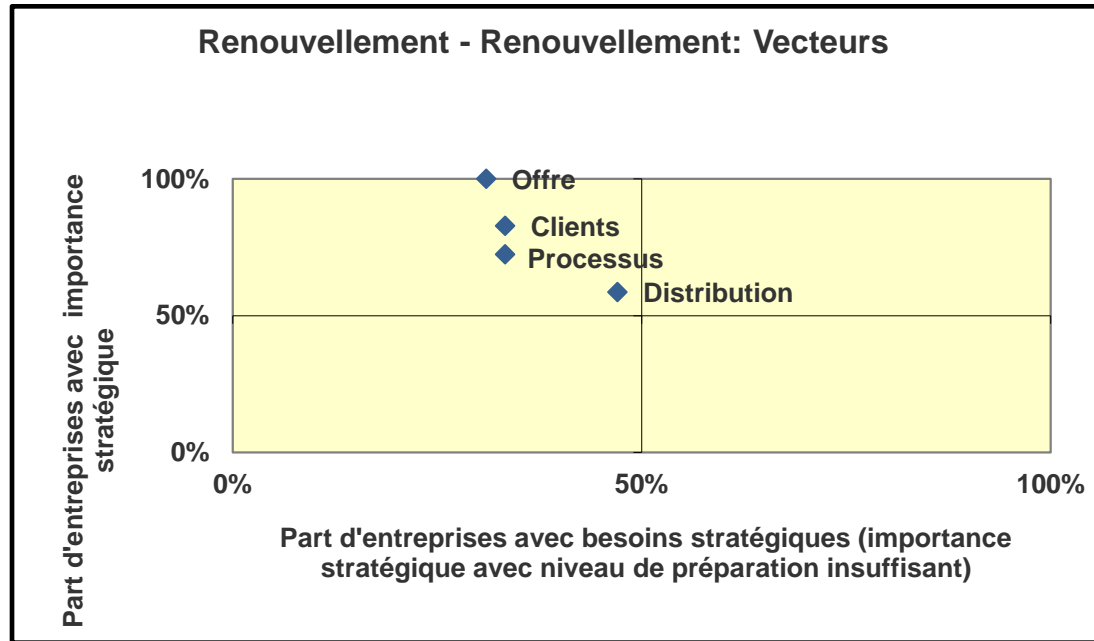
# Project Completion – Project Service Mode



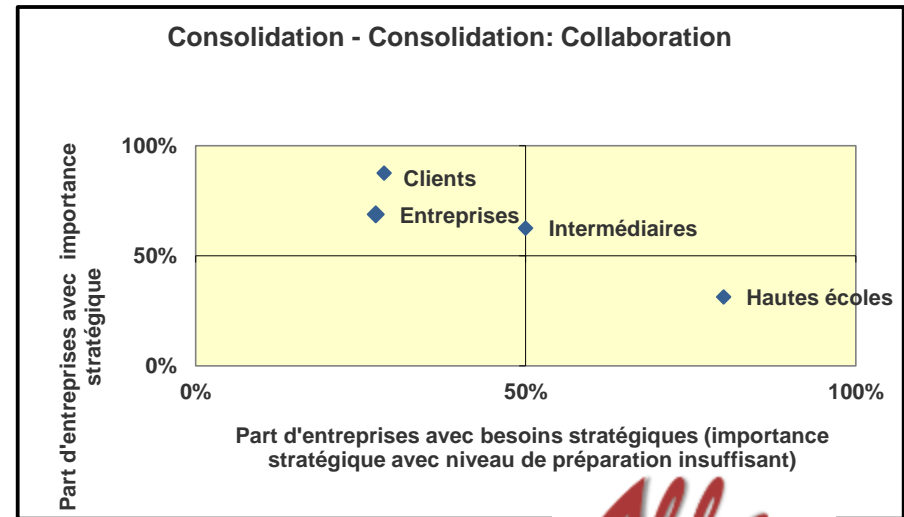
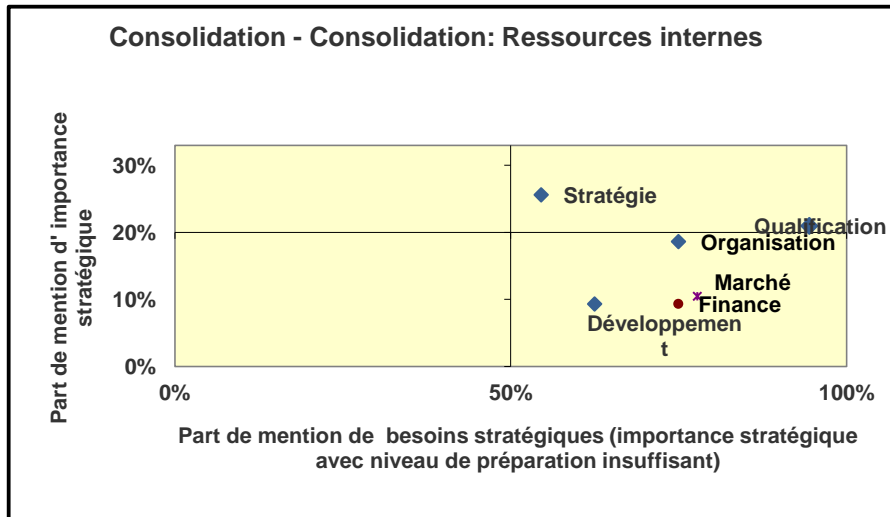
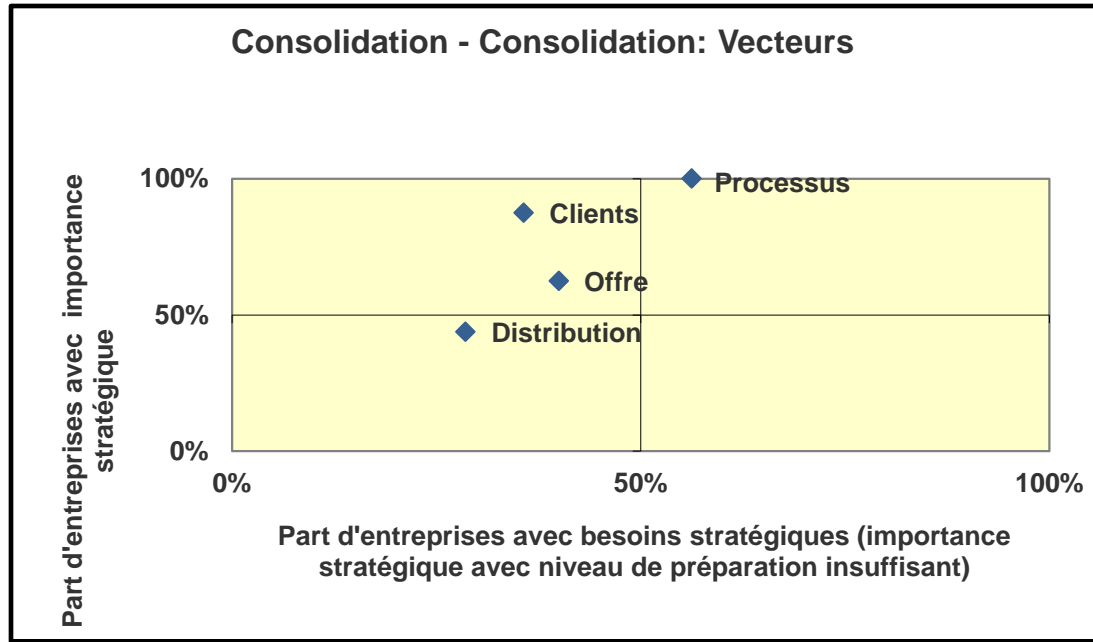
# Expansion - Expansion



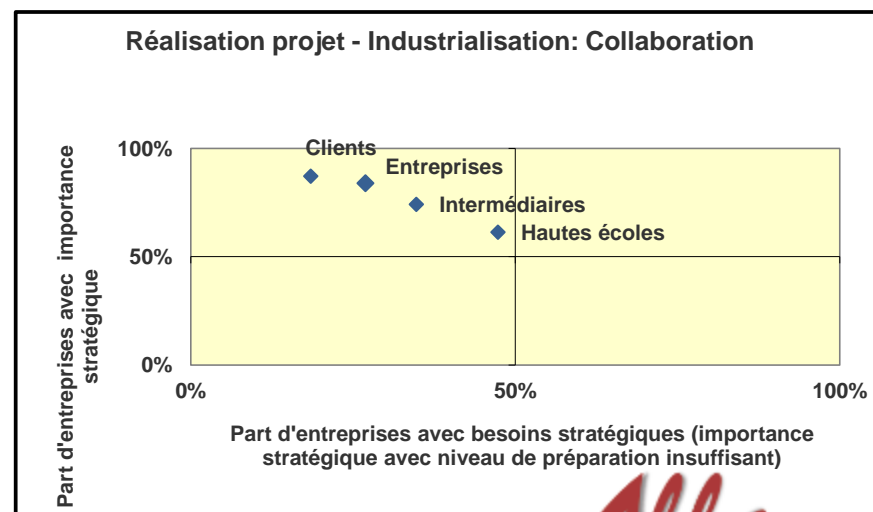
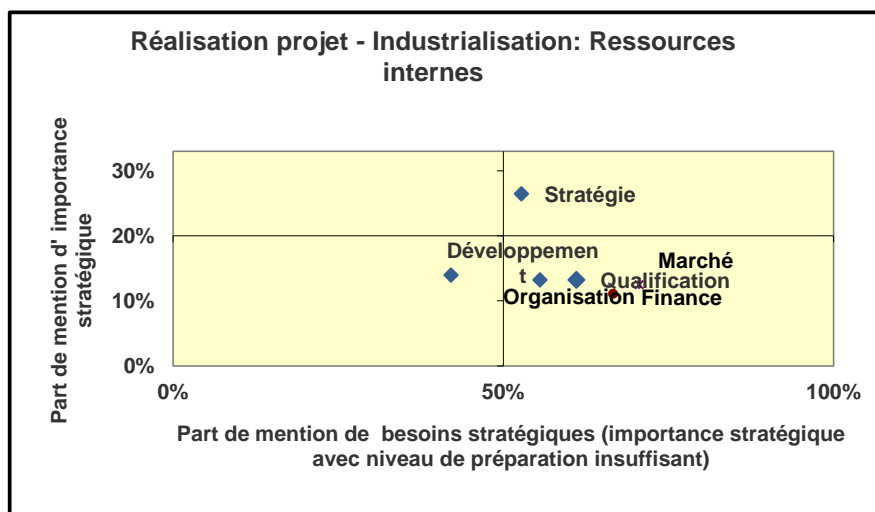
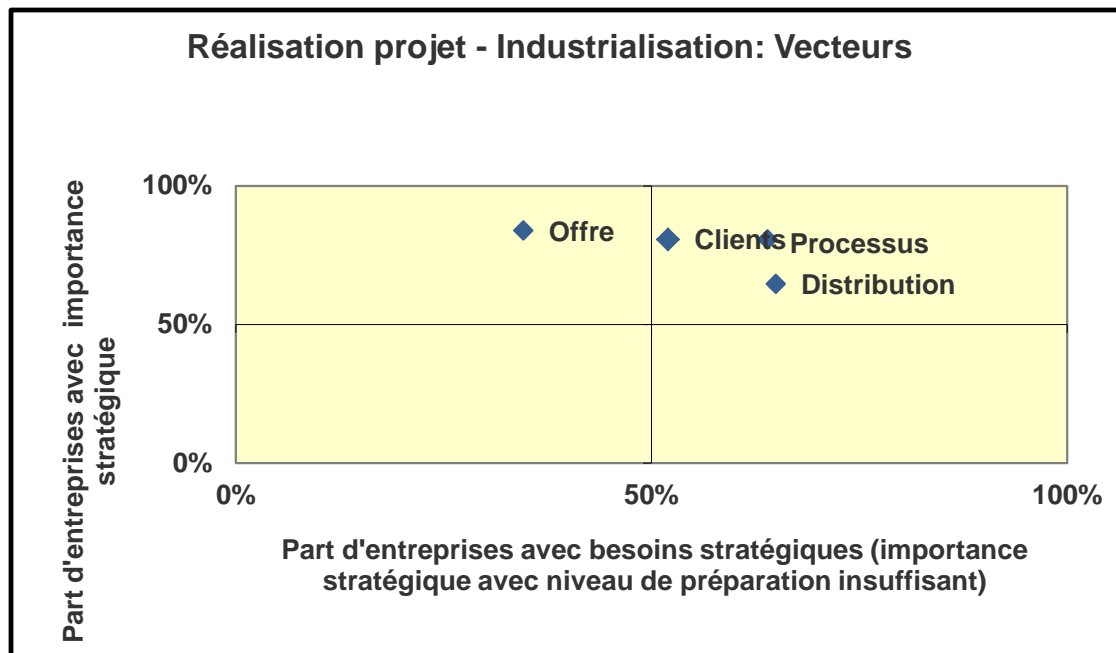
# Renouvellement - Renouvellement



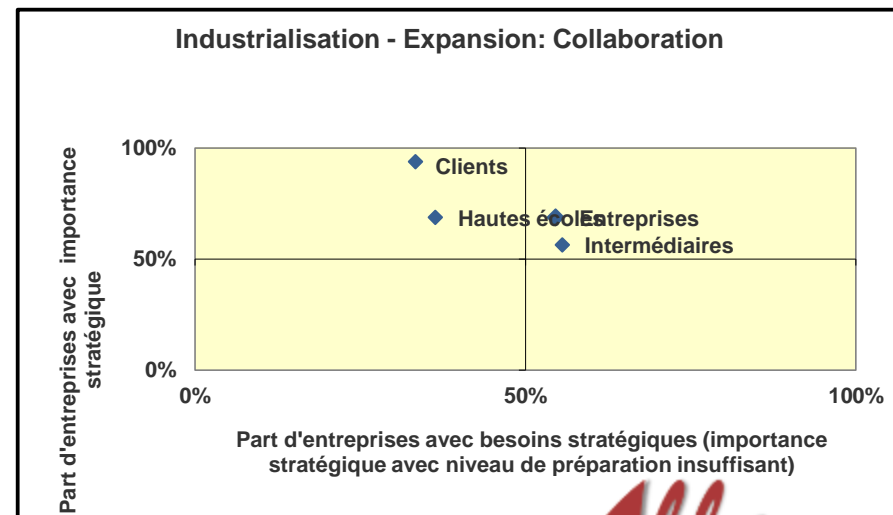
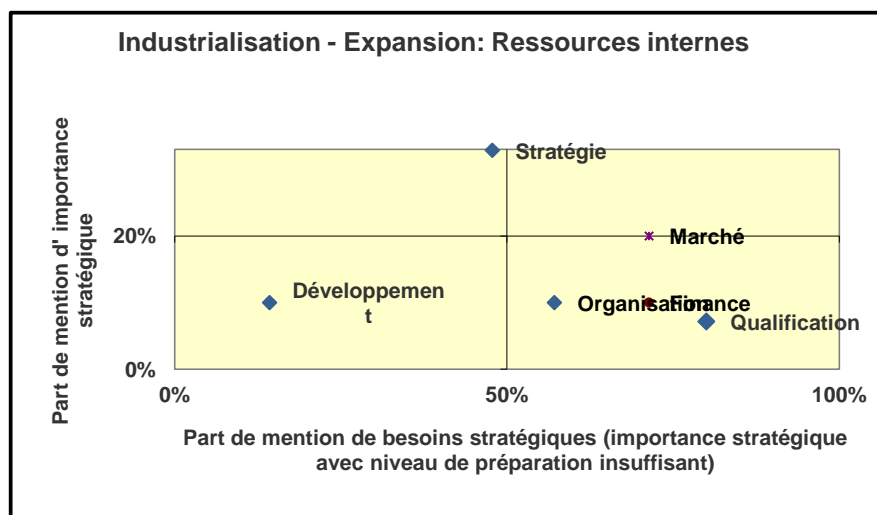
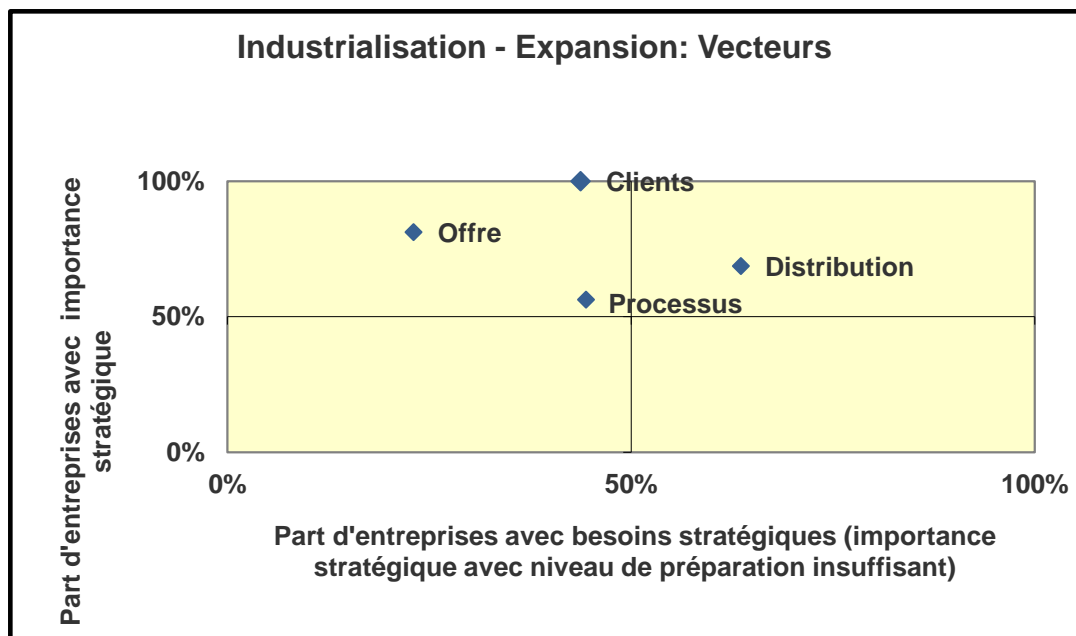
# Consolidation - Consolidation



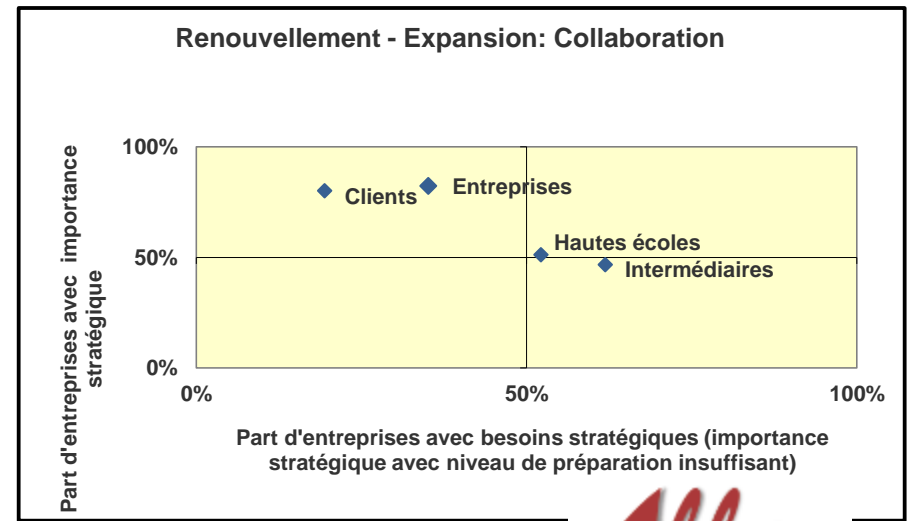
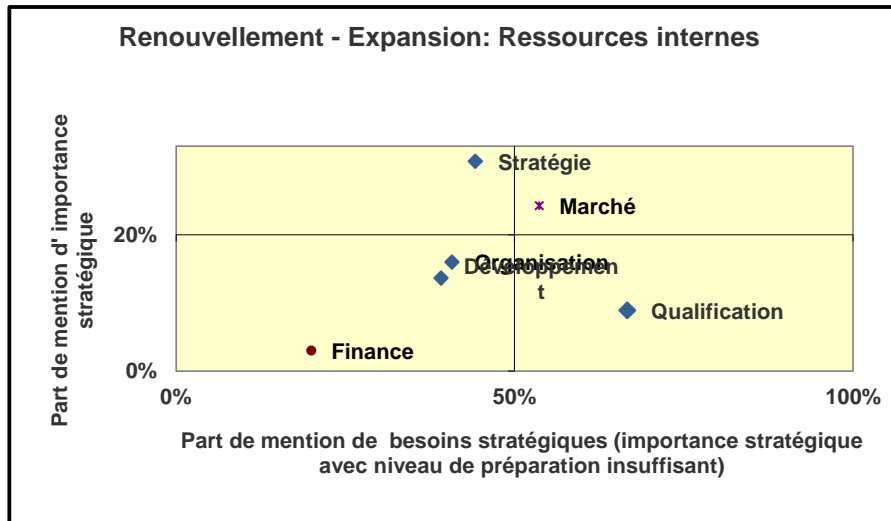
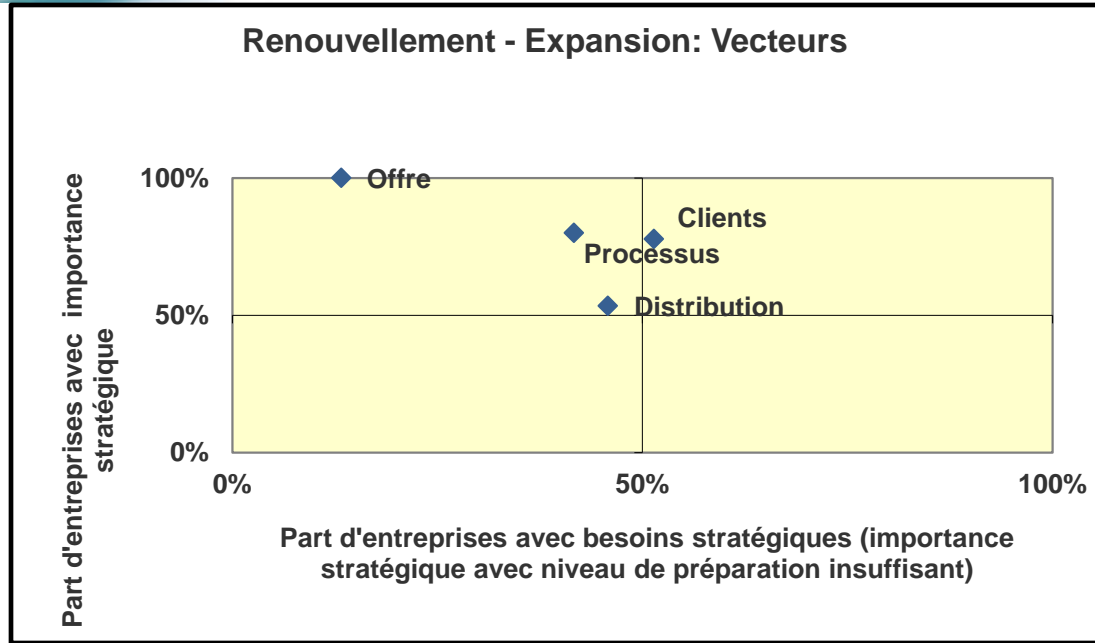
# Réalisation Projets - Industrialisation



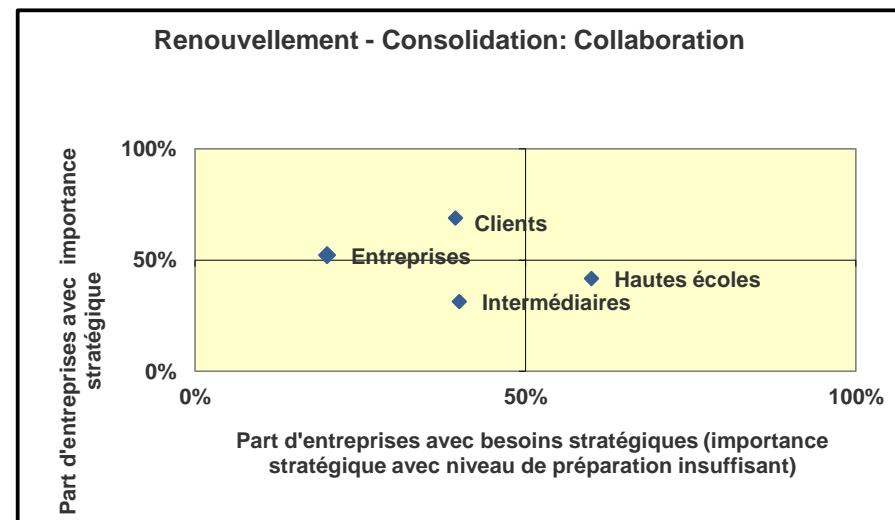
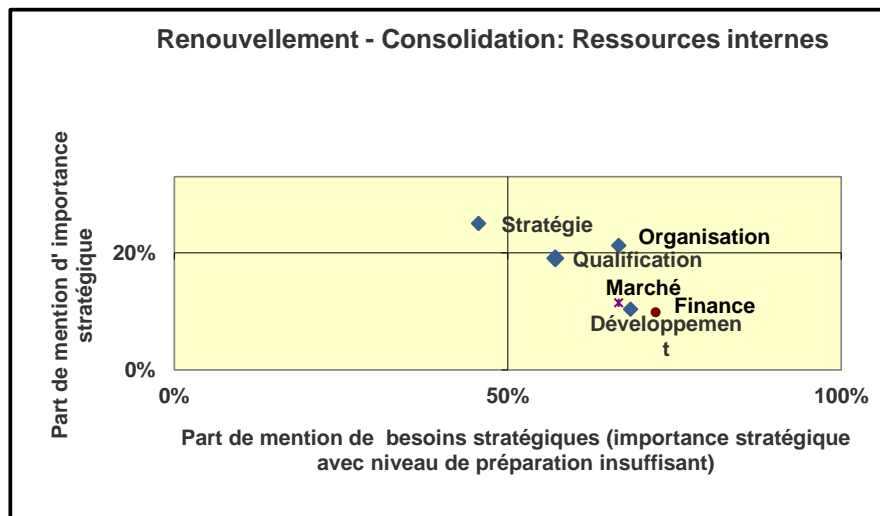
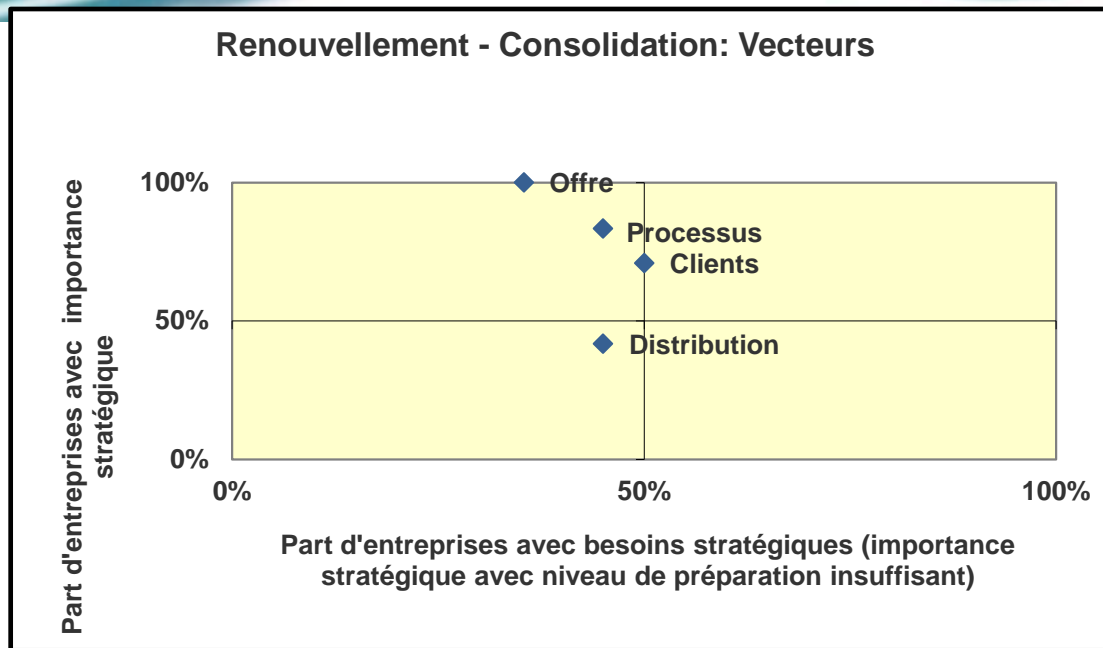
# Industrialisation - Expansion



# Renouvellement - Expansion



# Renouvellement - Consolidation





# Conclusions

- The Life Cycle Stage of the SME is a critical determinant of what innovation and growth elements are important and missing
- SMEs believe themselves to be more competent in some of the innovation and growth determinants than with others
- Universities are at times important but never the number one priority
- Coaching networks should be prepared to offer support across all critical elements to varying degrees at various life cycle stages

**Table 1**  
**The Six Games of Innovation**

|                 |          | Product (and Service) Architecture |                                       |                                   |
|-----------------|----------|------------------------------------|---------------------------------------|-----------------------------------|
|                 |          | Stand alone                        | Open system                           | Closed system                     |
| Market Maturity | Emerging | Eureka!<br>Nespresso               | Battle of architecture<br>Smart Phone | System Breakthrough<br>Early ERPs |
|                 | Mature   | New and Improved<br>Tide Detergent | Mass Customization<br>Wal Mart        | Pushing the Envelope<br>TGV       |

**Table 2**  
**Contribution of Innovation Games to Economic Growth**

|                 | Share of GDP | Contribution to growth through innovation |                               |                             |             |
|-----------------|--------------|---|-------------------------------|-----------------------------|-------------|
|                 |              | Stand alone                               | Open system                   | Closed system               | Total       |
| Emerging market | 10%          | Eureka!<br>15%                            | Battle of architecture<br>15% | System Breakthrough<br>5%   | 35%         |
| Mature markets  | 90%          | New and Improved<br>30%                   | Mass Customization<br>20%     | Pushing the Envelope<br>15% | 65%         |
| <b>Total</b>    | <b>100%</b>  | <b>45%</b>                                | <b>35%</b>                    | <b>20%</b>                  | <b>100%</b> |

# Global survey of innovators – key findings

- Innovation pursuit in emerging markets is inescapable, but this is not so in mature markets
- In mature markets a strategic commitment to innovation is the most important factor followed by corporate culture
- R&D is not on the list of principal drivers of innovation – it is often associated but rarely critical
- 95% of innovations involve improvements to what exists in the market or in the production process
  - The exception is in System Breakthrough and PTE where R&D is at the core of customer-driven change
  - Breakthrough innovators rarely survive pushed aside by smarter, more competitive emulators
- The major contribution by universities is not their research but their creation of a skilled labour pool of graduates capable of integrating global advances into regional businesses.

# Canada's innovation policies through the “games” lens

- In the real world, innovation takes place within a continuous stream of improvements in products and processes with an occasional breakthrough that gives rise to a new market or disrupt an existing one.
- An effective set of public policies aimed at stimulating innovation should target the continuous stream of improvements.
- Many of Canada's current public policies do not fare well under the games-of-innovation framework.
  - There is an inappropriate bias towards R&D intensive innovation
  - There is at best a tenuous link between university or dedicated research institution research and innovation.
  - Pushing the Envelope project support is worthwhile.
  - Encouraging local employment of university graduates and restructuring the NRC are likely to be effective.
  - Venture capital targeting firms that survive in the ecosystems of innovators and non-technological businesses has higher impact as odds of survival are higher and their economic footprint larger.



## Oh Oh!!

- So, we followed the best advice, tailored the best options to our particular circumstances and spawned a plethora of knowledge-based SMEs that grew quickly, went public with successful IPOs and continue to innovate while delivering on our hoped for objective of creating sustainable high – quality employment .
- Sound too good to be true??
- What can possibly go wrong with this clear track record of astounding success?

## The Prezi Case and ABB – Market Pull

- Prezi is a presentation software designed in Hungary
- The firm attracted venture capital funding and grew but
- Prezi now operates in Hungary and in the USA from its San Francisco office
- Apparently the founders believed that a US presence was essential to large-scale take up of the product
- It's not just start-up SMEs who are moving to markets
- Bill Black is Executive VP of ABB and he makes no secret of ABBs plan to diversify its operations equally within its three major market regions EU, NA, and Asia.

## • Canadian Tech Firms Undervalued

- Canada has much smaller pools of risk capital than our neighbour.
- We therefore tend to fund our companies at lower levels than the competition. They are therefore weaker than the competition and often cannot realise their full potential.
- Our public companies achieve valuations that are much lower than their peers south of the border. A recent analysis by Byron Capital Markets suggests that this under valuation is systematic across the tech sector.
- ICT companies for example are valued at a 23% discount in the software sector and a 34% discount in the hardware sector. So our companies are cheap. So guess what?

## • Foreign Firms are Gobbling Up Canada's Tech Sector

- They are acquired. The Branham group has listed 164 significant ICT companies that have been lost to acquisition in the last decade.
- And our security regulators compound this problem by making hostile acquisitions easier in Canada than south of the border.
- If you look at the ICT tech weight in the S&P 500 it has hovered around 15% over the past decade but accelerated in the last few years to above 19%.
- The ICT tech weight on the TSX has declined steadily from a peak of about 8% over the last decade to 1.2%. If you take out RIM and Opentext.
- **Yes 1.2 versus 19 percent.**



# Summary

- Universities , indeed R&D itself, are not major direct contributors to innovation – labour pools are the most important university role
- Knowledge-based SME firms requirements for support from governments vary markedly with the life cycle of the firm
- Quality of life and market access issues are critical to the location issues for KBE firms
- Hostile takeover legislation creating rules equivalent to those extant in the acquiring region is a critical component of the innovation policy framework in any region.





**Thank you for your  
attention**