

BOOKLET

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**TURNING
IDEAS
INTO
BUSINESSES:
THE FOUR
VALIDATIONS
MODEL**

BY PAULO AFONSO



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The people who are crazy enough to think they can change the world are the ones who do.

Steve Jobs

Turning Ideas into Businesses: the Four Validations Model
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BUSINESS DESIGN THINKING

This booklet describes a methodology based on **4 steps or validations** to transform ideas into businesses by leveraging and materializing ideas, particularly those based on technology and intensive knowledge, which can be developed in **university innovation and entrepreneurship ecosystems**.

Nowadays, such ecosystems must be compromised to help entrepreneurs to navigate the twin imperatives of **sustainability and digitalization**, through innovative and disruptive business models towards a more technology and knowledge-driven future.

Gary Hamel, Tim Brown, Steve Blank, Eric Ries, Alex Osterwalder, and previously, visionaries and business men as Peter Drucker and Steve Jobs, among others, designed, promoted and implemented a series of methods and tools to help new products and startups to survive the Valley of Death. These approaches and tools can be integrated to support an effective Business Design Thinking.

The methodology proposed here for exploring and developing business ideas is based on **4 interconnected stages** in which the business idea is validated:

#1 validation of the value proposition, #2 market & industry validation, #3 validation of the business model, #4 economic and financial validation.

**“BUSINESS PEOPLE DON’T JUST NEED TO UNDERSTAND DESIGNERS
BETTER: THEY NEED TO BECOME DESIGNERS.”**

(ROGER MARTIN, DEAN, ROTMAN SCHOOL OF MANAGEMENT)

1. UNIVERSITY INNOVATION AND ENTREPRENEURIAL ECOSYSTEMS

University innovation and entrepreneurial ecosystems include as **key players** the following actors: universities, Technology Transfer Offices (TTO), business accelerators and incubators, public agencies, municipalities, science parks, etc.

They should help companies and entrepreneurs to translate innovation into tangible results. Innovation needs to make an impact and fast and that asks for effective approaches to innovation.

For instance, according to Costa Markides, **strategic innovation** is an organization's process of reinventing or redesigning its corporate strategy to drive business growth, generate value for the company and its customers, and create competitive advantage. This type of innovation is essential for organizations to adapt to the speed of technology change.

Strategic innovation implies aligning innovation efforts with the organization's strategic objectives and vision through new products, services or processes that drive sustainable competitive advantages. It fuels effective innovation and entrepreneurship ecosystems where (radical) ideas can be

turned into (**disruptive**) new business models that can shape the future of technology/intensive knowledge-driven industries.

Design Thinking principles are also relevant in this context because it is a methodology for practical and creative resolution of problems or issues that looks towards an improved future result in terms of innovation, strategic capabilities, processes and, in the broadest sense, management. It is a form of solution-based or solution-focused thinking that starts with the goal or what is to be achieved.

The **four-steps** methodology presented here to turn ideas into products and businesses may contribute for strategic innovation in practice and for sustainable university innovation and entrepreneurial ecosystems.

According to C. Davis, B. Safran, L. Yayboke and R. Schaff from McKinsey & Company, an innovation ecosystem comprises **six key actions**:

1. Set the aspiration and a bold vision;
2. Focus on specific sectors, partners, and anchor tenants;
3. Catalyze a critical mass of VC capital and start-ups through a strong innovation backbone;
4. Develop an ecosystem talent and workforce strategy
5. Design high-quality real estate, infrastructure, and livability;
6. Cultivate a vibrant, diverse community and a sense of place.

The integrated innovation funnel spans four key areas.



Idea generation/R&D
Ideas developed through basic and applied research led by academic institutions, research institutions, and companies



Commercialization
Ideas translated to commercial technology by companies and higher education tech transfer offices



Start-up/early stage
Entrepreneurs starting new businesses using ideas, supported by seed funding and venture capital



Growth
Scaling of start-ups into businesses with good-paying jobs

“BY LISTENING TO POTENTIAL FUTURE CUSTOMERS', BY GOING OUT INTO THE FIELD AND INVESTIGATING POTENTIAL CUSTOMERS NEEDS – THE DIFFERENCE BETWEEN THE WINNERS AND LOSERS.”

(STEVE BLANK)

2. **TURNING IDEAS INTO BUSINESSES**

Turning ideas into technology-based or intensive knowledge startups may be done using structured **methodologies**, each aimed at reducing risk, validating assumptions, and ensuring the best product-market fit, enhancing the value proposition. Some of those methodologies can be highlighted.

Lean Startup (from Eric Ries) focuses on building a Minimum Viable Product (MVP), iterating quickly using the Build-Measure-Learn loop, and making data-driven decisions to pivot or persevere.

Design Thinking is a human-centered approach that emphasizes understanding user needs. It follows five steps: Empathize, Define, Ideate, Prototype, and Test. The goal is to develop creative solutions that solve real problems.

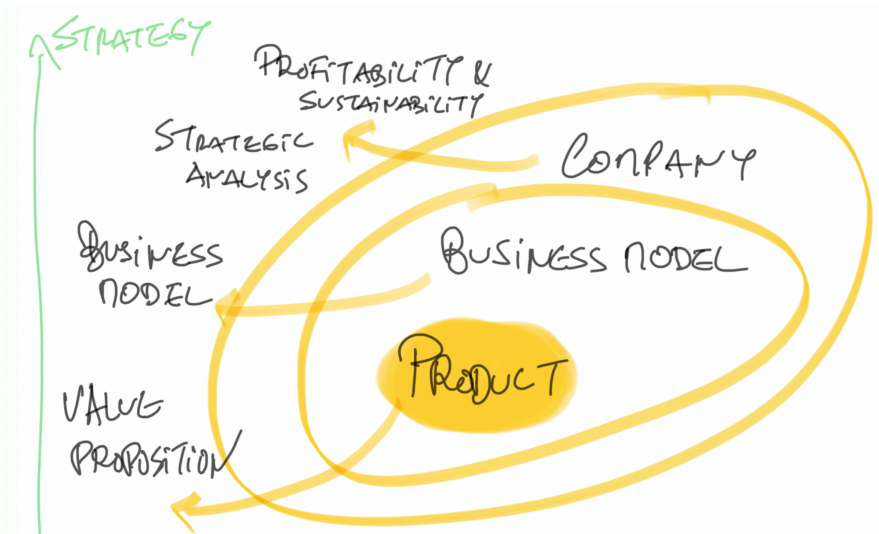
Business Model Canvas (from Alexander Osterwalder) provides a one-page framework to visualize and structure a business around 9 key blocks which include Value Proposition, Customer Segments, Channels, Revenue Streams, Key Activities, Resources and Partners.

Customer Development (from Steve Blank) is a systematic approach to discover, validate, and grow a customer base before scaling the business. It emphasizes Customer Discovery and Validation.

Jobs to Be Done (from Clayton Christensen) focuses on understanding the specific “job” a customer hires a product to do, ensuring products solve core customer problems.

Disciplined Entrepreneurship (from Bill Aulet) a 24-step framework guiding entrepreneurs through product development, customer identification, and scaling.

Each methodology aims to validate ideas early, minimize waste, and create sustainable business models.



3.

THE FOUR VALIDATIONS MODEL

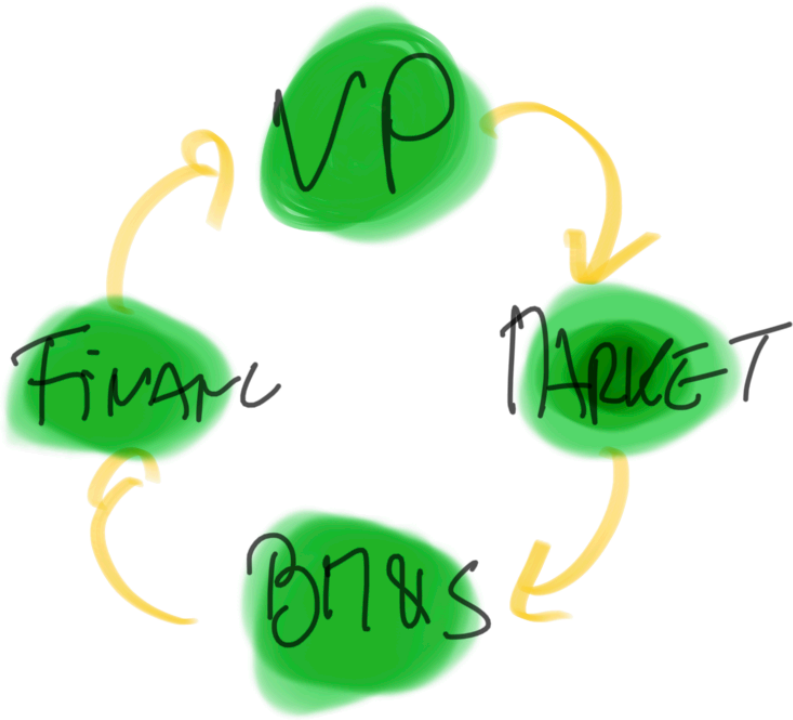
The **methodology** proposed here asks for a set of validations by the following order:

- #1 validation of the value proposition,
- #2 market & industry validation,
- #3 validation of the business model and strategy,
- #4 economic and financial validation.

It can be implemented through a series of lessons and/or workshops focused on the idea that turning ideas into businesses, particularly those that are technology or intensive knowledge based, is a process or a **path** of several interchangeable and recursive steps where a set of tools and techniques can be used to speed up, increase the potential and the sustainability of startups.

The rationality of the value proposition, the quality of the market analysis, the consistency of the business model and the conditions of economic and financial forecasts are fundamental, but the quality of the **communication** is also important (e.g., visual quality of the presentations, quality of oral presentations, quality of the business case and business plan, webpages).

These concepts, tools and approaches can be presented, applied and tested using examples, case studies, selected



short videos, etc. and, particularly, using a project work presented and discussed using several pitches to include a collaborative hands-on approach perspective. In the end, some final remarks, the most important lessons learned and opportunities for further work and a roadmap for the next steps will be easily highlighted.

The expected outcomes are set of **pitches** iteratively improved and a **business case** to clarify the value proposition and design the business strategy and to communicate the idea to potential clients, investors and business partners.

The feedback, information and suggestions provided by the mentors through the all process should be used to produce the final pitch and the business case.

4.

THE CANVASES

To turn ideas into business effectively and efficiently there are important concepts and tools which should be used such as the canvas models to be produced and improved iteratively through the business design processes.

Several **canvases** can be used, for example, the Value Proposition Canvas (**VPC**), the Business Model Canvas (**BMC**) and the Strategic Analysis Canvas (**SAC**).

The **BMC** is particularly useful to explain the 4 validations or steps and the precedence that exists between them.

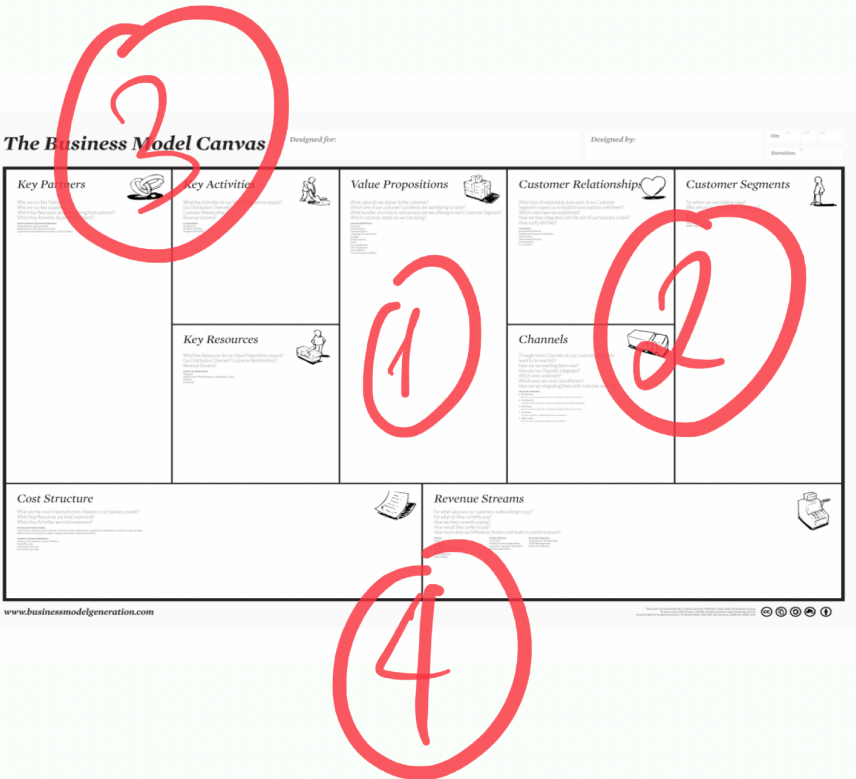
The initial step is focused on the clarification and improvement of the value proposition (step 1 in the figure) towards a good fit product-client, i.e. a strong value proposition.

The second step (2 in the figure) is about the right wing of the canvas, the emotional one. More information on the market is required and how the market will be approached must also be developed.

The third validation implies to complete the left wing of the BMC (the rational one), recognising the activities and residences needed for the business and that will provide the desired value proposition.

Finally, costs and revenues should be computed and compared, and investment needs and the profitability of the business must be evaluated (step 4).

The Strategic Analysis Canvas (**SAC**) is also useful to insert the business model into the perspective of the company where the value proposition will be offered (both an existent company or a new one, a startup). A value proposition only exists included into a proper business model and the later will works if a company exists.



As presented above, there is also a path to follow in designing and structuring the company that will turn possible the proposed business model. This canvas as the BMC also presents 9 blocks organized in a right and left sides and centered in a clear, future-oriented, sustainable and ambitious Vision and Mission of the company.

Firstly, the focus should be on such Mission and Visions to clarify the analysis of the external environment (right) and internal conditions (left).

The analysis of the external environment includes the study of the macroeconomic and Political, Economical, Social, Technological (PEST) and other general conditions of the economy; the analysis of industry using, for example, the well known Porter's models and a detailed study of the competitors and benchmarks in the industry. The left side summarises the analysis of the company's activities, capabilities and strategies. Both, right and left provide information for a well supported SWOT analysis at the bottom of the canvas.

STRATEGIC ANALYSIS CANVAS Designed for: _____ Designed by: _____ Date: _____
 Iterations: _____

Value Chain <small>Product's Global Value Chain Internal Value Chain (Porter's Model) Suppliers Outsourcing Business Partners</small>	Competitive Advantages <small>Which are? Cost Efficiency Higher Quality Innovation Focus Critical Factors of Success</small>	Mission <small>Mission Vision Values Resources Signature</small>	PEST+ <small>Environmental Factors Socio-Cultural Factors Economic Factors Political Factors Technological Factors Legal Etc.</small>	Competitors <small>3 to 6 of most relevant competitors There is a benchmark? Checklist for competitors' analysis Competitors' Comparative Matrix</small>
Strategy <small>Cost leadership Differentiation Focus Strategic Objectives Market entry strategy</small>		Industry <small>Which is the relevant industry? Industry Analysis, Trends... Porter's Forces Model The Role of Suppliers The Role of Buyers</small>		
Strengths and Weaknesses <small>3 to 6 topics related by relevance Strengths Weaknesses Strategies to capitalize strengths and mitigate weaknesses</small>		Opportunities and Threats <small>3 to 6 topics related by relevance Opportunities Threats Strategies to capitalize the opportunities and avoid the threats</small>		

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5. MENTORING

Mentors and business coaches are fundamental to guide participants in the different steps of the methodology and to share their experience and vision. Such interaction also promotes the creation of synergies, partnerships and networking.

Mentors can be experienced entrepreneurs, researchers with a strong knowledge on the methodology or on the technicalities of the project.

A good knowledge and experience on marketing or financial analysis is also relevant. These competencies can be found in some people but usually, several mentors are involved in the mentoring process.

Alumni play very well this role in the context of university entrepreneurial ecosystems. They share their knowledge, experience and suggestions in a way that is easily understood by entrepreneurs from the academia.

The **mentorship** can be made through master classes and seminars, in the initial stages of the process; and more through on-site visits, some training (for example on investment appraisal) and direct support.

A selected set of mentors are particularly relevant, namely, those well experienced on innovation and entrepreneurship, particularly on strategies and processes to turn university-based intensive knowledge and technologies into products and services, with impact in the community.

6.

#1 VALIDATION: VALUE PROPOSITION

The value proposition should be validated considering the next issues which should be used to prepare a first pitch, and preferably by this order: context (of the problem or opportunity), justification of the business opportunity considering if is tech-pushed or market-drive (in view of current solutions, and the importance of the opportunity, market size, etc.), a first general idea of the proposed solution must be presented, its advantages for the consumer/client, identification and preliminary analysis of the client/consumer (e.g., characteristics, preferences,...) and the market (size, competitors, price,...). For this validation, the Value Proposition Canvas and related supporting materials and the blocks on the right side of the Business Model Canvas can be considered.

7.

#2 VALIDATION: MARKET & INDUSTRY ANALYSIS

Information about the potential market and customers must be researched, to support the effectiveness of the value proposition. It is important to know about market characteristics (size, prices, pricing strategies), current products and solutions (and its limitations), competitors and analysis of current conditions, constraints and industry trends.

The aim of the market analysis is to bring the project closer to the reality of the market and compare entrepreneurs' perceptions with the knowledge obtained from the market, confirming or redefining the value proposition.

Existing products and market trends should be used to frame the product/service and signal existing news and opportunities. It is important to have a “mentor” with knowledge of the market who helps on the design of a strategy to introduce the product into the market.

The Strategic Analysis and Business Model canvas are important at this moment and the Value Proposition canvas can be revisited.

**“THE SURPRISING FACT IS THAT COMPANIES (...) FORCE THEIR NEW PRODUCTS INTO MARKETS WHERE NO ONE IS WAITING TO BUY.
(STEVE BLANK)**

8.

#3 VALIDATION: BUSINESS MODEL & STRATEGY

In addition to considering the aspects that have already been discussed before, it is necessary to highlight how the business model will be structured (how the product will be produced and offered, channels, partnerships, main business support activities) and the business strategy (particularly, how to enter the market and growth strategies) – should be used for this the information provided by the Business Model Canvas (BMC) and the Strategic Analysis Canvas (SAC).

#1 entry market strategy

#2 growth strategy

At this stage, after working on the first 3 validations, and assuming that some attempts or preliminary versions of the pitch have already been made, it is important to improve it visually, using a consistent graphic identity and a fluid and well-structured presentation.

9.

#4 VALIDATION: FINANCIAL

The economic-financial assessment implies the computation of the cash flows for the length of the project (typically around 5 years but it can be less or more years depending the characteristics of the industry and the market), based on sales forecasts, considering prices and cost estimates (direct and indirect, fixed and variable), investment needs (initial capital and needed investments).

Typically, the economic-financial assessment includes, among other metrics, the analysis of the Net Present Value (NPV), Internal Rate of Return (IRR), Payback, Breakeven, Return on Investment (ROI), etc.

A good investment plan is fundamental including working capital needs.

“PLANS ARE USELESS, BUT PLANNING IS INDISPENSABLE.”
(DWIGHT D. EISENHOWER)

10. PITCHES

Pitches are usually short but should include all these aspects. Preliminary pitches may include some of these topics and may be made several which will be improved iteratively towards the final one.

Longer pitches can be used for discussing the ideas with partners and mentors and shorter ones to present the idea to investors and business partners. The pitches can be oral presentations supported or complemented by slides, videos, performances, demonstrations, etc. and should include these topics:

- context, problem/opportunity/need, motivation (from tech to the market (Tech-Prod-Mk) or from market to the solution (Mk-Prod-(Tech)); potential solution(s) or/and general/draft solution;

- benchmarking and analysis of the current solutions, competitors, industry constraints, opportunities and trends... their strengths and limitations;

- analysis of the (current and potential) market (dimension, prices, ...) and the industry (suppliers, partners, distribution channels, stakeholders, etc.), business models (standard, disruptive ones, trends);

- proposal: functional and non-functional requirements, product/service/tech description, prototypes, mockups, TRL,

expected time-to-market, etc., minimum viable product and additional features considering the product's life-cycle;

- business model (expected evolution) and business strategy (steps, partners);

-

- financial analysis (estimations for revenues (Q and P) and costs, margins and profits, investment needs, cash-flows, NPV, IRR, Payback, Breakeven, sensitiveness and scenarios analysis and risk;

- roadmap for next steps;

- TEAM and people involved (FTE) (highlighting competencies for this project, identifying people, competencies and partners to add).



11.

BUSINESS CASE

The **Business case** is a report following and extending the pitch's structure presented before.

The canvases can be used (Value Proposition Canvas (VP), Strategic Analysis Canvas (SAC) and Business Model Canvas (BMC)), but preferably they should not appear explicitly in the presentations/pitches.

The rational of the value proposition, the quality of the market analysis, the consistency of the business model and the economic-financial conditions are fundamental elements for evaluating innovation and new product development projects, but the quality of the communication carried out is also important (e.g., appearance of presentations, quality of oral presentation, arguments well supported, etc.) to engage the all team and stakeholders. A motivated champion that will lead the project is also fundamental.

It is presented below a suggestion for the business case structure and contents.

The purpose of a business case is to describe and demonstrate business potential to an audience of potential investors, financiers, business partners or key customers. A business case must be clear, complete and convincing about the business potential of the proposed idea. A coherent graphic identity is also valued.

Executive Summary

Contextualization: Problem/Need/Opportunity/Potential of the Technology to be used... and status quo of existing solutions and limitations justifying the business opportunity

Value proposition: description of the proposed solution (characteristics) and demonstration of suitability to the customer's needs and interests, description of the product(s) and/or service(s), highlighting differentiating elements and enhancing the competitive advantages of the product/service

Market, Industry and Competitor Analysis: information on the size, characteristics and trends of the target market (of actual potential customers), characteristics of the industry that are of interest to highlight (e.g. barriers, suppliers, business partners, macroeconomic analysis if relevant (PEST and others) dimensions if relevant), comparison with competitors, summary of opportunities and threats

Business Model and Strategy: fundamental key activities to ensure the value proposition, partnerships, market and customer relationship channels, pricing model, vision and strategy for the business, market entry strategy, growth strategy, roadmap of activities to be developed to launch the product and the business, summary of strengths and weaknesses

Economic-Financial Assessment: assumptions (prices, product and company cost structure, etc.), sales forecasts, main operational costs (selling, general and administrative expenses; production costs (materials, direct labor and indirect costs), investment needs and investment sources, NPV, IRR and Payback, ROI; sensitivity analysis and risk (breakeven, optimistic and pessimistic scenarios, etc.)

Attachments (optional): product description, functional and non-functional requirements list, canvas, financial maps, market information, etc.



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