ENTREPRENEURIAL STRATEGY

BUSINESS MANAGEMENT AND ENTREPRENEURSHIP 2023-24
SESSION 4
Entrepreneurial strategy
Core assets
Problem/solution fit
Product/market fit
Perspectives on entrepreneurial strategy
Entrepreneurial strategy

Core assets
Problem/solution fit
Product/market fit
Perspectives on entrepreneurial strategy
Entrepreneurial strategy is a roadmap and plan of action that guides entrepreneurs in leveraging their resources to achieve their goals. The strategy is dynamic; it evolves as a result of advancing insights, internal and external changes.
“You know what strategy is, Marc? Something falls on your plate and you decide to do something with it. Or not.”

Ignace De Bock
2004
ENTREPRENEURIAL STRATEGY

WORKFLOW

Creativity & Idea generation

Idea translation

Idea implementation

Research

Selection

Execution

The scientist

The strategist

The entrepreneur

ENTREPRENEURIAL STRATEGY
do you have a concrete project in mind? If so, in what stage?

Klik op het geprojecteerd scherm om de vraag te activeren

1. not yet (25%)  2. I'm working on something that may have ... (38%)  3. we are looking at options regarding ... (13%)  4. we are working on plans for a start-up (6%)  5. we are actively working towards a start-up (13%)  6. we have a start-up (6%)
who has concrete project?

### Research Canvas 2.0

<table>
<thead>
<tr>
<th>Research problem</th>
<th>Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>The academic, technological or societal problem or challenge you are trying to solve with your research.</td>
<td>Project and/or industry partners, regional / European / International project, multidisciplinary team,...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Your research results</th>
<th>Differentiators</th>
<th>Alternatives and competition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research phase you are in and (expected) research outcome.</td>
<td>List how your research is different than what is already existing or upcoming and why this matters.</td>
<td>Solutions that are already in use to (partly) address the research problem.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output &amp; ownership</th>
<th>Upcoming alternatives and competition</th>
</tr>
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<tr>
<td>List the outputs (algorithm, model, knowledge, database, expertise,...) and who owns it.</td>
<td>Solutions that are not yet available but will be soon.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>About you</th>
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<tr>
<td>List your (professional) experiences, ambitions, interests and credentials.</td>
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Strategy is identifying a viable spot in the Business ecosystem and setting out a course towards it

- There is this whole business ecosystem of companies, organized in markets, supply chains, around standards...
- There is this permanent evolution due to innovations and industry life cycles
- Where and how do you fit?

Defining and implementing strategies are essential activities of entrepreneurs and managers

These challenges apply as well for startups as for established companies
ENTREPRENEURIAL STRATEGY

KEY DIMENSIONS

- What do you bring to the table?

- What offering do you build based on this; what is the added value of this offer for your customers?

- What is the concrete plan: how do you build and bring this offering to the market? Will you make money?
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Entrepreneurial strategy

**Core assets**

- Problem/solution fit
- Product/market fit
- Perspectives on entrepreneurial strategy
It all starts with **core assets**: something (relatively) unique you have in hand.
What do you bring to the table?

- What offering do you build based on this, what is the added value of this offer for your customers?

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**Entrepreneurial Strategy**
ABOUT CORE ASSETS

WHAT ARE CORE ASSETS?

- Note on terminology
  - Assets, Competencies, Capabilities
    - Generally interchangeable terms; we use the term ‘assets’ (except when we cite authors)
    - "Kernactiva, kerncompetenties"
  - Resources and capabilities
    - Resources are tradable and non-specific to the firm
    - Capabilities are firm-specific, often tacit knowledge

- We use core assets as overarching term
ABOUT CORE ASSETS

EXAMPLES

- A **patent** on the antibodies of camels
- A **secret** formula for a refreshing drink
- A **brand** name everybody knows
- An **installed base** of users on a social network
- The IT **infrastructure** and algorithms to deliver a perfect experience to 2 trillion search requests per year
- The **expertise** to build 50 kilometer long tunnels
- The **talent** to design clothes, write songs
- The legs of Remco Evenepoel
**Characteristics of core assets**
- Provide potential access to wide variety of markets
- Make a substantial contribution to customer benefits
- Are difficult for competitors to imitate

In running your business you enhance these core assets and develop new ones over time.
- Core competencies are enhanced as they are used
- These in turn open new horizons
- No-one can rely on the same core assets forever
- They may be limited in time
  - e.g. patent duration: 20 years
  - IBM and computing
Core competencies yield a **definition of the company** and the markets it serves.

- Provide a logic for product and market diversification, make resource allocation priorities transparent to the organization.
- Technologists, engineers, marketeers have a shared understanding of goals.

Ideally a company creates a **sustainable competitive advantage** based on its core competencies.

- Based on core competencies you develop a commercial offering and a plan for a venture.
- Few companies will build world leadership in more than five or six core competencies.
- When it comes to core competencies, it is difficult to get off the train, walk to the next station, and then re-board.
CLASSIFICATION

- **Physical**
  - natural resources, equipment, money,...

- **Intellectual**
  - creative talent, patents, copyrights, trade marks, expertise, experience,...

- **Organizational**
  - low cost retail, one-day package delivery, marketing, ability to attracts talents, innovation and product development,...

- **Market**
  - market share, brand name, distribution channel,...

- **Resources (= tradable) vs. capabilities (often tacit knowledge)**
Klik op het geprojecteerd scherm om de vraag te activeren
As a rule: **the more unique the more valuable**
- Of course it all depends on how important the subject of your exclusivity is

**Exclusivity is a sliding scale**
- The patent on the invention
  - Xerox
- **Brand names**
  - Pablo Picasso, Coca-Cola, Google
- **Market leadership** is by definition quite exclusive
  - Microsoft Windows/Office: broad markets
  - Barco screens: niche markets
- **Oligopolies**
  - 3 gaming Console Manufacturers
  - Oil and gas, pharma giants
- The opposite of exclusivity: large number of quasi identical suppliers
  - Pitta Bars...
The World's Most Valuable Brands 2021

2021 has been a year of economic recovery, as the world slowly transitions to a state of relative normalcy. But some companies are rebounding faster than others. According to Kantar BrandZ™, a lot of it has to do with the strength of a company’s brand.

With this in mind, here’s a look at the world’s most valuable brands in 2021.
2023

THE TOP 100
Most Valuable Brands

We've visualized the most valuable brands for 2023, based on Brand Finance's annual Global 500 ranking.

How is a brand’s value determined?

- Revenue
- Brand Strength
- Brand Value

U.S. companies make up half of the top 100 ranking.

- Petrol (14)
- Tech & Services (16)
- Media (8)
- Banking & Insurance (10)
- Telecommunications (3)
- Automobiles (10)
- Energy & Utilities (14)
- Food & Beverages (8)
- Healthcare Services (3)

Apple is the most valuable brand.

Amazon's strong position in both B2C and B2B sectors contribute to its enormous brand value.

Google ranked first overall in Brand Finance's annual Global 500 ranking.

Deutsche Telekom is now Europe's most valuable brand.

VRIJE UNIVERSITEIT BRUSSEL
In certain technology domains unique IP is a requirement (ex. pharma), in nearly all it is of substantial value.

Is the segment in which you claim leadership relevant?
- ‘Market leader in Feature phones’ (<< smartphones)

Exclusivity/leadership can be regional
- Walmart: low cost retail US market,
- Vs. Colruyt: low cost retail Belgian market

Core assets do not need to be exclusive, the combination of ‘not so special assets’ can be valuable
- example: Vietnamese boat people settling in Belgium in the 1980`s
  - restaurant owner
  - knowledge of French
- -> Vietnamese restaurant in Brussels
Assessing the uniqueness of your core assets...

Red ocean

- Compete with the existing
- Beat competition
- Exploit existing demand
- Make value/cost trade-off
- Differentiation or low cost

Blue ocean

- Create uncontested markets to serve
- Make competition irrelevant
- Create and capture new demand
- Break value/cost trade-off
- Differentiation and low cost

(Source: Kim & Mauborgne, 2015)
IS EXCLUSIVITY ENOUGH?

CORE ASSETS EXCLUSIVITY

- **Relevance**
  - Not enough to have core assets...
  - ... Someone must want them (or the products you derive from them)

- **Feasibility**
  - ... And you can make money delivering them
  - ... And there are no showstoppers: manufacturing, for use of product

- Finding the **right use** of your assets in the right market can be a creative process
  - Seeing the opportunity
<table>
<thead>
<tr>
<th>Type</th>
<th>Cost</th>
<th>Time</th>
<th>Limits</th>
<th>Value in negotiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual Property</td>
<td>$$$$$ + enforce</td>
<td>20 year</td>
<td>- time limit</td>
<td>- sign of real technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- freedom to operate</td>
<td>- signal threat of possible litigation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- how watertight?</td>
<td>- strength varies by sector</td>
</tr>
<tr>
<td>Secrecy, complexity</td>
<td>$</td>
<td>indefinite</td>
<td>- once the secret is out...</td>
<td>hard to bargain if your asset is secret (unless you can show the results)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- requires effective organization</td>
<td></td>
</tr>
<tr>
<td>Speed</td>
<td>$$</td>
<td>short</td>
<td>need to repeatedly innovate</td>
<td>hard to bargain when speed is of essence</td>
</tr>
<tr>
<td>Branding, reputation</td>
<td>$ - $$$</td>
<td>definite</td>
<td>relaunch from time to time, creativity required</td>
<td>favorable position when you have a strong brand</td>
</tr>
</tbody>
</table>

Adapted from “managing innovation and entrepreneurship”, Fiona Murray, 2008
**Merck and Liquid Crystal (Displays)**
- used in displays for televisions, notebooks and PC monitors, mobile phones, clocks and watches, measuring instruments, digital cameras, camcorders, navigation systems ...
- HQ in Germany, but main LC business based in East Asia.

‘More than’
- 100 years of liquid crystal production at Merck’
- 2,500 patents for liquid crystals, their mixtures and display applications.’
- 60% market share in Liquid Crystal market in 2017

**2007: Liquid Crystal business represents**
- 13% of Merck revenues
- 50% of Merck operating profits

**Quantity of LCs used in devices...**
- The display of a mobile phone contains about 5 mg of LC, a notebook. 0.3 to 0.4 g and a 32” LCD TVs panel 2g
- The annual world market production of LCs is about 40 tonnes
- In case of a 32” HD panel, the liquid crystal represents about 6% of total material cost
Pfizer relied on a single set of patents covering cholesterol drug Lipitor for a fourth of its total sales.

- the patent expired in 2011, after generating more than $123 Billion revenues for Pfizer

Qualcomm collected almost all its revenue—$10.4 billion in 2009—from selling licenses for and making the chips containing its patented 3G mobile-phone technology, known as CDMA.

- In 2019 a judge ruled that Qualcomm’s licensing tactics violated antitrust law

Horacio Gutiérrez, chief intellectual property officer (at a/o Microsoft), says patents are treated not as a profit center but "as a currency that you use to trade to another company" for its patents. Volume is an important gauge of a company’s innovation, he adds, but "only if they are high-quality patents."
Dr. John S. Pemberton invented Coca-Cola in 1886.

Since then, the secret formula of Coca-Cola has been kept shared only with a small group.

It is kept in a vault in the United States.

- you can visit the Vault of the Secret Formula at the World of Coca-Cola in Atlanta.

“The formula for making Coca-Cola is a trade secret.

- we have it for more than 130 years
- only The Coca-Cola Company knows how to make Coca-Cola
- you can be sure you’re getting the same delicious and refreshing experience time and time again!”

It is rumored that only two Coca-Cola executives know the secret formula for Coke.

- the two are strictly forbidden to take the same plane.
Adobe developed 2 file format standards
- **Postscript**: for printing = exchange between PC and printers
- **PDF**: for file exchange between users, computer systems

In both cases Adobe published the specifications

+ Acrobat allowed plug-ins
  - -> a whole ecosystem developed around Acrobat

Consequences
- anybody could write Postscript/PDF applications
- -> nobody felt uneasy in adopting Postscript/PDF as standard file format

Adobe beat competition in speed, quality, marketing
- -> maintained large market share in PDF tools
CORE ASSET STRATEGIES

Disneyland

1. Disney characters and stories
2. Animatronics and Show Design
   - pioneer in the fields of automated show elements: animatronics, lighting, sound and music, and other show effects, coordinated into a customer-pleasing package.
3. Storytelling, Story Creation and Themed Atmospheric Attractions:
   - investing in the right people and having them learn ways to tell stories effectively
4. Efficient operation of theme parks:
   - inventors of the efficiently-run modern theme park,
     - entirely new levels of cleanliness, safety and productivity while giving a uniformly high-quality entertainment experience to very large numbers of people
     - gained through trial-and-error over the past 45 years
   - Knowing how to efficiently serve so many people so well may actually be more important to Disney’s success than any other ability
HOW MARKET-READY ARE YOUR CORE ASSETS?

- For technology entrepreneurs ...
- The long road from the lab to a usable product is almost systematically underestimated
- A lab demonstrator is NOT a product
  - Functioning in all circumstances
  - Manufacturable
  - No fatal flaws
  - Compliance to regulations
  - ...
  - + acceptance, financial viability...
- Be very very sober in analyzing what remains to be done
  - And the time it will take
  - Engineers always think it’s going to be easy...
- Validation is key!
  - It works
  - It works in real life circumstances
  - It has been manufactured in x units
  - It is being used by end users
- Method of estimating technology maturity
- Used by a wide variety of organizations, e.g. NASA, DoD, EU, ESA...
- Definitions of European Commission

<table>
<thead>
<tr>
<th>TRL</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Basic principles observed</td>
</tr>
<tr>
<td>2</td>
<td>Technology concept formulated</td>
</tr>
<tr>
<td>3</td>
<td>Experimental proof of concept</td>
</tr>
<tr>
<td>4</td>
<td>Technology validated in lab</td>
</tr>
<tr>
<td>5</td>
<td>Technology validated in environment</td>
</tr>
<tr>
<td>6</td>
<td>Technology demonstrated in environment</td>
</tr>
<tr>
<td>7</td>
<td>System prototype in environment</td>
</tr>
<tr>
<td>8</td>
<td>System complete and qualified</td>
</tr>
<tr>
<td>9</td>
<td>Proven system in operational environment</td>
</tr>
</tbody>
</table>

NASA example
if applicable: what is the TRL level of your innovation(s)?

1. 1
   - 27%  3

2. 2
   - 27%  3

3. 3
   - 9%   1

4. 4
   - 18%  2

5. 5
   - 9%   1

6. 6
   - 0%   0

7. 7
   - 0%   0

8. 8
   - 0%   0

9. 9
   - 9%   1
THE 6 “READINESS LEVELS”

- Technology Readiness Level – TRL
  - develop and test the technology, product, service, or concept

- Business Model Readiness Level – BRL –
  - establish that the concept can be financially, environmentally, and socially viable and feasible

- IPR Readiness Level – IPRL
  - clarify the legal and IP situation and secure relevant IP protection

- Team Readiness Level – TMRL
  - secure the right competencies and align the team

- Funding Readiness Level – FRL
  - secure the necessary funding to take the idea to the market

- Customer Readiness Level – CRL
  - confirm customer need and interest
Customer Readiness Level – CRL

CRL 9
Widenspread product sales that scale.

CRL 8
First products sold and increased structured sales efforts.

CRL 7
Customers in extended product testing or first test sales.

CRL 6
Benefits of the product confirmed through partnerships or first customer testing.

CRL 5
Established interest for product and relations with target customers.

CRL 4
Confirmed problem/need from several customers or users.

CRL 3
First market feedback established.

CRL 2
Identified specific needs in market.

CRL 1
Hypothesizing on possible needs in market.
DO YOU HAVE FREEDOM TO OPERATE?

- Do you have the freedom to test, market, or sell a product or service in a specific area or application domain?
- Can a specific action take place without infringing on the intellectual property rights of others?
  - Generally patents you will infringe when you do your thing
- Tactical question, but potential showstopper
  - Especially in technology & life sciences
- Can also be prosaically linked to employment contracts
  - Non-compete clauses
- See also session on IP
1. First core asset: a (much) better search algorithm
   - Patent owned Stanford University, shares in Google sold for $336 million in 2005
   - Resulted in rapid massive adoption of Google search

2. Then: the underlying IT infrastructure
   - Own server hardware, operating system
     - Making it possible to upscale very rapidly
     - And to roll-out YouTube, Gmail, Google Earth, Waze...
   - Cost savings: up to three time the computing performance per dollar of other contenders

3. Then: credibility
   - See Google’s philosophy ‘Ten things we know to be true’
     - ‘You can make money without doing evil’
   - We trust the Google search results
   - We like an advertising-free homepage

4. Then: a profitable business model
   - Context-sensitive textual ads next to search results sold via auction
   - Re-use of ads on other websites
   - Network effects (where?)

5. Then: organizational capabilities
   - To attract the brightest
   - To innovate
Core Asset Examples

ExxonMobil Corporation

Chemical

Upstream
- Exploration
- Development
- Production

Downstream
- Refining & supply
- Fuels marketing
- Lubricants & specialties
- The world largest petroleum fields
- The expertise and equipment to exploit these fields and move the oil to users
- the refineries to process petroleum into a wide range of products
- the sales, marketing and distribution (gas stations) capabilities to sell all these products
Entrepreneurial strategy
Core assets
Problem/solution fit
Product/market fit
Perspectives on entrepreneurial strategy
What do you bring to the table?

What offering do you build based on this, what is the added value of this offer for your customers?

What is the concrete plan? How do you build and bring this offering to the market?
“Problem / solution fit is the confirmation that the problem is real and the solution is right, as validated by potential customers. It’s about generating value.”
OPTRIMA: PLENTY OF SOLUTIONS TO PROBLEM

PROBLEM/SOLUTION FIT

Television
- DepthSense™ and OptriCam™ enables natural interface to TVs based on simple gestures, allowing new and intuitive ways of interacting with your media-centre. A simple hand gesture will change the TV channel, turn up the volume, surf the Internet or flip through the photo or music library.

Gaming
- You are the controller

Automobile
- Optrima NV has licensed its DepthSense™ 3D CMOS Sensor technology to Melexis NV for adaption of the technology to the automotive market.

Health-Lifestyle
- New applications that can help elderly people or less valid patients home, in hospitals or in care centers benefit from “gaming alike rehabilitation and revalidation programs”.

Automation
- Optrima’s DepthSense™ and OptriCam™ systems provide reliable 3D data for autonomously guided vehicles, with improved obstacle identification and avoidance, service robots in industrial and in assembly, quality control monitoring, material handling and automation.

Security
- By using the OptriCam™ 3D Time-of-Flight camera a reliable set of depth data becomes available. This increases the robustness and flexibility of many surveillance, inspection, and logistics systems: camera based factory automation, person-counting applications at airports, elevator and door/gate security detection systems.
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Core assets
Problem/solution fit
  Who is your (Most important) customer?
  Performance Criteria
  Value Propositions

Product/market fit
Perspectives on entrepreneurial strategy
The customers you target (or someone else) will need to spend money on your product
- And not on the endless range of alternatives

-> Will that happen?

Especially in B2B rational reasons determine if products are bought
- B2C adds other dimensions, but rational reasons remain applicable

-> It is essential that you fully understand
- the profile(s) and logic of the customer
- competitive offerings

-> You must consider things from the perspective of your customer
- The focus is on your customer, his needs, how your solution complies to these needs

You build on your core assets to create ‘solutions’ for ‘products’

+Who is your ‘Most Important Customer’
Entrepreneurial strategy

Core assets

**Problem/solution fit**

Who is your (Most important) customer?
- Performance Criteria
- Value Propositions

Product/market fit

Perspectives on entrepreneurial strategy
1. **Who** is the most likely to **recognize the value** provided by your offering?

2. **Who** stands to **lose the most financially** if there’s a problem or issue with your offering?

3. If there’s a problem or issue with your offering in the final product, **who is responsible** for taking the action required to rectify the situation?
Military vehicle armament case

The manufacturer
- produces the “best performing” fiber in the market... 4x better
- But all products meet existing MIL specs.

who is the MIC of Bekaert?
- Who is the most likely to recognize the value provided by your offering?
- Who stands to lose the most financially if there’s a problem or issue with your offering?
- If there’s a problem or issue with your offering in the final product, who is responsible for taking the action required to rectify the situation?
### The Most Important Customer: Exercise

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<th>Who has to fix the problem?</th>
<th>Who stands to lose financially?</th>
<th>Who sees the Value?</th>
</tr>
</thead>
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<tr>
<td>Vehicle Mfr</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>US Military</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Soldier</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

How BEKAERT solved it...
WHO IS YOUR CUSTOMER?

THE MOST IMPORTANT CUSTOMER: EXERCISE

Manufacturer of Fibers
- Fabricator
- Component Manufacturer
- Vehicle Manufacturer
- Military
- Soldier

e.g., Fibers used in Vehicle Armament

Solution: The manufacturer meets with the US Military share...
“we have a fiber which is 4x better but costs more”

Most Important Customer in this value chain

At that meeting, they propose to set up a meeting with the military, the Fabricator and the Bekaert Value Innovation Team

- ... the message
- ... we want you to use this fiber
- ... cost is a NON ISSUE
- ... protecting our men and women is THE ISSUE
Entrepreneurial strategy

Core assets

Problem/solution fit
  Who is your (Most important) customer?

  Performance Criteria
  Value Propositions

Product/market fit

Perspectives on entrepreneurial strategy
Our tool for understanding & measuring:
- customer decision criteria
- customer segments & niches
- how your offer scores on customer decision criteria
- how your offer compares to alternatives

The key questions:
- What criteria are determining in the purchase decision of your customers?
- Does their importance vary over different types of customers, creating market segments & niches?
- How does your solution score on these performance criteria?
- How do alternatives score?

The key challenges
- Identifying the relevant criteria
  - And not skipping the ones you don’t like
  - Denial is not an option
- Assessing different market segments
- Assessing correctly how you and alternatives score

Note on terminology: “customer requirements” is also commonly used
1. Define who is your customer
   - List known or suspected market segments: customer groups with specific needs

2. List criteria known or suspected to weigh in the customer decision
   - Sources:
     - Expertise, informal information
     - Hunches, convictions
     - Market surveys, customer surveys
   - A strike of genius in the definition of the criteria can make the difference!
   - Market segments = different sets or criteria, weight of criteria

3. ‘Calibrate’ each criterion
   - What is the show stopper level?
   - When is the product ‘good enough’?

4. Optionally: define the relative importance of each criterion

5. Perform market research
   - See part on marketing (later)
WHY ARE YOU BETTER?

- How do you (and your competitors) really score on the **performance criteria**
  - Denial is not an option
- Have you taken all dimensions along?
  - Criteria
  - Network effects, brand...
- Beware if you do not have a compelling competitive advantage
  - As a starter you often have a lot of competitive disadvantages to overcome
- Stijn Christiaens Collibra:
  - you have to be **ten times better** than the currently used solution
WHAT IS HIS/HER PAIN?

- **Palm gridpad**
  - Too big and heavy
  - Too expensive
  - For use inside specialized markets
  - No PC connectivity

- **Apple Newton**
  - Heavy and cumbersome
  - Mediocre handwriting recognition
WHAT IS HIS/HER PAIN?

- Clearly defined target group: mobile professionals
  - Not: general consumer, niches such as transport & logistics

- Clear definition of added value
  - Electronic pocket agenda: agenda, address book, to do list, notes
  - NOT a computer-in-the pocket

- Performance criteria
  - Simplicity
  - Small size
  - Reasonable price
  - Attractive design
  - Connectivity
  - Reliable input (through easily learned character set)

- 1996: huge success
WHAT IS HIS/HER PAIN?

PERFORMANCE CRITERIA: PALM COMPUTERS

Apple Newton weaknesses:
- Complex
- Dysfunctional for input
- No connectivity

Palm Pilot improvements:
- Simplicity
- Size
- Connectivity
- Handwriting input

Handheld device performance envelope 1996
<table>
<thead>
<tr>
<th>Performance Criteria</th>
<th>Small Molecule</th>
<th>Conventional Antibody</th>
<th>Nanobody</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Affinity</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>High Selectivity</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Low Toxicity</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Cavity Binding</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Stability</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>High Solubility and no Tendency to Aggregate</td>
<td>❌</td>
<td>❌</td>
<td>✔️</td>
</tr>
<tr>
<td>Tissue Penetration</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Alternative Routes of Administration</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Tailored in vivo half-life</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Ease and Low Cost of Manufacturing</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Bi-specific and Multivalent Formats</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
</tr>
<tr>
<td>Speed of discovery</td>
<td>✔️</td>
<td>❌</td>
<td>❌</td>
</tr>
</tbody>
</table>

**WHAT IS HIS/HER PAIN?**

**ANTIBODY PERFORMANCE CRITERIA**
Figuur 26: performance envelope: E Ink vs. OLED vs. LCD, toekomstige situatie
What are your performance criteria for a new smartphone?

Klik op het geprojecteerd scherm om de vraag te activeren
Klik op het geprojecteerd scherm om de vraag te activeren.
WHAT IS HIS/HER PAIN?

PERFORMANCE CRITERIA

- A formalized way to think about
  - Customer needs
  - Market segments
  - The way your offering/solution complies to their needs
  - Comparing your offering/solution to alternatives

- You must be able to indicate the key differentiators of your offering and why they matter
- If you can’t, you don’t have a viable offering!
ARE THERE ANY SHOW-SToppers?

- Watch out for show-stoppers
- Applies to all aspects: sometimes a criterion, or a minimum score, is a must
  - PDA’s of 5 kilograms have no chance
- May only apply to certain segments
Entrepreneurial strategy

Core assets

**Problem/solution fit**
- Who is your (Most important) customer?
- Performance Criteria
- **Value Propositions**

Product/market fit

Perspectives on entrepreneurial strategy
Value Propositions are business or marketing statements that summarize why a consumer should buy a product or use a service.

Business buyers are rational buyers. So help them in their decision making process.

The ideal value proposition is

- **concise**
- Appeals to the customer's strongest decision-making drivers.
- Often **fully quantified** analyses of the impact of switching to your product, financially and from perspective of features
- **Substantiated and documented**

Companies pay a high price when customers lose sight of the company's value proposition.

(Source: www.investopedia.com)
“(Most) Managers who make purchase decisions want to do business with suppliers that fully grasp critical issues in their business and deliver a customer value proposition that’s simple yet powerfully captivating.”

James C. Anderson
Project Plan

Week 1:
- Research
- SBA
- Cost

Week 2:
- Update
- Budget
- Cost

Week 3:
- Final Presentation

Next Steps:
- Draft final stakeholder presentation
- Cost baseline update
what strikes you most in this ad?
• what strikes you most in this ad?
• what are according to you the three key messages of this ad?
  ▪ full attention, no distractions
  ▪ digital paper
  ▪ organize digitally

• ‘capture, update and organize your thoughts whenever inspiration strikes’
**Substantiate your claim**

- Rockwell Automation precisely calculated cost savings from reduced power usage that customers would gain by purchasing Rockwell’s pump solution instead of a comparable offering.
- Rockwell used industry-specific metrics to communicate about functionality and performance—including kilowatt-hours spent, number of operating hours per year, and dollars per kilowatt-hour.

**Document the delivered value**

- Create written accounts of cost savings or added value that existing customers have actually captured by using your offerings.
- Chemical manufacturer Akzo Nobel conducted a two-week pilot on a production reactor at a prospective customer’s facility to study the performance of its high-purity metal organics product relative to the next best alternative in producing compound semiconductor wafers.
Example: company that manufactured resins used in exterior paints
- Researched the needs of commercial painting contractors
  - key customer segment
- Learned that labor constituted the lion’s share of contractors’ costs, while paint made up just 15% of costs.
- -> emphasized that its product dried so fast that contractors could apply two coats in one day
  - substantially lowering labor costs.
- Customers snapped up the product while paying a 40% price premium

The resin manufacturer deepened its understanding of key customers in several ways
- enrolled managers in courses on how painting contractors estimate jobs
- conducted focus groups and field tests to study products’ performance on crucial criteria
- asked customers to
  - identify performance trade-offs they were willing to make
  - indicate their willingness to pay for paints that delivered enhanced performance
- joined relevant industry associations
Global packaging supplier headquartered in Hartsville, South Carolina

Although the redesigned packaging provided six favorable points of difference relative to the next best alternative, Sonoco chose to emphasize one point of parity and two points of difference in what it called its distinctive value proposition (DVP).

The value proposition was that the redesigned packaging would:

- Deliver significantly greater manufacturing efficiency in the customer’s fill lines, through **higher-speed closing**
  - Allowing users to move from a seven-day, three-shift production schedule during peak times to a five-day, two-shift operation
- Provide a **distinctive look** that consumers would find more appealing
- All for the **same price** as the present packaging
- -> Sonoco chose to include a point of parity in its value proposition because, in this case, the customer would not even consider a packaging redesign if the price went up
ABOUT PERFORMANCE CRITERIA

Our tool for understanding customer needs (and segments), and how your product/service meets those needs (compared to alternatives):

- **performance criteria**
  - It is about *understanding customer decision criteria, market segments, and alternatives to your product/service*

- The key questions:
  - What criteria are determining in the purchase decision of your customers?
  - Does their importance vary over different types of customers, creating market segments?
  - How does your solution score on these performance criteria?
  - How do alternatives score?

- The key challenges
  - Identifying the relevant criteria
    - And not skipping the ones you don’t like
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- **Note on terminology:** “customer requirements” is also commonly used...
EXXONMOBIL CASE

PROBLEM / SOLUTION FIT

(or See WPO)
2009 European PE Consumption in Film

Major drivers for primary, secondary and tertiary packaging growth:

- Trade and logistics
- Consumer markets evolutions

Data from: Applied Market Information
The business chain is characterized by two opposite flows:

- A cumulative set of Needs & Wants flowing from the end-user to the PE producer
- Products & Services going in the opposite direction
Who is ExxonMobil’s most important customer?
Packaging and Product Bundling Trends & Drivers

Consumer – Retail
- Point-of-purchase differentiation impacts ultimate buying decision
- Advertisement spending shifts from traditional media to point-of-purchase influencing
- Increased emphasis on environmental impact – more sustainable flexible film solutions

Distribution Channels
- In-store cost reductions and more efficient waste stream management
- Package simplifications (e.g. removal of cardboards)
- Improved stock rotation
- Rise in warehouse & club-store retailing, outdoor displays

Packaging Trends
- Packaging functionality expands
- Shelf appeal becomes an ever more important dimension of packaging value
- Accelerated growth in multi-pack merchandising
- Display packaging grows at the cost of bundling in developing markets
- Source reduction and move toward single-material packaging systems
Collation Shrink Film Development Trends

- Snug fit around the product
  - Efficient/controlled shrinkage
  - ‘Bull’s-eye’ as handle
  - Stiffness

- Packaging line performance
  - Seal consistency
  - Efficient/controlled Shrinkage
  - Low coefficient of friction

- Optical properties
  - Low haze, good contact or ‘see-through’ clarity
  - High gloss for printing

- Downgauging potential
  - Source reduction
  - Unit cost reduction
  - More sustainable flexible film solutions

- Package integrity
  - Puncture Resistance
  - High holding force
  - No hole formation
**Metalocene Catalysts vs. Ziegler Natta Catalysts**

- More selective, more active catalysts
- Polymer molecules are very similar
- Significantly improved product properties

Metalocene

Ziegler Natta

Active site
SEGMENTING THE OFFERING...

**mPE Value Proposition**

**Exceed™ mPE resin**
- Superior film toughness and strength
- Outstanding film impact resistance
- Excellent optical properties
- Superior film sealing performance

**Enable™ mPE resin**
Replacing LDPE resin-rich blends
- Equivalent processability
- Up to 25% downgauging
- LDPE shrink properties
- Excellent see-through clarity

Replacing LLDPE resin-rich blends
- Business simplification
- Up to 20% improvement in output
- Excellent bubble stability
- LL-HAO performance benefits

Exceed and Enable mPE resins form a unique portfolio that facilitates business opportunities expansion across the value chain.

ExxonMobil Chemical
SEGMENTING THE OFFERING...
"Exceed™ mPE is the leading edge mPE that expands the possibilities for experts working in the most demanding film applications to meet, and often redefine, the film performance attributes demanded by the value chain globally."

Superior film toughness and strength balance translate into significant film downgauging.
- Reduces costs (raw material, inventory, processing, delivery and disposal)
- Offers more sustainable solutions to brand owners and retailers through reduced packaging weight
- Less packaging lines shut-down (Stretch Hood)

Superior film impact resistance offers:
- Less application failure & after sales support from converters & packaging machine manufacturers (stretch hood)
- Improved package integrity
- Improved tamper resistance (beverages)

Superior film optical properties (gloss, haze & transparency) offer:
- Improved print quality
- Better packaged product appeal
- Improved consumer brand recognition leading to higher revenue (beverages)
- Improved bar code reading (appliances)

Superior film sealing performance offers:
- Increased packaging line speed at no cost (stretch hood)
- Delayed packaging line investment
- Improved integrity and shelf-life for packages relying on sealed layers (pouches, laminated bags, etc...)
- Less packaging lines shut-down (FFS)
Enable™ mPE resin – Value Proposition

“Enable™ mPE offers an unprecedented combination of film processing and HAO performance benefits in a single unique resin, leading to improved business operations and increase productivity.”

Operational Stability: Have a broad operating window - on both LL and LD equipment - that withstands fluctuations in manufacturing conditions
- Ability to extrude at lower melt temperature promotes greater bubble stability; improved melt strength and greater shear thinning
- Stable, worry-free operations

Extended Output: Increase line capacity through faster processing
- Increased output (up to 20%) at no additional cost when replacing LL-rich blends – increased revenue
- Postpone future equipment investments
- Reduce or eliminate the use of polymer processing aids – lower cost operations

Sourcing Simplicity: Simplify your sourcing and operations with a single unique resin designed to replace blends
- Eliminate blending complexity and errors
- Reduced inventory costs by reducing the number of resins needing to be sourced
- Reduce or eliminate the need for sourcing LDPE

Versatility with HAO Performance: Meet the performance needs of several applications
- Meet the mechanical performance requirements of LL-rich structures
- Improve the toughness of LD-rich structures - 20% downgauging possible
- Extend the life of LD equipment - opportunity to enter new applications
QUESTIONS?

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