

SIRIUS Workshop 17
Emerging risk and opportunities in the space sector

How to ‘Disrupt’ the ‘Disruptors’?

Strategic intents of incumbents after the
introduction of radical innovations: the case
of “low cost” satellites and launchers

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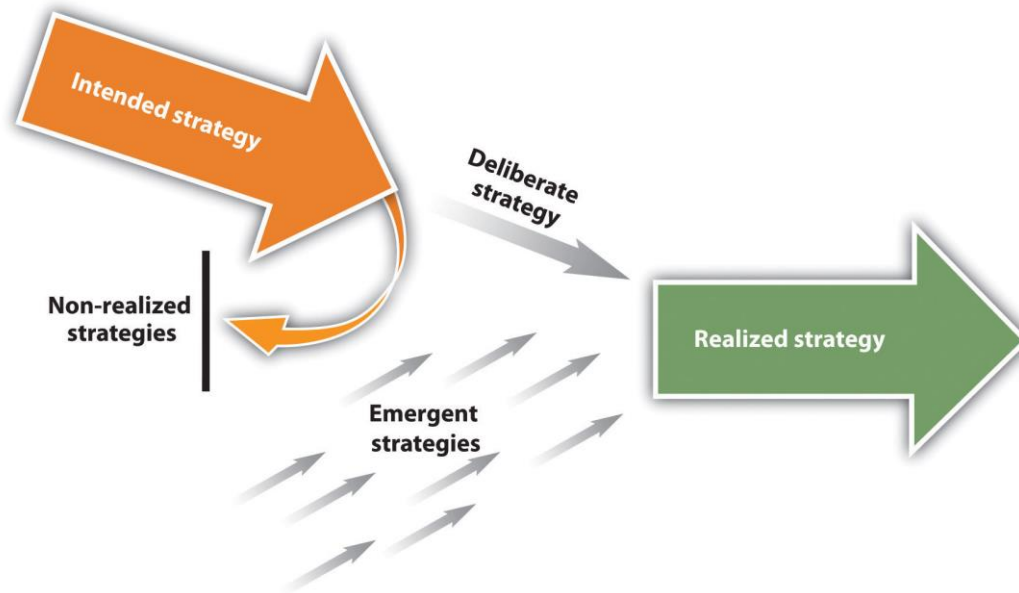
Purpose

- «Hi everyone, my name is Elon Musk, I am the founder of SpaceX. You are all dead in five years.» (Elon MUSK, 2006, Washington, [Challenges, 2013])
- Study the strategic intents of existing producers after the recent introduction of radical innovations by new entrants
 - Diversity of intents
 - Construction of intents
- Ex ante analysis = uncertainty
 - Radical innovation have not yet produced the results expected by new entrants
 - Incumbents did not yet
 - implement a new strategy
 - get the results of the new strategy

Literature review

strategic intents

- The realized strategy results from a process starting with the strategic intents
- The strategic intents are between the strategic diagnosis and realized strategy observed later
- Strategic intents may relate to technological choices, mergers and acquisitions, internationalization, etc.
 - We focus on technological choices
- Strategic intents are visible in the speech of companies



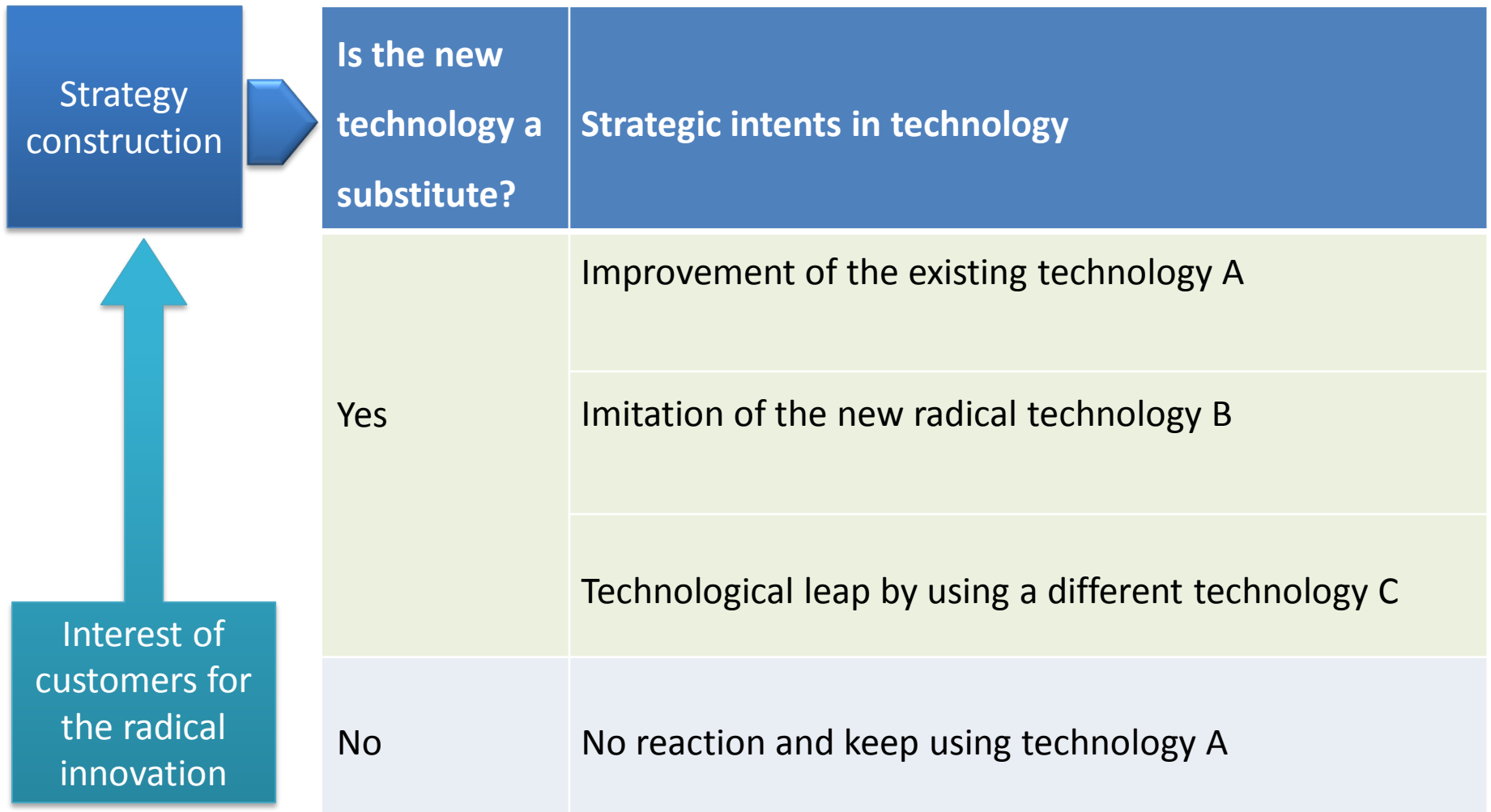
Source: Mintzberg (1994)

Literature review

Strategy construction

- Existing firms build their strategy by analyzing if the new technology is a substitute of the existing technology (Gambardella, 2004)
- Producers look at the interest of customers for the new technology to determine if it is a substitute of the existing technology (Christensen, 1996)

Our conceptual framework



Methodology

- Qualitative methodology
- Study of the speech of senior managers after the introduction of a radical innovation
- Period: 2005-2017
- Units of analysis
 - Actors
 - Existing producers
 - Existing customers
 - Market
 - Satellites
 - Launchers
 - Radical innovations
 - « Low cost » satellites and launchers
- Sources: specialized and general press
 - e.g. *Aviation Week & Space Technology*, *Lockheed Martin Press release*, *SpaceNews*, *Air et Cosmos*, *l'Usine Nouvelle*, etc.

Preliminary results

Satellites: Producers

- Diversity of strategic intents after the introduction of the radical innovation (i.e. « low cost » satellites)
- Multiple strategic intents by the same company: imitation and technological leap
 - (e.g. Sodern, Thales Alenia Space, Airbus)
- Contradiction: imitation and technological leap combined with no reaction and improvement of existing technology
 - (e.g. Airbus: commercial satellites and scientific satellites)

Satellites: Customers

- Diversity of speeches
 - Institutional customers and new commercial customers: “low cost” satellites are substitutes
 - (e.g. *U.S. Air Force Research Laboratory, OneWeb*)
 - They lead producers to react
 - Existing commercial customers: “low cost” are not substitutes
 - (e.g. *AsiaSat, Iridium Communications, Arabsat*)
 - They lead producers to not react

Launchers: Producers

- Diversity of strategic intents after the introduction of the radical innovation (i.e. « low cost » launchers)
- Multiple strategic intents by the same company: imitation and technological improvement
 - (e.g. ULA Engineering, ATK)
- Contradiction: imitation and technological improvement combined with no reaction
 - (e.g. Arianespace)

Launchers: Customers

- Diversity of speeches
- Commercial customers and US institutional customers
 - At short term “Low cost” launchers are considered as imperfect substitutes but they could become substitutes at long term
 - (e.g. AsiaSat, SES, Eutelsat, Airforce Space)
 - Lead producers to react
- European institutional customers
 - “Low cost” launchers are considered both as substitutes and as no substitutes
 - (e.g. CNES, French Ministry of higher education and research, French Air Force General)
 - Lead producers to adopt contradictory strategic intents: reaction and no reaction

Preliminary conclusions

- Diversity of strategic intents for the same radical innovation (“low cost”)
 - 4 possible intents
 - Several intents at the same time
 - Contradictory intents
- Strategic intents of existing producers to face the same radical innovation is influenced by
 - their market position
 - the interest of customers on the radical innovation
 - consistency between on the one hand the strategic intents of existing producers and on the other hand the customers interest on the radical innovation
- Diversity is explained by the complexity of the strategic position of incumbents
 - Not by irrationality
 - Impossible to say that strategic intents are dangerous

- Thank you for your attention!