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?
“Product / market fit is being in a good market with a product that can satisfy that market. It’s about capturing value.”

Marc Andreessen
Quite often not from scratch...
- Often no-brainer, or +/- well-defined range of possibilities
- Even at startup product/market is often known

**Product starters**: they leave their existing employer when they have a concrete idea for a product, often for the customers of their current employer

But for **Technology starters** finding a product/market for their core assets is often an issue
- A technology in search of a market
- Often the challenge is that the technology entrepreneur has no affiliation with the user industry

You should consider and rank different product/market combinations

In this part we focus on the analysis per product/market combination
<table>
<thead>
<tr>
<th>Core assets</th>
<th>Problem / Solution fit</th>
<th>Product / Market fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>What exactly are your core assets?</td>
<td>Who is your customer? What does he/she do today?</td>
<td>What will be your place in the supply chain/ecosystem?</td>
</tr>
<tr>
<td>Are your core assets exclusive?</td>
<td>What is his/her pain?</td>
<td>Who will be your key partners?</td>
</tr>
<tr>
<td>What strategy fits your core assets?</td>
<td>What solution do you offer?</td>
<td>Can you make money with this product / market combination?</td>
</tr>
<tr>
<td>In what stage of finalization are they? What remains to be done?</td>
<td>Why are you better than alternatives?</td>
<td>What resources do you need to start, grow?</td>
</tr>
<tr>
<td>Do you have freedom to operate?</td>
<td>Are there any show-stoppers?</td>
<td>Is it an attractive market?</td>
</tr>
</tbody>
</table>
YOUR PLACE IN THE ECOSYSTEM

WHAT’S YOUR PLACE?

- You almost never can provide the whole product on your own
  - There are exceptions...
    - Standard Oil, IBM in the 60’s came very close
    - Google, Facebook, eBay... (Don’t underestimate their core assets!)
  - Full vertical integration = covering the full supply chain
    - From raw material to customer services

- Different roles are possible
  - Architect or module in the supply chain or ecosystem? Both can be realistic strategies, much depends on sector. Some examples:
    - Trinean: Full solution for biomedical lab analysis instead of just the reader component (‘it’s better to sell one copy at 100,000 euro than 1,000 at 100’)
    - BEST sorting: sorting equipment for food manufacturing
    - Intel: component -> subsystem
  - Alternatives must be considered closely
    - Pixar...
  - We will see later that keeping your options open might be a sensible approach

- Role in ecosystem generally impacts many aspects:
  - Competitive position; capital needs; minimum size; scalability...
WHAT’S YOUR PLACE?

FOR COMPONENT SUPPLIERS

- Supplier of specific component (incl materials) to manufacturer downstream in value chain
  - Plastics for packaging
  - PDF editing tools for graphics arts market
  - 3D chip, system, camera, subsystem...

- How to be successful
  - Competitive advantage through
    - IP, Speed, secrecy
    - Focus
  - Relevance, added value

- Sustainability!
  - How long is your component needed?
  - How long can you continue to be the best?
    - From when on is the component ‘good enough’, and do you lose your competitive advantage?
  - Other players may embrace your field
    - Manufacturing of GSM components for PCs
    - Spreadsheet -> Office Suite
Architect

- May require broad scope of activities at the outset
- Creates design rules, define visible information
- Convinces people this architecture will prevail
- As modularity is established, leads the evolution of the business ecosystem

Module player

- Conforms to the architecture, interfaces and test protocols established by others
- Masters the hidden information involved
- Relies on superior execution
How easily can you grow in size?
- Google vs. Colruyt vs. McKinsey

Pure Internet is almost infinitely scalable
- But how durable is the competitive advantage then?

Service are very hard to scale
- Consultancy
- Creative services
WHAT’S YOUR PLACE?

ECOSYSTEM ANIMATOR

Some elements of strategy
- Compatibility between versions
- Consistency of Application Program Interfaces (API’s)

Example Microsoft early 2000’s
- 40,000 employees
- In total 38,000 partner companies
- 5 million people develop software for/on Microsoft software (members MSDN)
- 2,000 people full time on developer support
WHAT’S YOUR PLACE?

EXAMPLE ECOSYSTEM ANIMATOR: LI & FUNG

- 100 y old Honk Kong based trading company
- Relationship with 8,000 firms in 40 countries
- Customizes supply chain services for clothing retailers such as Gap
The Role of Industrial Partners

- Often essential role
  - IBM for Microsoft
  - Adobe for Enfocus
  - Softkinetic (and others) for Optrima
  - Energy players as investors in Photovoltech

- Different formats for role
  - Investor
  - Customer, supplier
  - Joint marketing

- Different time frames
  - Dependant on volatility of market, evolution of industry

- Roles change, balance of power shifts

- Always be on the outlook for interesting partners

- There must be a clear strategic reason for the partnership on both sides
The contracting out of a business function - commonly one previously performed in-house - to an external provider

Deciding what to outsource and what to do internally is a major and very complex decision.
- What are the core assets you wish to invest in? What is secondary?
- Is the required expertise really available @ partner?
- Will you depend on just one supplier?
- Will you be able to compete? Can you become large enough to compete, given the market, network effects and economies of scale?
- IP leakage: train your future competitor?

Can provide shortcut to a more competitive product

But it typically contributes little to building the people-embodied skills that are needed to sustain product leadership

Example Chrysler
- Engines and power trains just one more component, outsourced
- Becoming dependent on Mitsubishi and Hyundai
Mobile in 2001

Virgin Mobile, the first MVNO, emerged & targeted youth segment

Massachusetts Institute of Technology

Michael A M Davies
23 April 2007, Page 14
**Vertical axis**
- Generally (extended, ‘whole’ product’) value chain
- Relevance to subject at hand
  - Are you an industry analyst?
  - Or do you need it for company-strategic purposes?

**Horizontal axis:**
- Market (standards)
- Adjacent markets

**Cells**
- Companies, products
- Relative size

**Dynamics**
- Spot changes in different dimensions
- At industry level, at company level
- Identify opportunities and threats

**Your position and strategy**
THE THREE ECOSYSTEM MAP DIMENSIONS

ARCHITECTURAL MAP
- How things work, roles
- Contributions of individual participants or business elements
- “You are here and there are your neighbors”
- Basic education about the STRUCTURE of the business, roles and niches, and who its competitors and complementors are

BUSINESS MAP
- Participants with relative share, at a point in time
- Optionally, adjacent ecosystems too
- “Who’s doing well”
- Illustrate relative SCALE or strength of a business, its competitors and complementors
- Can demonstrate ecosystem invasion

CHRONOLOGICAL MAP
- Detailed ecosystem changes (or events) over time
- Activity compared with competitors (benchmark)
- Evolution trajectory
- “What’s going on”
- Show historical or potential DYNAMICS in the ecosystem
- Show strategic intent
- Help plan for strategic goals
By 2002, transition underway

Nokia still dominant; loses some share but holds on stronger to vertical integration.

New, flexible vendors begin to develop custom solutions for NOCs/SPs.

By 2002, the OS battle has intensified as mobile data devices become more important.

Chip manufacturers continue to embed greater functionality in silicon.
Mobile Business Ecosystem

Business scale – share of 2005 spending (estimated)

Demand Opportunity

Service providers

Network operators

Infrastructure and application software

Platforms/Architects

Device marketing

Device production

Components/ Modules

Technological architecture

Electronic Assemblies

Display

Mechanical

Battery

Application

GSM

WCDMA

CDMA

Application software

Nokia 31%

Samsung 14%

Motorola 16%

Others

Java downloadable

BREW

Other VM

Air interface

Share of spending

Share of sales

Spending on mobile devices, voice and data services

Share of revenue

Share of revenue

Share of revenue

Share of revenue

Share of revenue

Share of revenue

Share of devices, weighted by the type of device
By 2010:

Same markets?
Same players?
Same value chain?

What happened to Nokia?
Ecosystem positioning

• Tremendously important
• Extra dimension, for Optrima in big lines:
  – Consumer (= mainly TV, PC, Gaming)
  – Industrial (= many small ones)
  – Automotive
• Helps you make good decisions
• Important to forge partnerships
WHAT'S YOUR PLACE?

MAPPING THE BUSINESS ECOSYSTEM: OPTRIMA CASE
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MAPPING THE BUSINESS ECOSYSTEM: OPTRIMA CASE
Key Milestone for Optrima

- Announced 2009 → project Natal
- Worldwide Release November 2010
- Fastest selling CE product (8 million in 9 weeks)
XBOX Kinect: Good or bad?

- Before/After Microsoft:
  - Before: Market recognition lower
  - Before: A lot of explaining/evangelizing to do
  - After: There is a market for 3D ToF
- Microsoft is big, but cannot consume the whole market, main focus today is gaming, not TV, PC, STB
- Sony/Nintendo/??? also exist
- Microsoft wants the best technology
- People want to pay for independence
- Microsoft has been accelerator in non-microsoft markets, eg. security monitoring, automotive, ...
Microsoft To Acquire 3D Chipmaker Canesta (10/29/10)

SUNNYVALE, Calif. — Canesta Inc., which makes 3-D imaging chips, has agreed to be bought by Microsoft Corp. for an undisclosed amount.

The deal announced Friday comes less than a week before Microsoft is set to start selling Kinect, an add-on for Xbox 360 that can interpret players' body movements, using them to control what happens in the game. Kinect will allow people to play video games without having to mash buttons on a plastic controller.

Redmond, Wash.-based Microsoft worked with another 3-D sensor company, PrimeSense, in building Kinect. It had also acquired 3DV, a PrimeSense competitor, but did not end up using its technology.

Canesta, based in Sunnyvale, said the acquisition is expected to close before the end of the year.
Back to news overview

Sony buys VUB spin-off SoftKinetic!

09.10.2015

The Brussels company SoftKinetic, producer of 3D Sensors, has been sold to Sony. Their sensor was invented and developed at the ETRO lab from Vrije Universiteit Brussel with support from FWO, IWT and the Brussels Region.

Professor Hugo Thienpont, Vice Rector for Innovation and Valorisation of Vrije Universiteit Brussel: “In the future it is expected that this original VUB technology will become widespread.”

SoftKinetic makes hardware and software that can detect and analyze movements in 3D. The technology is after all already in use at BMW and Facebook, the latter for its 3D glasses Oculus Rift. The hard and software of Softkinetic will undoubtedly become mainstream the coming years. The technology will not only be used in game consoles, but also in the automotive industry, such as self-driving cars and virtual reality applications.

And in 2015...
October 8, 2015  **Sony Acquires Belgian Softkinetic Systems S.A., in its Push Toward Next-Generation Range Image Sensors and Solutions**

- Application areas: Surveillance cameras; factory automation, Internet of Things, drones and automotive applications.
- Sony possesses expertise in advanced camera technologies, lenses, signal processing, recognition algorithms, power consumption management.
- We acquired Softkinetic Systems in order to gain further technology and business know-how necessary for developing new applications and moving into new markets.
- Sony will focus on **combining Softkinetic's ToF range image sensor technology expertise with its own technologies** with the aim of **developing the next generation of range image sensors** and solutions, not only in the field of imaging, but for broader sensing-related applications as well.

- No material impact is anticipated on Sony's consolidated financial results for the fiscal year ending March 31, 2016 as a result of the acquisition.
Your position and strategy
- What is your place
- Evolution: strategy

Why you do this
- Required understanding of your market
- Anticipate changes, define own strategy

To be used by entrepreneur in an intelligent way
- Scale, degree of detail... depend on requirements of project
- In some circumstances it may be overkill
Your core assets generally are not sufficient to have a rounded offer to the market, complementary assets may be required

- Especially if you are a small startup...
- Complementary assets generally linked to value chain of industry, or to product complements
  - Biotech & pharma,
  - Apple & music labels for iPod

- If there are players with important and ‘exclusive’ complementary assets: you may need to team up with them, and share the value

- Owners of strong complementary assets may also consider entering in your market
  - Can you forbid them (patent?)
  - Does it make sense for them, does it fit in their strategy?
  - Speed versus resources...

- Note on terminology
  - \( \not\sim \) Complementary goods/services: are traded on markets
  - vs. Complementary assets: has strategic importance to a firm and may lead to a competitive advantage and generation of value. Usually you need these assets to offer a rounded product/service to the market, but other may have control over them. (e.g. can be infrastructure, specific human resources...)
WHO WILL BE YOUR KEY PARTNERS?

**COMPLEMENTARY ASSETS: EMI EXAMPLE**

- **EMI**: electronics company active a/o in sound equipment, ended up in recording business
- The CAT Scanner was a medical imaging system developed by Godfrey Hounsfield at EMI.
- EMI had **no track record in medical electronics** but was so confident of the success of the product that it decided to develop its own scanner business.
- This market attracted entrants by established medical imaging companies. These were **better placed to sell and support this equipment**.
- Although EMI had applied for a number of **patents**, this **did not prevent** the appearance of competing machines. By 1976, EMI had lost market leadership in the US market.
- EMI was beginning to have difficulties in other parts of its business. In 1979, EMI was sold. The buyer immediately **sold off the CAT scanner business to GE at a knockdown price**.
- Godfrey Hounsfield shared the Nobel prize for **medicine** in 1979.
WHO WILL BE YOUR KEY PARTNERS?

COMPLEMENTARY ASSETS: EMI EXAMPLE

- Core assets
  - Relevant
    - Nobel prize-level knowledge of CAT scanners
    - Patents
    - First mover advantage
  - Irrelevant
    - Consumer brand name
    - Knowledge of movie and recording industry

- Needed complementary assets
  - Experience in manufacturing medical products
  - In-depth understanding of hospital market
    - Investment decision making, key players,...
  - Expertise in reimbursement processes by national social security organizations
  - Sales and marketing channels
    - GE: 300 persons
  - Service and support system
    - GE 1200 persons

- Threat of entry
  - General Electric, Siemens, Philips = incumbents in medical equipment market
    - Posses complementary assets
    - Virtually unlimited resources
COMPLEMENTARY ASSETS: THROMBOGENICS
Key questions: are the complementary assets you need owned (more of less) exclusively by specific players in the market? Or are they readily available, or easy to build up yourself?
COMPLEMENARY ASSET Strategies

Who will be your key partners?

Managing innovation & entrepreneurship, Fiona Murray, MIT Sloan School of Management, 2008
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</tr>
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<td>Yes</td>
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WHO WILL BE YOUR KEY PARTNERS?

IDEAS FACTORIES

- Strong intellectual property protection by startup but incumbents control the complementary assets (e.g. Biotechnology, electronics components)
- Key issue is not longer whether to pursue a cooperation strategy but when and how
- Start-up with leading technology will focus on research and commercialize through reinforcing partnerships
- Ideas factories can
  - Enhance the competitive advantage for incumbents by reinforcing the basis of advantage for those established firms
  - Offer a fertile source of new innovations for incumbents, especially when the start up’s technology is complementary to the existing value proposition
- Return on innovation will depend on the bargaining power of the start-up
  - And its bargaining skills!
  - Hire accordingly
- How to enhance the bargaining power of your start-up
  - Clearly signal and demonstrate the value of the technology
  - Disclosure does not undermine bargaining power because appropriability is strong!
  - Play established firms against each other in a bidding war
WHO WILL BE YOUR KEY PARTNERS?

COMPLEMENTARY ASSETS IN BIOTECH
Greenfield Competition

- Strong intellectual property protection and incumbent complementary assets are unimportant
- Doesn’t happen that often... (e.g. Xerox)
- Start-up innovators can preclude effective imitation
- The power to determine the most effective commercialization strategy lies with the start-up innovator
- Both competition and cooperation may be effective
- Ability to control the development and evolution of platforms and standards may be decisive

Who will be your key partners?
Attacker’s Advantage

- Poor intellectual property protection + incumbents do not control the complementary assets. This happens very often!
- Startups must exploit the blind spot of current market leaders & target the underserved customer groups
  - “Stealth” is a crucial element of an effective competition-oriented commercialization strategy
  - Don’t moon the giant!
- Competition is likely to be intense
  - Start-ups and incumbents are on a “level playing field”
    - Start-ups have an opportunity to overturn established positions and to capture market leadership by effectively developing and diffusing competence-destroying technology
  - Incumbents have the opportunity to imitate once they recognize the nascent threat
    - Easy imitability weakens position of initial innovator
    - Increases risk of getting only small share of the value over the long-term
    - Reduces advantage from either cooperation or competition
- Speed is of essential importance
  - Be faster, so as to be systematically ahead of competition
  - This applies as long as you can make the difference based on technical advantage!
- Ecosystems properties such as network effects and lock-in determine whether first mover can build sustainable advantage (e.g. Ebay)
- Poor intellectual property protection and incumbents control the complementary assets necessary for effective commercialization
- Disclosure problem!!
- In capital intensive industries, incumbents are tempted to expropriate technology revealed to them (e.g. Automobile, aircraft..)
- Start-up has to rely on reputation-based ideas trading
WHO WILL BE YOUR KEY PARTNERS?

COMPLEMENTARY ASSET STRATEGIES

MIT research on commercialization strategies

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<tr>
<td>No</td>
<td>14%</td>
</tr>
<tr>
<td>Yes</td>
<td>34%</td>
</tr>
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</table>
A business model describes the rationale of how an organization creates, delivers, and captures value.

“Osterwalder et al. 2010”
“...a business model is (...) defining the manner by which the enterprise delivers value to customers, entices customers to pay for value, and converts those payments to profit”

David Teece 2010
A business model answers two key questions in finding a product/market combination:

1. **Can you make money with this product / market combination?**
   - It is the Zen description of the way you make money
   - Different ways to make money (see next slide)

2. **What funding (resources) do you need to start, grow? (see also entrepreneurial finance)**
   - The amount of cash required before a company achieves positive cash flow
     - Investments
     - Losses during startup period
     - Money tied up in the process (stock, payment conditions...)
   - What is the maximum financing need of the business model?
   - Over what period of time is the investment required?
   - At what point does the cash flow of the company turn positive? What is the break-even point?
   - Where do you (plan to) get the money from? How does this affect your company?

- These are reflected in the **value chain** of a company!
- Note on terminology: business model vs. business plan (see later)
Different Ways to Make Money

- Build and maintain an expensive infrastructure and let users pay for the services you deliver over it
  - French highway network operators
  - Electrabel
  - Belgacom, Telenet...

- Sell equipment at low cost and make money on consumables
  - Printers

- Provide free-of-charge service to a wide audience and make money on linked services offered to third parties (often ads)
  - Gouden Gids
  - Metro
  - Google

- Provide expert services to customers for a fee
  - Legal, audit, IT, private banking, cooking...

- Sell made-to-order PCs direct to end-users
  - Dell

- Often the business model is a no-brainer
  - Horeca, consulting, taxi’s (?) ...

- Business model innovation is popular these days...
  - Google, Apple
  - Web x.0 companies

- Sometimes business model innovations fail...
  - Netscape

- Complexity, needed resources and expertise, longevity can vary enormously!
DIFFERENT WAYS TO MAKE MONEY: DEVICE CONSUMABLES

- Sale of two interdependent products
  - equipment or instruments,
  - consumables

- You can decide to price the equipment low and rely on sales of consumables
  - Sales of the consumables is dependent upon the installed base

- Examples
  - Printers and ink
  - Medical devices and consumables
Online auction company; create IT infrastructure that allows people to communicate for a modest fee

Company takes no part in transactions, has no responsibility for the goods offered at auction, nor for collecting the payments, nor for shipping the goods

Receives revenues from seller fees

Pays the cost of building and maintaining the online infrastructure, marketing, product development and general and administrative expenses

The internet economy
- Relatively low fixed costs and no variable costs gives the company enormous operating leverage
- Small number of salaried employees can handle huge and growing volume of business
- Compare what it takes to run eBay and Colruyt
- A doubling of transaction volumes (and revenue) can be accommodated with relatively modest extra investments

Network effects
- Very strong first mover advantage
Webvan was an online grocery business

Webvan embraced a total customer satisfaction model with a 30 minute delivery window.

Webvan invested $1 billion in warehouses, bought a fleet of delivery trucks, and at least 115 Herman Miller Aeron chairs (at over $800 each).

At its peak, it offered service in ten U.S. markets. The company had originally hoped to expand to 26 cities.

None of Webvan's senior executives or investors had any experience in the supermarket industry.

Orders were smaller than the minimal order size to be profitable, so money was lost per order.

‘Its business model was profit proof’

Webvan went from being a $1.2 bn company with 4,500 employees to bankruptcy in under two years.

Investors including Sequoia Capital (Apple, Google) saw Webvan’s stock plummet from $30 to just six cents in a few months.
DIFFERENT WAYS TO MAKE MONEY: EBAY VS. WEBVAN

- Huge up-front investments (minimal threshold to run business: distribution centers, logistics...)
- Huge operational costs
- Requires major change in daily habits of customers: requires time and marketing efforts to win them over
- Cost model of Webvan is on at least one points worse than traditional distribution: in the supermarket order picking is done by the customer
- Distribution is very low margin business
- Distributors have huge buying power, receive lower prices
- Business model requires minimal sales value per transaction
- Very high risk: Up-front investment

- Very low investments
- Very low operational costs
- Little marketing expenses
- High margins
- Low risks
BUSINESS MODEL CANVAS

Markides, 1999; Osterwalder & Pigneur, 2002; Osterwalder et al., 2010
BUSINESS MODEL CANVAS EXAMPLE: ZIPCAR
### Key Partners
- Insurance companies
- Post service
- Parking places
- Online paying platforms (credit cards)
- Legal support
- Marketing support
- Accounting support
- Gas stations
- Garage
- University Campuses
- Airports
- Network providers
- Unlock technology providers

### Key Activities
- Development & support of online platform (website, applications for Android and iOS etc.)
- Cars maintenance
- Logistics/scheduling
- Help center (online, phone)

### Value Propositions
- On-demand access to drive cars by the hour or the day in cities, airports, and campuses around the globe

### Customer Relationships
- Self-service online system (website, app)
- Help service 24/7 FAQ
- Promotional activities Facebook, Twitter, Instagram, Youtube, LinkedIn

### Customer Segments
- Urban commuters: go to the airport, from home to work, afterwork drink
- Short trips
- Long trips
- Day trips
- Universities (users are students, faculty staff – private use, personal payment)
- Companies (users are employees of these companies – separate business and private trips)
- European vs US markets

### Key Resources
- Car fleet
- Office facilities
- Human resources
- Parking places
- Location-specific wireless technologies, GPS
- Unlock technology
- Fuel card, Zipcard

### Channels
- Cars points
- Website
- Application Android & iOS

### Sales persons

### Cost Structure
- **Fixed costs**: cars, parking, insurance, depreciation, human resources (salary..), call center/help center, website & app development
- **Variable costs**: fuel, car maintenance, transaction costs for payments, marketing, website & app maintenance

### Revenue Streams
- **One time registration fee** 19€
- **All in rate (parking, fuel, insurance, 100 km)**: 0,25€/minute, 11€/hour, 69€/day (24h)
- Extra 0,16€ fee per km after 100km, 50€ late fee
- Monthly or annual subscription fee (in some countries)
- Damage fee 750€
- Administrative costs (in case of a fine, damage)

---

**Insurance companies**

**Post service**

**Parking places**

**Online paying platforms (credit cards)**

**Legal support**

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**Development & support of online platform**: (website, applications for Android and iOS etc.)

**Cars maintenance**

**Logistics/scheduling**

**Help center**: (online, phone)

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**Self-service online system**: (website, app)

**Help service 24/7 FAQ**

**Promotional activities**: Facebook, Twitter, Instagram, Youtube, LinkedIn

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**Insurance companies**

**Post service**

**Parking places**

**Online paying platforms (credit cards)**

**Legal support**

**Marketing support**

**Accounting support**

**Gas stations**

**Garage**

**University Campuses**

**Airports**

**Network providers**

**Unlock technology providers**

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**On-demand access to drive cars by the hour or the day in cities, airports, and campuses around the globe**

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**Company cars on-demand**

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**Urban commuters**: go to the airport, from home to work, afterwork drink

**Short trips**

**Long trips**

**Day trips**

**Universities**: (users are students, faculty staff – private use, personal payment)

**Companies**: (users are employees of these companies – separate business and private trips)

**European vs US markets**
BUSINESS MODEL

BUSINESS MODEL CANVAS EXAMPLE: STARBUCK
- tot hier Part 5
Remember these examples?
WHAT IS THE PROJECT?

Project = new product, new service (in startup or established company).
You always need to make an overall assessment of a project, and often you have to choose between options and scenario’s.

Criteria you should include in your assessment

- Financials (see entrepreneurial finance)
  - Capital needs
  - Potential return
- Strengths of project
  - Unique competitive position?
  - Soundness of overall project
- Time-to-market
  - Short term horizon or long shot?
- Project complexity
- Validation stage of project
- Competitive position
- ...

IS IT AN ATTRACTIVE MARKET?
Some markets are more attractive than others

Main elements in Porter’s 5 Forces:
- Rivalry: who are your competitors?
- Barriers to entry: is the market easy to enter for newcomers?
- Threat of substitutes: do alternative ways of responding to customer need exist?
- The number of players in the supply chain
  - Are you dependent on a limited number of suppliers?
  - Are you dependent on a limited number of customers?
  - Few customers / suppliers = weaker bargaining position

Some elements I would add
- Market dynamics
  - Market growth? Stage on ILC?
- Regulatory context
  - Goverment related aspects

Porter’s five forces (1979) + our additions
Using Porter’s five forces model: is the professional photography industry an interesting industry?
IS IT AN ATTRACTIVE MARKET?

PORTER’S FIVE FORCES: EXAMPLE PHOTOGRAPHY

- Photographer’s market in 2010: lousy!
  - Direct competition: lots of competitors, easy entry, attractive job
  - Substitute products: journalists that take the photographs themselves, image banks (+ amateur photographers for weddings)
  - Few and +/- shrinking customers (press)

- Versus photocopier market in 1960’s: great! (for Xerox...)
  - Huge need, no substitute
  - No competitors thanks to patent
  - Lots of customers, no key suppliers
PESTEL stands for Political, Economic, Social, Technological, Environmental and Legal factors.
You will need to do the numbers
- Market size
- Market share
- Price, margins
- Return on investment
- This can be extremely hard, but you will get better at it as time goes by

Market sizes vary enormously
- Game consoles vs milking robots
- You can make (a lot of) money in smaller markets too!

Some early stage investors will look at the long term overall market potential of your project; if this is sufficiently huge they will be interested
Entrepreneurial strategy
Core assets
Problem/solution fit
Product/market fit

Perspectives on entrepreneurial strategy
If you assume, you make an ass out of you and me.

"If you assume, you make an ass out of you and me."

John Barton
The more novelty and the bigger, the more complex

Complexity for the firm
- Market, customers:
  - New? Familiar?
  - Markets, channels, type of customers
  - Sale methods, skills, contacts...
- Technology
  - How new for the firm?
    - + how far from mass production?
- Impact on processes within company
  - Is your organization equipped to deal with the project?
- Complementary assets
  - Do you need new partners? Do you have agreements with them?
- Team members’ experience in domains

Complexity for the customer
- Novelty of offering for customer
- (behavioral) change for customer
- dis-benefits to customer
  - These weigh heavily in decision making process
  - + Cost; return on investment, total cost of ownership

There’s nothing wrong with complexity
- By doing complex things you build competitive advantage
- But you do have to cope with it

You need to assess your project’s complexity
- Can you decrease complexity?
- How will you cope with this complexity?

Do you know the industry?
Decreasing knowledge of the technology

Decreasing knowledge of the market

Probability of succes (%)

- Project Complexity
- Perspectives on Entrepreneur-ial Strategy

Market Expansion
Business Expansion
New Business Model

Market Extension
Business Extension
Business Expansion

Market Penetration
Product Extension
Product Expansion

0.03%
15%
75%
50%
Some dimensions to take along when defining the degree of validation (and therefore of risk) of a project

- Seed money is essentially destined to move the project up the validation scale

What do you have today?

- Technology
  - Lab demonstrator
  - Engineering specifications
  - Operational prototype
  - Value chain in place
  - 10,000 copies manufactured

- Intellectual property (see TT & IP session)

- Market
  - End-user customers, channel:

- Letter of intent
- Test installation
- Signed customers
- Operational customers, re-ordering, referenced
- Market validation through customers
- Installed base, recurring business

Organization

- Team composition vs. needs

Financial

- Revenue stream
- Cash break-even?
  - UBER? Amazon? Spotify?
- Profitable

Project validation is the result of finding a product/market fit.
STRATEGIES FOR UNCERTAIN MARKETS

- Defining strategies based on narrow predictions is entirely the wrong mind-set for an inherently uncertain world
- We should take a cue from nature and rely less on our ability to make accurate predictions and more on the power of evolution
- Businesses should not have a singular focussed strategies but instead cultivate and manage populations of multiple strategies that evolve over time
- Parallelism: the more places you are simultaneously exploring the more likely your are to find a higher peak in your fitness landscape

- Christensen The Innovator’s Dilemma 1997
- Eric D. Beinhocker Sloan Management Review Spring, 1999:
- Not only are the market applications for disruptive technologies unknown at the time of their development, they are unknowable
  - Market research is not an option for disruptive innovations
  - Strategies and plans should be plans for learning and discovery rather than plans for execution
- The risk: spreading too thin
  - As with everything: local circumstances (company, industry) determine the right balance
  - Elk voordeel heb z’n nadeel
STRATEGIES FOR UNCERTAIN MARKETS: EXAMPLE HP

- Introduced in 1992
  - 1.3 inch form factor
  - Capacity of 20 MB
- Massive investment on forecasted market: PDA’s
  - Product optimized for this use
- Turned out the market didn’t materialize
- Other markets (GPS, gaming) did, but with different requirements
  - Cost vs. sturdiness
- Product was insufficiently flexible to adapt
- HP patience had dried up, project was halted
1988 Operating Systems landscape
- Overwhelming market share: DOS 4.0
- Sexiest product: Apple Macintosh
- Range of (mainframe) vendors with proprietary OS: IBM, DEC, Siemens...

Major developments in PC/Workstation OS market
- IBM: working on OS/2 (together with Microsoft)
- Microsoft: working on Windows 2.0
- Sun+AT&T+Xerox: Unix Open Look
- Hewlett_packard, Digital Equipment Corporation, Apollo, Siemens Nixdorf: Open Systems Foundation (Unix)

1988 Microsoft Strategy
- Continue to develop DOS
- Become the largest software developer for Apple Macintosh: Word, Excel
- Develop Windows 1->2->3->95...
- Co-develop OS/2 with IBM
- Buy SCO Unix, the largest provider of PC-based Unix Operating Systems

Microsoft...
- Couldn’t know what would happen
- Did have its preferred outcome: Windows domination
- But had ‘irons in the fire’ for most other outcomes
  - Macintosh -> applications
  - OS/2: co-ownership; Unix: a major player
- And in parallel was building those core assets that were needed in any outcome
  - Graphical user interfaces
  - Object-oriented programming
- Strategies are never cast in stone
- You must systematically reassess the soundness of the strategy...
- But you shouldn’t change course at every corner/issue either...
  - Illustration: Source Daniel van Nieuwenhoven

Continuous analysis mode

Examples:
- Why do people want my product?
  - What can be improved?
  - What is better than competition?
- What can kill me?
- What are my weaknesses?
- What will competitors do?
- What will the market do?
- What is the evolution in perception of the technology?
- Where will the vision change?
- Ecosystem forces? Bottlenecks?
ITERATION: GOOGLE PROJECTS

PERSPECTIVES ON ENTREPRENEURIAL STRATEGY
Several **streams and methodologies on how to deal** with core assets, problem/solution fit, and product market fit

- Causality vs. Effectuation (see introduction session)
- Blue vs. Red ocean strategy (see intro & this session)
- New product development methodologies (see new product development session)
  - Stage-gate
  - Design for manufacture, Rapid prototyping, Computer-aided techniques, in-silico simulations
  - Agile methodologies
QUESTIONS?

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Offices
Pleinlaan 5, Level 4
PL5.4.27 & PL5.4.28
FRICTION

- **gemak**
  - contactloos betalen
  - spotify
  - online bankieren

- **sources**