Using Inventive Thinking to innovate

How organizations sustain their competitive advantage. The Amazon Case - A Capabilities Based Innovation story

Dr. Constantine “Dino” Kiritsis
Award Winning Curriculum Development Expert, PwC, Entrepreneur, Professional Trainer & Author
Agenda & objectives

Who am I?

Networking & Synthesis

The constantly evolving business context

Amazon
The context
Trends affecting businesses today

• Communication;
• Intense global competition;
• Increased transparency;
• Big Data & Data Analytics;
• Constant Change;
• Increased Collaboration – crowdsourcing & open innovation
Why innovate?
Recent Thinking on the sources of competitive advantage

No company can have a sustainable competitive advantage forever – Everything can be ‘copied’

“ The only advantage is the ability to learn & change
What do these companies have in common?
Therefore, why innovate? What would happen if you don’t?

Innovation is not a choice… it’s a necessity!
What is innovation?

Innovation = Inspiration / ideas commercialized – ideas that work!

Innovation = Ideas implemented!
Disruption - Never been in the industry... (!)

Skype?

Airbnb?

iPhone?

Uber?

Facebook?

Khan Academy?

Publishing field: Amazon
1. Why – How - What (of Amazon)
2. Strategy of Amazon

- Low Cost?
- Differentiation?
- Niche?
- Hybrid?
- New strategies?
- Combination?
Is there always a way to develop your organization?
3. Building on capabilities - Amazon

Understanding the theory

Step 1: Can you extend a capability? A strength?

Step 2: Can you modify a strength? An activity you do well?

A process?

Maybe use something in a different way?

Maybe use the data to undertake research?

To find a new service?...
3.1 Knowledge Management @ Amazon

- Understanding KM
- Understanding knowledge transfer
- Understanding how to build capabilities from existing knowledge
- Where is your knowledge “stored” and how is it “used”?

**CAPTURE**

**CREATE**

**DISTRIBUTE**

**SHARE**

**HOW CAN THIS HELP INNOVATION or help you MOVE towards a more innovative culture?**
Example 1 – Extending products through on-line capability

From on-line book seller to...selling more products – extending a capability
Example 2 – Amazon Fresh

We ‘know’ distribution & logistics, why not sell fresh goods and some dry goods – same day delivery?
Example 3 – Extending selling capability to making their own brand

Amazon fashion...

<table>
<thead>
<tr>
<th>Clothing &amp; accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building on understanding customers &amp; products</td>
</tr>
<tr>
<td>Using their own ‘knowledge’ &amp; data?</td>
</tr>
</tbody>
</table>
Example 4: Extending data capabilities bGDPR (before GDPR)

Recommendations, predictions, patterns…
Example 5: From own server capabilities (keeping track of their own customer data) to cloud...

**Server capabilities**

Capacity capability

Why don’t we ‘rent’ space?

Cloud capability

Amazon Web Services (AWS)
Example 6: Division idea – creation of Kindle...

- Creation of device for more sales
- Faster sales
- Prime customers
- Extra benefits
- More data...
Example 7 – Logistics capability

Amazon’s fulfillment centers

- Logistics “Wherever it fits”
- Bar codes
- Algorithmic work

The beginning of robots for logistics
Example 8: Amazon Robots

Robot system based on the work done in example 6

Over 100,000 robots
Example 9: From Robots to Amazon ‘Go’

Robot capability & system built the first supermarket with no cash register in 2017…
Example 10: Amazon super markets

We understand S/W, logistics and how to sell…

Why not buy a supermarket chain to test our system and control distribution?

2017: Amazon Whole Foods

Testing the systems…
Weak spot? Amazon distribution, so investment in capability...

- Used trucks & planes
- Tried drones (tested since 2013)
- Own planes
- Own airport!
Example 11: Amazon Air

Organizing its supply chain end to end…
Using its capabilities & knowledge management from working with suppliers in the past 25 years…
### Amazon brands (examples)...

<table>
<thead>
<tr>
<th>Amazon publishing</th>
<th>Amazon fashion</th>
<th>Amazon fresh</th>
<th>Amazon Web Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon Kindle &amp; Kindle Store</td>
<td>Amazon drones</td>
<td>Amazon go</td>
<td>Amazon whole foods</td>
</tr>
<tr>
<td>Amazon prime</td>
<td>Amazon robots</td>
<td>Amazon prime &amp; octacopters (drones)</td>
<td>Amazon Prime air (+ airport)</td>
</tr>
</tbody>
</table>

**What’s next? – Overall, Amazon has close to 20 subsidiary companies**
On-going summary – Amazon case

- Innovation - NECESSITY
- Mission & “Why” updated
- Strategy
- External Analysis
  - Raising barriers
  - Using national advantages
  - Understanding customer power
  - Understanding disruption
- Internal Analysis
  - Capabilities
  - Customer centricity
  - Quality
  - Financial sense (long term)
  - People
- Marketing
  - Predictive analytics
  - Portfolio Analysis
  - Value & supply chain
- **Capabilities** (S from SWOT)
  - Constant attempts to disrupt
The issue of investing the cash...

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>4000 items per minute sold...</td>
<td></td>
</tr>
<tr>
<td>Over 100 million items old on ‘prime day’</td>
<td></td>
</tr>
<tr>
<td>Over 120 million products offered by Amazon...</td>
<td></td>
</tr>
<tr>
<td>150 million <strong>mobile</strong> users in 2019</td>
<td></td>
</tr>
<tr>
<td>Customers: 315 million...</td>
<td></td>
</tr>
</tbody>
</table>
Innovation follows a set of patterns that can be re-applied to any product, service, or process.

Creativity thrives under constraints...
Example for Amazon: Systematic Inventive Thinking - Subtraction

The elimination of core components rather than an addition of new systems and functions
Focus - Thinking tool: Subtraction technique

<table>
<thead>
<tr>
<th>Mini MBA</th>
<th><strong>Amazon “go” (S)</strong></th>
<th>DVD – Slimline Philips</th>
<th>Freshener Fabreeze</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact lenses</td>
<td>Instant soup</td>
<td>SONY Walkman</td>
<td>Wi-Fi</td>
</tr>
<tr>
<td>Decaf coffee</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ear Pods</td>
<td>Entertainment systems in airplanes</td>
<td>Motorola Mango</td>
<td>Wi (no joystick!)</td>
</tr>
</tbody>
</table>

Can you find any examples? Can you apply this methodology to your work?
Subtraction
Function Follows Form

Existing Situation

Thinking Tool

Virtual Product

Should we do it?
Identifying needs, benefits, markets

Can we do it?
Checking feasibility, challenges

Adaptations

Idea

Subtraction
Task unification
Division
Multiplication
Attribute dependency
Define, visualize
Marker ...
Implementation ....
So what is your ‘essential’ component?

- It may not be the Most essential, but it is also not the Least essential
- Or you can “partially” subtract something (Twitter)
- Maybe this could be an option?
- Subtraction can “reframe” the problem for you
Multiplication
Function Follows Form

- Existing Situation
- Thinking Tool
- Virtual Product
- Should we do it? Identifying needs, benefits, markets
- Can we do it? Checking feasibility, challenges
- Adaptations
- Idea

Subtraction
Task unification
Division
Multiplication
Attribute dependency
Define, visualize
Marker...
Implementation....
Division
Function Follows Form

- Existing Situation
- Thinking Tool
- Virtual Product
- Should we do it?
  - Identifying needs, benefits, markets
- Can we do it?
  - Checking feasibility, challenges
- Adaptations
- Idea

- Subtraction
- Task unification
- Division
- Multiplication
- Attribute dependency

- Define, visualize
- Marker ...
- Implementation ....
The Division Technique works by taking a component of the product or the product itself, then *dividing it physically or functionally*. You re-arrange the parts to seek new benefits.

Using the Division Technique, many creative products and services have had a component divided out of them and placed somewhere else in the usage situation, usually in a way that initially seemed unproductive or unworkable.
Examples of division

- Bite size chocolates
- Razors and handles

Home cinema speakers
Printers & ink
**Alexa & Kindle for Amazon**

Nespresso system
Tooth brush systems

Air conditioning split units
Old car stereos front face
Thank you!

Dr. Constantine “Dino” Kiritsis, ICDE PwC, Author, Entrepreneur
Constantine.Kiritsis@pwc.com