Emergence of high technology markets: the case of space related business

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Market emergence and product life cycle

- Typical curve
- Starting point: launch of a new product (aka launch of an innovation)
- Placing firm’s product in the life cycle helps to understand current situation and make forecasts on
  - Sales, profits, competition rivalry, production decisions, etc.
The case of GNSS markets

Cumulative Revenue 2015-2025 by segment

[Source: GSA, 2017]
• Many diffusion processes are very chaotic
• 62% of new products launched onto the market are failures
• Improvements build on a better understanding of the diffusion of innovations
Main segments of adopters

<table>
<thead>
<tr>
<th>Different needs for each segment</th>
<th>Innovators</th>
<th>Laggards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected returns from adoption</td>
<td>+++</td>
<td>--</td>
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<tr>
<td>Price sensitiveness</td>
<td>---</td>
<td>++</td>
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<tr>
<td>Key performance parameters</td>
<td>Specific</td>
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</tr>
</tbody>
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Emergence | Growth | Maturity | Decline

Sales

Time

- Innovators
- Early adopters
- Early majority
- Laggards
- Diffusion curve (total)

Different needs for each segment:

- Expected returns from adoption: Innovators (++), Laggards (--)
- Expertise on the innovation: Innovators (++), Laggards (--)
- Risk tolerance: Innovators (++), Laggards (--)
- Price sensitiveness: Innovators (--), Laggards (++)
- Key performance parameters: Innovators (Specific), Laggards (Specific)
Chasms and failures of innovations on markets

• If significant changes in the commercial and technical specifications are not made we observe chasms and failures of innovations on the market.
• Why?
  – “we do what we do but better” leads to improve the position within the existing adopter segment.
Solution

• “we do something different” and not “we do what you do but better”
  – “we do something different” leads to move toward the next adopter segment

• How?
  – Collaborate with existing adopters to find out the new direction for innovation
    • Von Hipple (1986) details the case of collaboration with innovators (aka lead users)
Step 1: learn from existing adopters

- Learn from innovators by identifying together
  - the needs of innovators
  - the needs of the early adopters from the needs of innovators
  - the obstacles to adoption for early adopters
- Use the information collected
  - Integrate the comments of innovators in the development of the next version of the innovation
- The main objective of the collaboration with innovators
  - Is not to propose a product that fits with the needs of the innovators
  - Is to develop the next version of the innovation that fits with the needs of the early adopters
- Implies significant changes in the technical and market specifications of the product
  - “we do something different”
Some tips

• The producer invites 10 innovators to joint a project team made of 5 employees to develop the next version of the innovation
• Invite only innovators that agree with your vision about the innovation
• Be fair: the project manager has to accept innovators comments otherwise it is useless to invite them
  – e.g. innovators will leave the project team
Step 2: enlarge the market

• Risky choice to do something different
  – Existing customers
    • The needs of innovators tend to be addressed less accurately
    • Innovators will reduce their purchases in new generation
    • Some will argue that they are “betrayed” by the producer
      – e.g. negative word of mouth
  – New customers
    • Difficult to forecast the future sales because it is the first attempt in this market

• In the long term the producer has to leave the innovators market segment to keep selling longer his product in the market
Conclusion

• The diffusion of innovations on the market is chaotic and usually fails

• How to overcome this situation?
  – Collaborate with existing adopters to find out the new direction for innovation
Thank you!