Learning Block 1: Academic spin-off growth stage and diffusion pattern

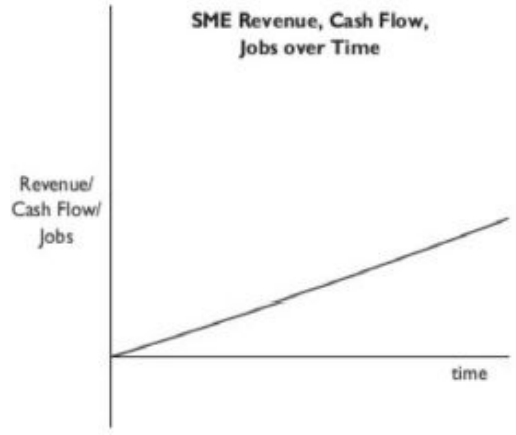
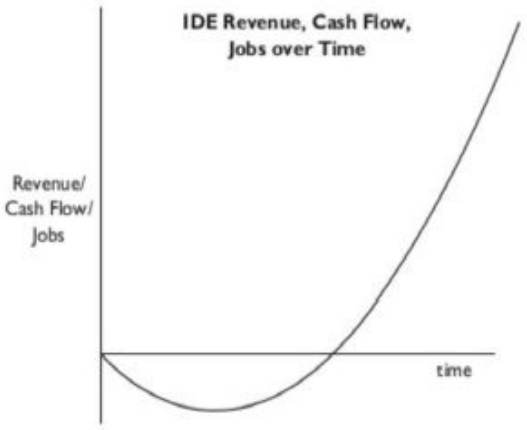
Entrepreneurs definition:

- Schumpeter (1965): individuals who exploit market opportunity through technical and/or organizational innovation (create opportunity)
- Kirzner's (1973): able to perceive opportunities for entrepreneurial profits (discover opportunity)

Who are entrepreneurs?

- Lifestyle vs. Fast Growth
- Local Goal vs. Global Goal
- Low tech vs. High tech
- Corporate vs. start-up
- Serial vs. Multiple
- Start up vs. Inherit, vs. Purchase
- SMEs vs. IDE

All above are entrepreneurs.

SME (Small and Medium Enterprise Entrepreneurship)	**IDE** (Innovation Driven Enterprise Entrepreneurship)
	
The company grows at a linear rate. When you put money into the company, the system (revenue, cash flow, jobs, etc.) will respond quickly in a positive manner.	The company starts by losing money, but will have exponential growth. Requires investment. When you put money into the company, the revenue/ cash flow/jobs numbers do not respond quickly.

Academic Spin-off:
Definition: a new firm created to exploit commercially some knowledge, technology or research results developed within a university.

Growth stage:

Each venture must pass through the previous phase in order to progress to the next one but each phase involves an iterative, non-linear process of development in which there may be a need to revisit some of the earlier decisions and activities.

Research phase:

- Perfect academic research and publication
- Create valuable intellectual property, and generate potential opportunity for commercialization

Barrier:

- Inability to arrange IP protection
- Inability to think commercially
- Inability to write business plan
- Lack of industry network

Opportunity framing phase:

- Examine whether the recognized opportunity had sufficient underlying value to warrant further effort in pursuing commercialization
- Once the opportunity had been evaluated for technological validity and performance, attempts were made to frame it within a commercial opportunity: what application to develop and how to access customers
- Problem: imprecisely defined opportunities that (targeted ambiguously-> impracticable)

Barrier:

- Lack of entrepreneurial skills
- Inability to find market application
- Lack of role model
- Lack of entrepreneurial capability
- Lack of entrepreneurial attitude
- Lack of commercial experience

- Lack of focus
- Underestimation of time and effort

Re-organization phase:

- Develop and start to implement strategic plans
- taking decisions over what existing resources and capabilities to develop, what resources and knowledge to acquire now and in the future, as well as when and where to access these resources and knowledge

Barrier:

- Inability to attract finance
- Lack of a well-balanced managerial team
- Lack of legitimacy
- Inability to find a partner
- Underestimation of competition
- Untrustworthy investor
- Wrong partner
- Slow market adoption
- Inability to get fast to the market

Re-orientation phase:

- Goal: generate return
- requires continuously identifying, acquiring and integrating resources and then subsequently re-configuring them
- Apply the knowledge acquired from recognizing and correcting mistakes in reassembling and building stocks of resources and internal capabilities as well as perfecting the technology

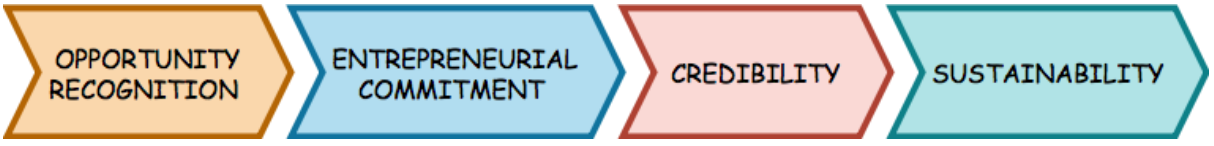
Barrier:

- Inability to get to market
- Lack of ambition to grow larger
- Lack of exit or growth strategy

Sustainability phase:

- Attain sustainable return

Critical junctures:



Opportunity recognition:

Definition: the match between an unfulfilled market need and a solution that satisfies the need

Activities: capture break through ideas that trigger an evaluation, as a precursor to the formation of commercialization effort

Require: requires a set of skills, aptitudes, insights, and circumstances that are neither uniformly nor widely distributed

Problem: academics possessed significant technological know-how yet had insufficient knowledge of how to serve markets and unrealistic expectations of the profits

Entrepreneurial commitment:

an entrepreneur's ideas and intentions form the initial strategic template of a new organization and are important underpinnings of new venture development

Credibility:

entrepreneur's ability to gain access to and acquire an initial stock of resources

- the entrepreneurs were required to access, acquire and assemble resources with which to commence business operations
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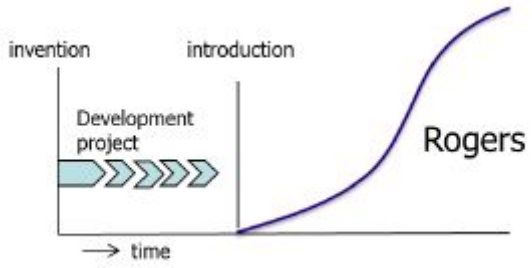
Sustainability:

- Sustainable returns may take the form of revenues from customers for services or products sold, milestone payments from collaborative agreements or investment from existing or new investors.
- a sign that the entrepreneurial team has the ability to create value from having developed the appropriate resources, capabilities and social capital

The pattern of development and diffusion of radically new high-tech product

Life Cycle Model



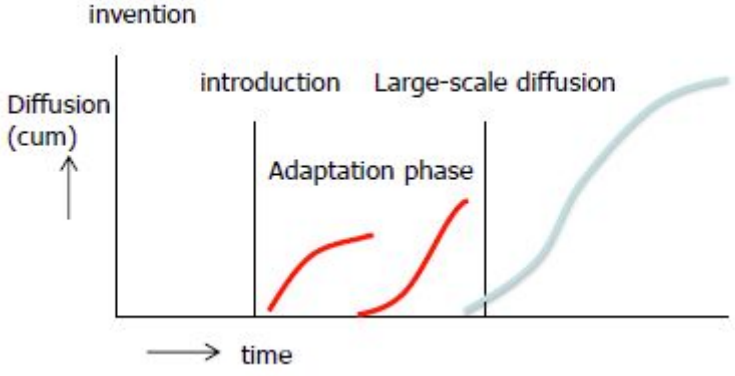
Implications:

- Innovation is more a management competence than an entrepreneurial act. Projects should be managed professional to be successful.
- Introduction is a marketing competence, marketing production and product design should be closely aligned within a company across the entire innovation/diffusion process.
- Success is increased by these competences.

Problem:

- Success rate of new products is not increasing although innovation project approaches are improved
- Predictions about new product success are mostly terrible wrong
- successful products did not diffuse smoothly from the start (historians of technology, economic historians)
- Innovation intensity increases later on, next to diffusion.
- Basic research intensifies after invention and introduction.
- substitution is not simple at all

Evolutionary Model:



Improvements:

- Long period after invention diffusion starts (S-curve starts late)
- Long period after the market introduction diffusion takes off (S-curve starts slowly)
- First applications diverge from wide-scale applications (S-curve limited perspective)
- Substitution is not straightforward and smooth

Innovation phase is crucial:
- Longer than project
- Barriers blocking development and intro
- Funding
- Vision and alignment of actors around the vision is lacking

Adaptation phase is crucial:
- Different product versions in market niches
- Barriers blocking large-scale diffusion
- Build up mechanisms
- (double) Competition (standard battles)

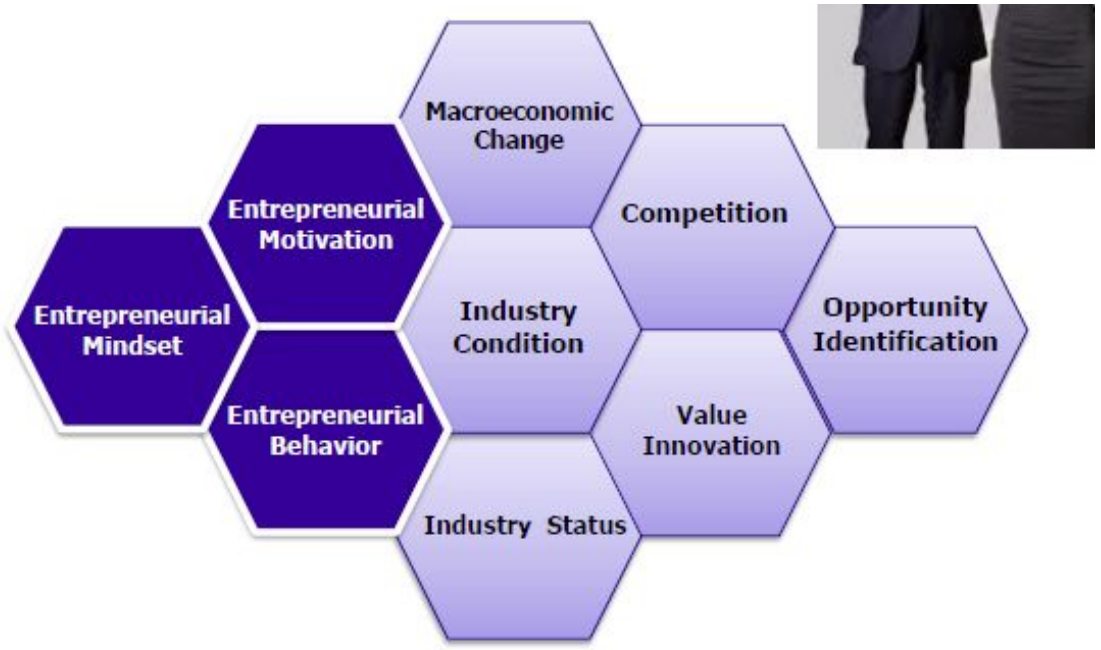
Implications of the model for entrepreneurs:
- Long time after invention until start large-scale diffusion.
- Entrepreneurship is needed yet different in three stages.
- Risk because the length of the phases are unknown.
- Risk because at the time of invention market potential is hard to assess.
- Product/market combi's often change fundamentally over time.
- Timing of introduction is crucial.
- Innovation and entrepreneurship happen simultaneously.

Life cycle model	Evolutionary model
Innovation = project	Innovation = no project 1.Combination of parallel projects 2.Innovation is increased later on
Success based on good management	Success is based on entrepreneurial action
Success is assessed in terms of diffusion	Most successful products diffuse first chaotic
Success is predictable (curve fitting)	Success is created, persistent and flexible action

New technology outperforms old technology	Substitution is not simple at all 1.New product= replacing one old product 2.Old/new product both develop

Learning Block 2: Opportunity analysis and value proposition

Opportunity analysis canvas:



Think entrepreneurially:

- Entrepreneurial Mindset, Entrepreneurial Motivation, Entrepreneurial Behavior
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Entrepreneurial Mindset:

- Need for achievement: a preference for challenge, an acceptance of personal responsibility for outcomes, a personal drive for accomplishment
- Individualism: willingness and a preference to go against the norm, Results in entrepreneurs needing less support or approval from others
- Control: Belief that a person can (internal) or cannot (external) control their own destiny and influence outcomes
- Focus: Attention + commitment
- set S.M.A.R.T goals
  S – Specific/Significant
  M – Measurable/Meaningful
  A – Attainable/Action-Oriented
  R – Relevant/Rewarding
  T – Time-bound/Trackable
- Optimism: frequently make judgments on subjective positive factors

Entrepreneurial motivation:

- Self-efficacy:
  - your belief in your ability to accomplish a specific task
  - Intersects the entrepreneurial mindset and entrepreneurial motivation
  - Related to control and confidence
  - but tied to a specific task or activity
- Cognitive motivation: want to see, want to acquire, want to analyze
  - Individuals **high** in need for cognition (thinking) tend to seek, acquire, think, and reflect on relevant information (preferred)
  - Individuals **low** in need for cognition tend to rely on experience, assumptions, and luck
- Tolerance for ambiguity: try to work through and recognize the things that change

Entrepreneurial behavior:

- Confidence:
  - Important for entrepreneurs to believe in themselves and their abilities
  - Self doubt can result in doubts from your team, partners, investors, customers
- Interpersonal relationship skills:
  - Driven by your likeability and communication skills
  - Influences your ability to connect with individuals
- Social capital:
  - the resources available in and through personal and professional networks
  - richness depends on the size, quality, and diversity of your network
  - with rich social capital, people are better informed, more creative, more efficient, better problem solvers
  - with right networks, people save time because they know where to get information, foster cooperation and collaboration
- Risk tolerance:
  - addresses your willingness to accept risk

See entrepreneurially:

- Macroeconomic Change, Industry Condition, Industry Status, Competition

Macroeconomic Change:

- Technological Change
- Social & Demographic Change
- Political & Regulatory Change

Competition:

- Learning curve challenges for entrepreneurs
- Consider where your advantages may lie

Industry Condition:

- knowledge condition: amount and type of knowledge creation that is required to generate the industry's products/services
- demand condition: the size, rate of growth, and consistency of the market
- to capture on demand condition:
    - Magnitude of customer demand for products and services
    - Rate of growth of that demand

Industry Status: lifecycle of the industry

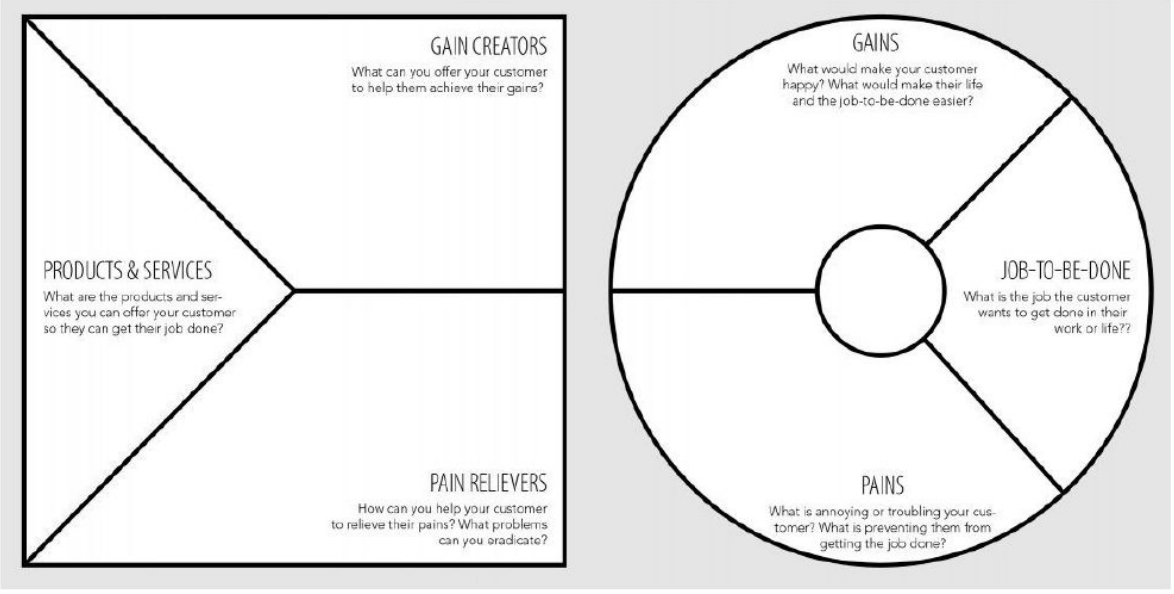
Act entrepreneurially: Value Innovation, Opportunity Identification

Value Innovation:

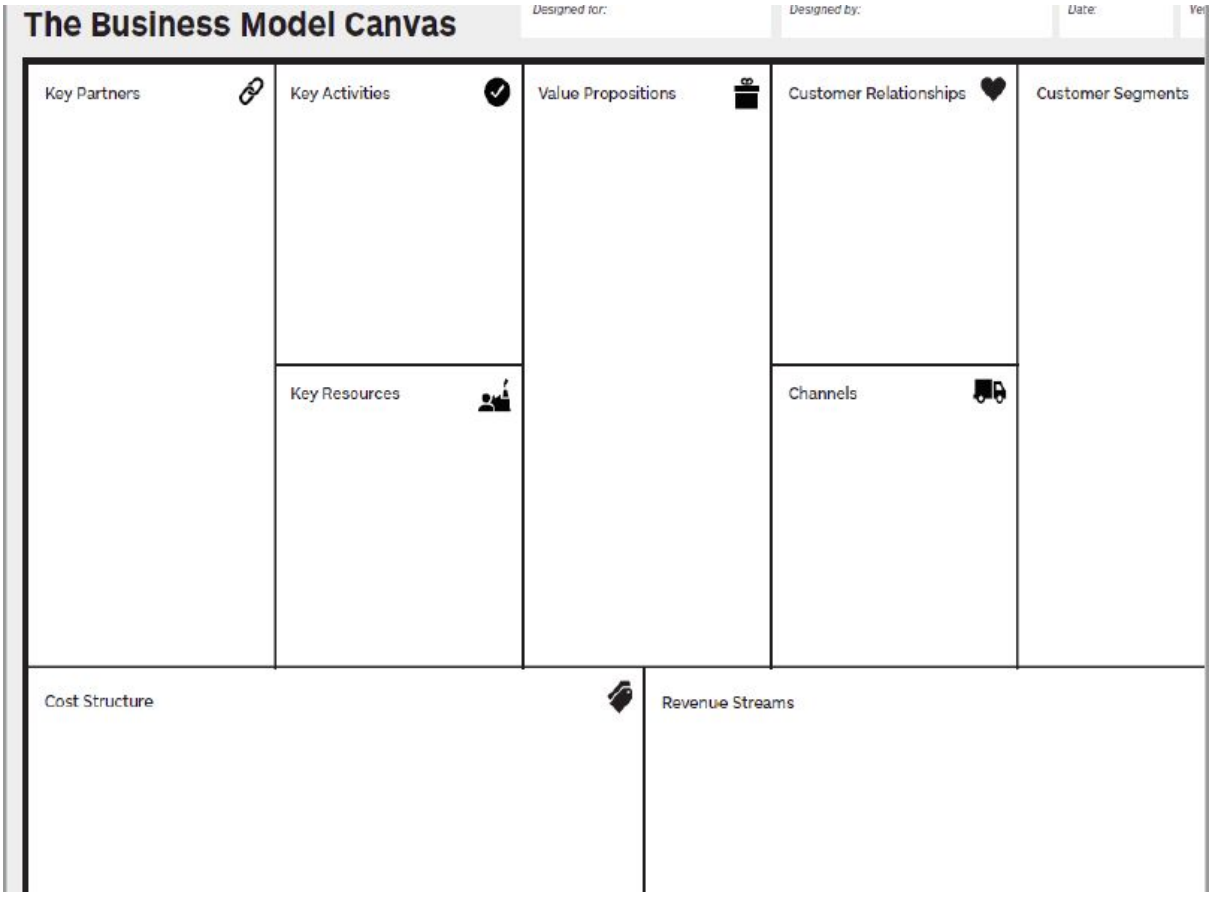
- Eliminate, Reduce, Raise, Create
- Method: Value Curve/ Blue ocean strategy

Opportunity Identification: problem, solution, advantage

Value proposition



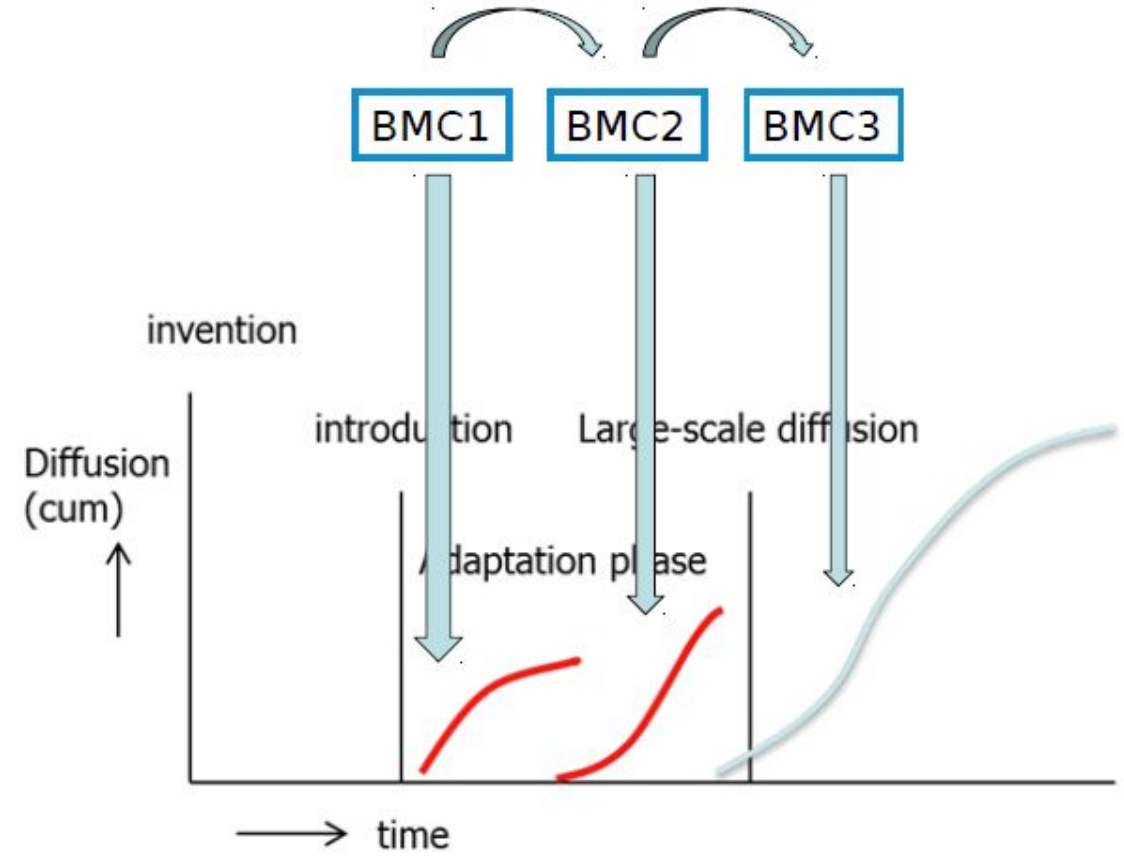
Business Model

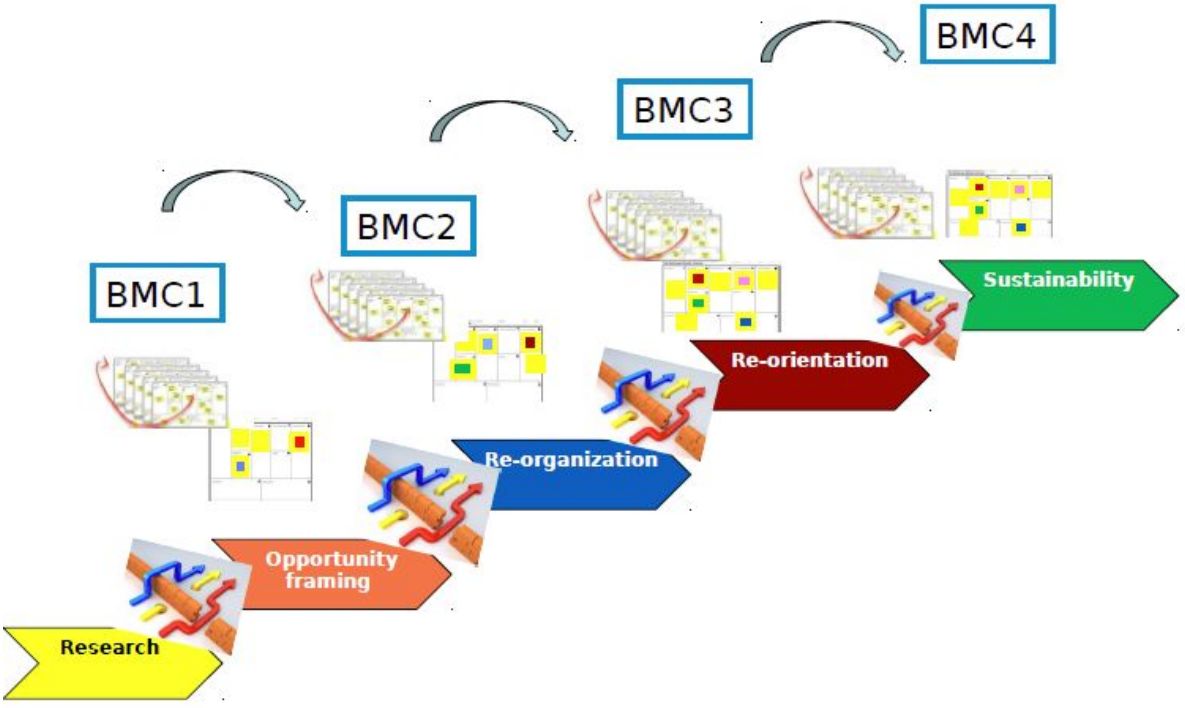


Critics:

- Its not complete (External, competitors and internal competitiveness)
- It is static
- We can not see the relationship between blocks
- We can not see the changes over time

Dynamic Business Model:


BMC1
BMC2
BMC3
invention
introduction
Large-scale diffusion
Diffusion
(cum)
Adaptation phase
time


BMC4
BMC3
BMC2
BMC1
Sustainability
Re-orientation
Re-organization
Opportunity framing
Research

Learning Block 3: Introducing product to the market

Niche strategies: specific product(version)-market(segment) combi to start diffusion and survive the first hurdles before mass market

Market Segment:
What:
- A well-defined group of potential customers that because of their characteristics have similar needs and wants regarding you product

Why:
- Customers that form a well-connected group with similar needs can help you to start diffusion
- Radically new products that ultimately diffuse in a mass market often start in a niche (very specific and small segment) of the market that differs from the mass market.

How to:
- segmentation variable
    - variable related to product behaviour : e.g. need, the context of use
    - variables that describe segments (sociodemographics)
- beachhead market:
    - Your first entry to the market
    - Small enough to be a significant player
    - Big enough to generate some cash

Market Analysis:
- **TAM** (Total Available Market): total market demand for a product or service
- **SAM** (Serviceable Available Market): the segment of the TAM targeted by your products and services which is within your geographical reach.
- **SOM** (Serviceable Obtainable Market): portion of SAM that you can capture

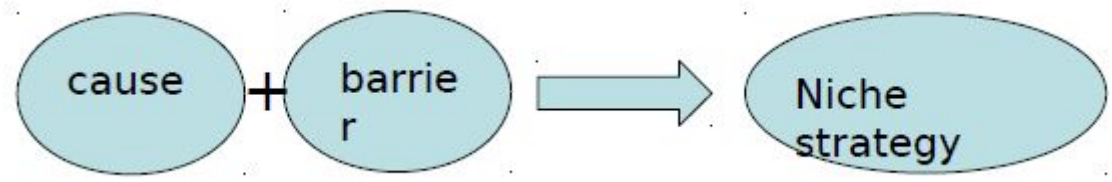
example: https://www.thebusinessplanshop.com/blog/en/entry/tam_sam_som

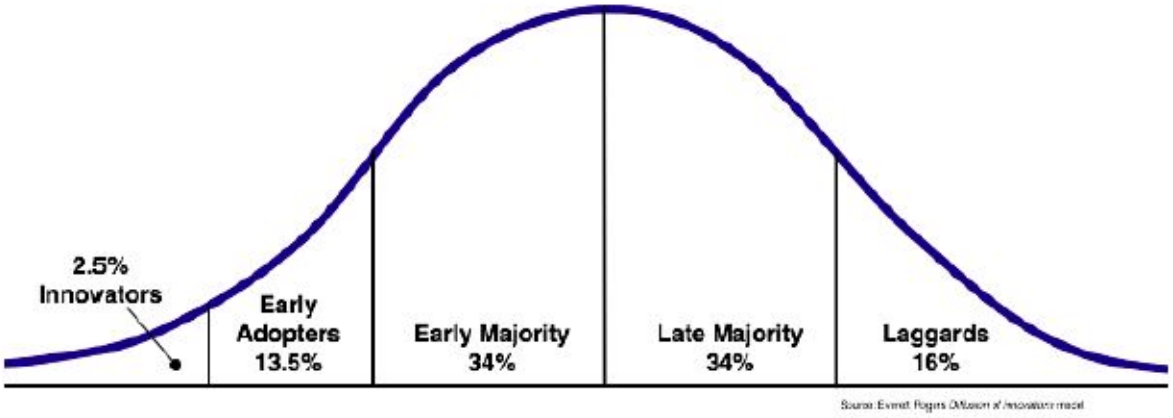
Marketing Mix (4 P's)

- Product: benefit, position, differential advantage
- Price:
    - **Penetration pricing**: Where the company sets a low price to increase sales and market share
    - **Competition pricing**: Setting a price in comparison with competitors
    - **Skimming pricing**: The company sets an initial high price and then slowly lowers the price to make the product available to a wider market. The objective is to skim profits of the market layer by layer.

- Promotion: communicate & persuade the target market to buy the company's products
    - Advertising Mass-media channels
    - Public relations (PR)
    - Sales promotion
    - Personal selling: Reaching one customer at a time, highly expensive and small coverage
- Place, physical distribution

Niche: a combination of a specialized version of a product specifically for a small group of customers.





Entrepreneur vs Manager

BASIS FOR COMPARISON	ENTREPRENEUR	MANAGER
Meaning	Entrepreneur refers to a person who creates an enterprise, by taking financial risk in order to get profit.	Manager is an individual who takes the responsibility of controlling and administering the organization.
Focus	Business startup	Ongoing operations
Primary motivation	Achievement	Power
Approach to task	Informal	Formal
Status	Owner	Employee
Reward	Profit	Salary
Decision making	Intuitive	Calculative
Driving force	Creativity and Innovation	Preserving status quo
Risk orientation	Risk taker	Risk averse

Exploitation v.s. Exploration
exploration: spend time in new opportunity
exploitation: exploit the market

Bounded Rationality:
The rational decision process is bounded by former experience in the past.

Three learning trap:

- Familiarity trap:
    - Focus on familiar knowledge
    - Preferred investing: more immediate and likely returns
    - Difficult to shift to novel technologies and novel modes of reasoning (novel to the firm) because it feels uncomfortable
- Maturity trap:

    - Favor mature technologies
    - Technologies that exist for some time and are well known and understood in industry
    - Easier acceptance, easier to work with in networks/ co-specialization
    - Difficult to shift to emerging technologies, because they are not proven in the market
- Propinquity trap:
    - Problem are solved with similar solutions as existing solutions.
    - Less risky, fewer resources needed.
    - Difficult to shift to pioneering technologies (existing but new to the firm) because we have no experience in them and need to learn