

ENTREPRENEURSHIP **for Computer Science and** **Engineering**

Lecture 9: **Business Plan and Pitch Deck**

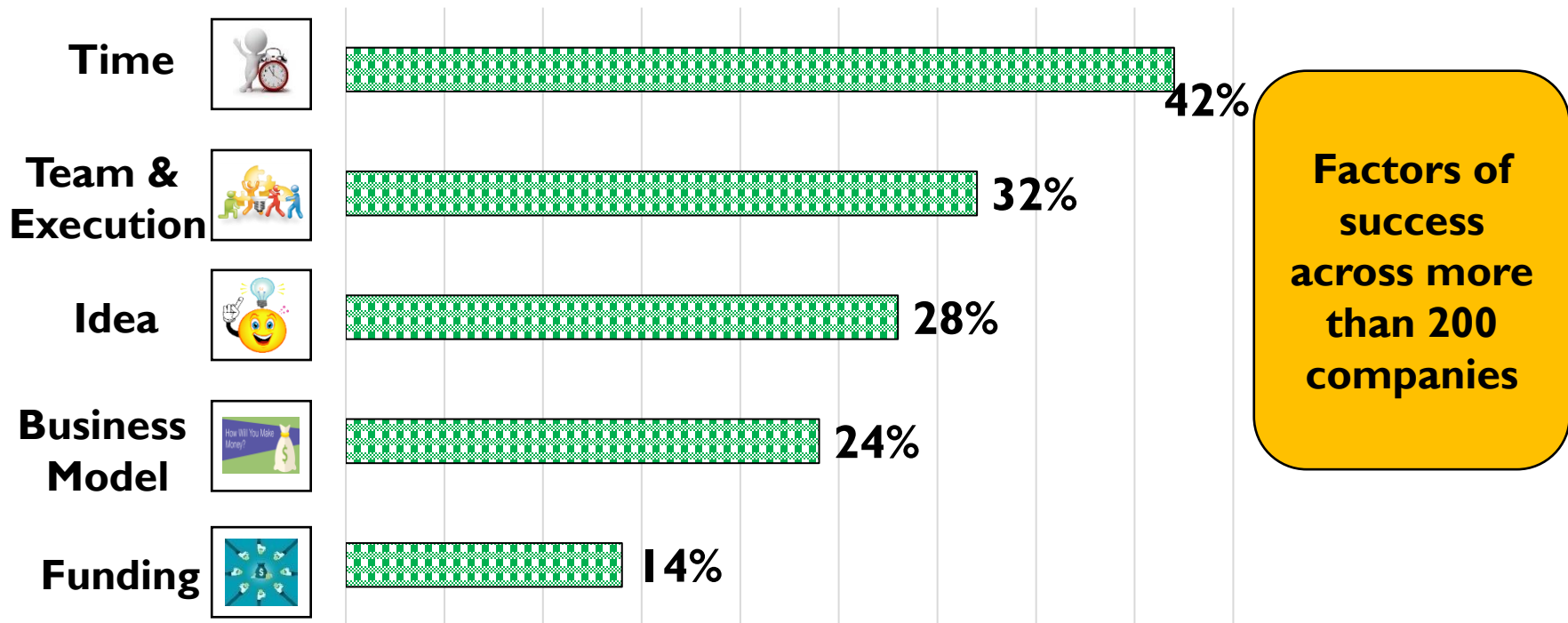
Morteza Zakeri
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Outline

- Last Session:
 - The Lean Approach
 - Minimum Viable Product (MVP)
- This lecture
 - Business Plan (BP)
 - Feasibility Study (FP)
 - Return on investment
 - Breakeven point (value)
 - Pitch Deck (BP Presentation)
 - Elevator Pitch
 - Product Plan
- Announcements:
 - Course website: <https://www.m-zakeri.ir/Entrep/>
 - My lab: <https://www.m-zakeri.ir/lab>
 - Book template:
 - <https://github.com/m-zakeri/Entrep/tree/main/docs/assignments/book>

Recap: What makes startups succeed?

- Factors of success



[Based on a study by IdeaLab]

<https://www.idealab.com/>

7th National Informatics Conference

- <https://cs.ipm.ac.ir/nic/1404/>

هفتمین کنفرانس ملی انفورماتیک ایران
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تئوری
طراحی و تحلیل الگوریتم ها
هندسه محاسباتی
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امنیت داده و کامپیوتر
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سیستم های عامل
زبان های برنامه سازی
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سیستم حافظه و ذخیره سازی داده
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Business Plan (BP)

- A business plan is a formal document that precisely defines a company's objectives in fine detail.
 - About **15–25** pages in length.
- It also describes how the company plans to achieve its goals.
- **All companies** create and use business plans.
 - *i.e.*, startups and established institutions.



Business Plan (BP)

- Business plans are critical for new businesses to attract **investors** and secure lending.
- A business plan can take **several weeks** to **months** to create, depending on the complexity of the business.
- A business plan can be **periodically reviewed and updated**, and new ones can be created if a business decides to move in a new direction.
- **Encouragement:** Your business plan is your roadmap—make it your best work!

Business Plan (BP)

Why Business Plans Are Crucial



You are **260%**
more likely to launch your business
if you have a business plan.

2x You are two times more likely to
grow your business if you have a plan.

Your business is more
likely to receive funding if you
have a business plan in place.



Structure of a Business Plan (BP)

- Business plan and competitor analysis template



Section I: Executive Summary

- **Your Business Idea**
 - Briefly describe your business idea and what makes it unique
- **Goals, Missions, and Vision**
 - State your business goals, missions, and vision clearly
- **Key Points Summary**
 - Summarize key points from your plan (product, market, finances)

Section I: Executive Summary

- **Your Business Idea**
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- **Goals, Missions, and Vision**
 - State your business goals, missions, and vision clearly
- **Key Points Summary**
 - Summarize key points from your plan (product, market, finances)
- **Evaluation Tip:** Is the summary clear, concise, and compelling?

Mission and Vision

Mission Statement		Vision Statement
Present-oriented (what we do now)	vs	Future-oriented (what we want to be)
Defines WHY (purpose and values)	vs	Describes the desired future state
Action-oriented	vs	Aspirational
Answers: "What do we do?"	vs	Answers: "What do we want to become?" (impact)

<https://thomasgriffin.com/mission-statement-vs-vision-statement>

Section 2: Business Description

- **Product or Service**

- What product or service does your business offer?

- **Target Customers**

- Who are your target customers?

- **Business Structure**

- What is your business structure (e.g., sole proprietorship مالکیت انحصاری, Limited liability company (LLC) شرکت با مسئولیت محدود)?

Section 2: Business Description

- **Product or Service**

- What product or service does your business offer?

- **Target Customers**

- Who are your target customers?

- **Business Structure**

- What is your business structure (e.g., sole proprietorship, LLC)?

- **Evaluation Tip:** Does this section clearly define the business and its purpose?

Section 3: Product and Services

- **Product/Service**

- Details of the offerings.

- **Main Competitors**

- List your main competitors (name specific companies).

- **Strengths and Weaknesses**

- Compare their strengths and weaknesses to your business.

- **Competitive Advantage**

- Identify your competitive advantage or unique selling proposition.

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- Compare their strengths and weaknesses to your business.

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- **Evaluation Tip: Is the competitor analysis detailed and strategic?**

Section 4: Market Research and Analysis

- **A: Industry and Trends**
 - Describe your industry and current trends
- **B: Target Market**
 - Identify your target market segments and customer needs
- **C: Market Data**
 - Include relevant market size or growth data

Section 4: Market Research and Analysis

- A: Industry and Trends
 - Describe your industry and current trends
- B: Target Market
 - Identify your target market segments and customer needs
- C: Market Data
 - Include relevant market size or growth data
- **Evaluation Tip:** Is the market opportunity well-researched and realistic?

Recall: Market Analysis and Research Platforms

- **One of the most challenging steps of a BP**
- **Market research:** A study done to collect statistics on a given market within a specific industry.
- **Market analysis:** Interpretation of market information to determine a market's size, growth potential, audience, and competitive landscape.
- Example platforms:
 1. Grand View Research (<https://www.grandviewresearch.com>)
 2. Transparency Market Research (<https://www.transparencymarketresearch.com/>)
 3. Future Market Insights (<https://www.futuremarketinsights.com/>)
 4. Allied Market Research (<https://www.alliedmarketresearch.com>)

Section 5: Marketing and Sales Strategy

- **Marketing Mixture**
 - Outline your marketing mix: Product, Price, Place, Promotion
 - Describe how you will attract and retain customers
- **Sales Process**
 - Explain your sales process and channels

Section 5: Marketing and Sales Strategy

- Marketing Mixture
 - Outline your marketing mix: Product, Price, Place, Promotion
 - Describe how you will attract and retain customers
- Sales Process
 - Explain your sales process and channels
- **Evaluation Tip:** Are marketing and sales plans actionable and aligned with the market?

Section 6: Financial Plan

- Financial Projections
 - Provide basic financial projections: sales, expenses, profits
- Funding Needs
 - Outline your funding needs and sources
- Contingency Plans
 - Include contingency plans for risks or unexpected costs/
events

Section 6: Financial Plan

- Financial Projections
 - Provide basic financial projections: sales, expenses, profits
- Funding Needs
 - Outline your funding needs and sources
- Contingency Plans
 - Include contingency plans for risks or unexpected costs/ events
- **Evaluation Tip:** Are financial assumptions realistic and well-supported?

Section 7: Operations Plan and Budget

- **Key Activities**
 - Describe your key activities and daily operations
- **Resources and Partners**
 - List important resources, suppliers, staff, or partners
- **Budget**
 - Determine the budget that is needed to start
- **Location and Technology**
 - Explain your location, facilities, and technology needs

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 - Explain your location, facilities, and technology needs
- **Evaluation Tip: Is the operational plan feasible and efficient?**

Additional Info: Management and Organization

- Management Team
 - Introduce your management team with roles and experience
- Organizational Structure
 - Show your organizational structure (org chart recommended)
- Staffing Needs
 - Explain staffing needs and employee roles

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 - Explain staffing needs and employee roles
- **Evaluation Tip:** Does the team have the skills to execute the plan?

Evaluation Checklist and Reflection

- **Completeness**
 - Have you addressed all key sections clearly?
- **Viability**
 - Is your business idea viable and competitive?
- **Strengths and Improvements**
 - What are your plan's strengths and areas for improvement?
- **Monitoring and Adaptation**
 - How will you monitor progress and adapt your plan?
- Use the above checklist just to self-assess and prepare for feedback.

Business Plans Best Practices (BPBPs!)

- Keep your plan clear, concise, and focused on your audience
- Use data and examples to support your claims
- **Update** your plan regularly as your **business evolves**.
 - **Note:** *I just love software evolution!* 😊
- **Recall:**
 - Your business plan is your roadmap—make it your best work!

Feasibility Study (FS)

Invest in individual projects

Feasibility Study (FS)

- A **feasibility study (FS)** is a way to evaluate whether or not a project plan could be successful.
- As you implement your **business plan**, you will **invest in individual projects**.
- A feasibility study is a way to evaluate the practicality of any given individual project or initiative.
- Sometimes called a **feasibility analysis** or **feasibility report**.

Feasibility Study Types and Goals

- There are different types of feasibility studies.
 - Technical feasibility
 - Financial feasibility
 - Market feasibility
 - Operational feasibility
 - Legal feasibility
 - ...

Feasibility Study Types and Goals

- There are different types of feasibility studies.
 - Technical feasibility
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 - Market feasibility
 - Operational feasibility
 - Legal feasibility
 - ...
- FS (especially financial FS) does so by answering two questions:
 - Does our team have the required tools or resources to complete this project?
 - Will there be a **high enough return on investment (ROI)** to make the project worth pursuing?

Return on Investment (ROI)

- **Return on investment (ROI)** or **return on costs (ROC)** is the ratio of **net income** (profit) to **investment**.
 - Or Rate of Return (RoR)
- As a performance measure, ROI is used to evaluate the efficiency of an investment or to **compare the efficiencies of several different investments**.
- The investment with the largest ROI is usually prioritized.
- Consider "**Year 0**" investment and **two** to **three** years' income.

Return on Investment (ROI)

- Return on investment can be calculated in different ways depending on the goal and application.
- The most comprehensive formula for return on investment (ROI) is:

$$ROI(\%) = \frac{I_0 + I - Q}{Q} \times 100\%$$

- where I_0 is the current value of investment,
- I is income from investment,
- and Q is the initial investment and other expenses.

Return on Investment (ROI) Example

- For example, you invested **\$10,000** in stocks (initial investment) and paid **\$200** in brokerage fees (other expenses).
- After one year, the current value of your investment is **\$12,500**, not yet sold.
- During the year, you received **\$300** in **dividends** (income from the investment).
- So, the ROI is the following:

Return on Investment (ROI) Example

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- As the duration of this investment is **one year**, this ROI is **annual**. ROI must be greater than MARR.

Minimum Attractive Rate of Return

- The **minimum acceptable rate of return** or **minimum attractive rate of return** (often abbreviated **MARR**) is the minimum rate of return on a project a manager or company is willing to accept.
- To determine whether or not a business project has a **positive net present value** using the MARR as the **discount rate**.
- **ROI (ROR) must be greater than MARR.**

Minimum Attractive Rate of Return

- The MARR is often decomposed into the **sum of the following components** (range of typical values shown):
 - Traditional inflation-free rate of interest for risk-free loans: **3-5%**
 - Expected rate of inflation: **5%**
 - The anticipated change in the rate of inflation, if any, over the life of the investment: **Usually taken at 0%**
 - The risk of defaulting on a loan: **0-5%**
 - The risk profile of a particular venture: **0-5% and higher**

Return on Investment (ROI) vs. NPV

- ROI is not time-adjusted (unlike e.g. net present value)
 - "Year 0" investment and two to three years' income.
- For long-term investments, the need for a **Net Present Value** adjustment is great, and without it, the ROI is incorrect.
- Similar to **discounted cash flow**, a discounted ROI should be used instead.
- The Return on Investment calculation **holds time constant** and solves for money.
- The **Break-Even point** holds money constant and solves for time.

Break-Even Point

- Every business faces a **critical threshold** in its operations—the point at which sales revenue precisely covers all expenses.
- This pivotal moment, known as the **break-even point**, separates a time of financial losses from profitability.
- Many ventures **operate at a loss** for extended periods before reaching this **milestone**.
- For companies, gauging how and when they will reach the breakeven point is crucial for financial planning and pricing.

Break-Even Point

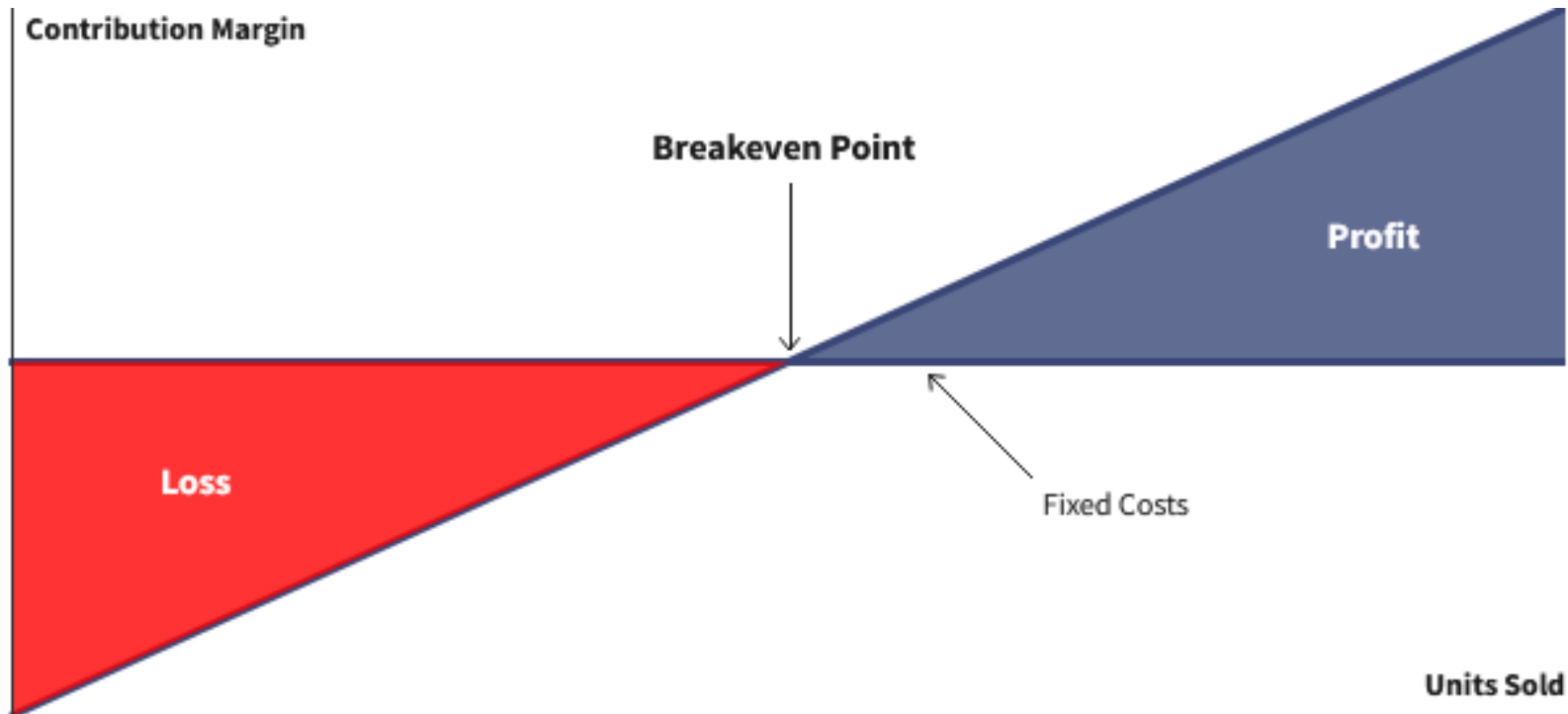
- The breakeven point occurs when revenue exactly equals total costs, when the money coming in equals the amount going out the door.
- A lower breakeven point generally indicates a more resilient business model.
- To calculate the breakeven point in accounting, divide fixed production costs by the contribution margin (price per unit minus variable costs per unit).

Break-Even Point Calculations

- The breakeven point is calculated in one of two major ways:
 - by **units sold** or by **sales dollars**.
- **(I) Break-Even Point (Units)** = *Fixed Costs / (Selling Price per Unit - Variable Cost per Unit)*
- **(II) Break-Even Point (Sales Dollars)** = *Fixed Costs / Contribution Margin Ratio*
 - **Contribution Margin** is the amount each unit contributes toward covering fixed costs and generating profit.
 - **Contribution Margin Ratio** is the contribution margin expressed as a percentage of the selling price.

Break-Even Point Calculations

- The breakeven point is an important financial indicator that helps businesses understand their **minimum viability threshold**.



Break-Even Point Example

- A bakery has fixed costs of **\$50,000 per month** and variable costs of **\$10** per cake. Each cake is priced at **\$50**.
- Find the **breakeven point** (in both units and sales dollars) for the bakery business.

Break-Even Point Example

- A bakery has fixed costs of **\$50,000 per month** and variable costs of **\$10** per cake. Each cake is priced at **\$50**.
- Find the **breakeven point** (in both units and sales dollars) for the bakery business.
- **Answer:**
 - Break-Even Point (Units) = $50000 / (50 - 10) = 50000 / 40 = 1250$ **units**
 - The bakery needs to sell 1,250 cakes monthly to cover all expenses and break even.
 - Break-Even Point (Sales Dollars) = $1250 \times 50 = 62,500$ **\$**

Pitch Deck

Presenting Your Business Plan Effectively

Pitch Deck ارائه‌ی استارت‌آپی

- You need financial backing from investors and partners.
- How do you convince them that they should put their money behind you?
 - **Enter the pitch deck!**



Pitch Deck

- **Pitch Deck** is a **concise, insightful** presentation that highlights your vision, market potential, and why others should join your journey.
- A pitch deck is like a **movie trailer**.
- A pitch deck grabs the attention of potential investors or partners, giving them a **snapshot** of your company or product and compelling them to learn more about it.
- Find pitch deck examples and templates:
 - <https://www.figma.com/resource-library/pitch-deck-examples/>
 - <https://www.ycombinator.com/>

Structure of a Pitch Deck

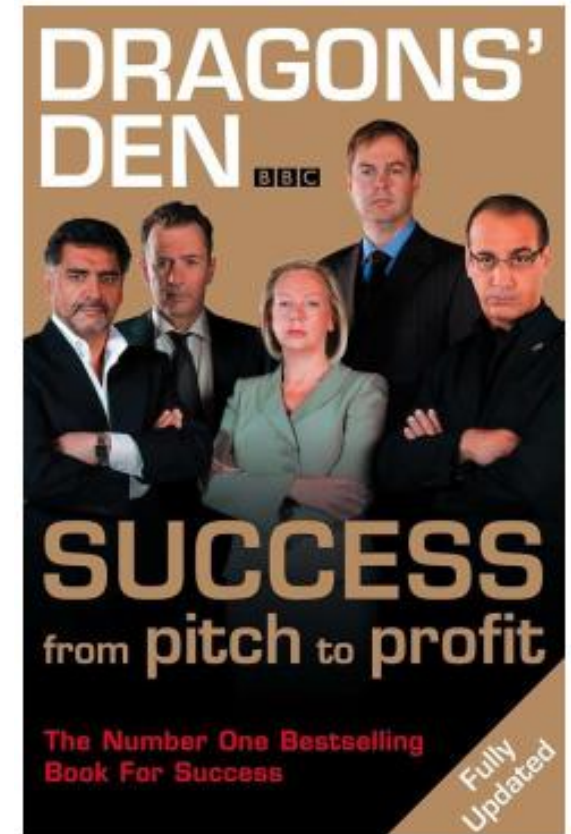
- Key *nine* elements to incorporate in a pitch deck include:
 - Your company's **mission** and **vision**
 - **Problem statement**
 - Product or service overview and key features
 - Business model
 - Market overview and growth
 - Traction and financial projections
 - Overview of your team
 - Funding request
 - Call to action

More on the Problem Statement

- Instead of rushing to a solution, writing a problem statement enables you to reflect on the challenge and plan your response.
 - *“Give me six hours to chop down a tree and I will spend the first four sharpening the axe”*
- How to write one in five steps:
 - Step 1: Identify the problem
 - Step 2: Put the problem into context
 - Step 3: Find the root cause
 - Step 4: Describe your ideal outcome
 - Step 5: Propose a solution and outline its benefits

Pitch Deck Examples: Dragons' Den

- **Dragons' Den** is a **British** reality television business program started in 2005 on **BBC**.
 - Allows several entrepreneurs an opportunity to present their varying business ideas to a panel of five **wealthy investors**, the "**Dragons**" of the show's title.
 - The program originated in 2001 in **Japan**, where it is known as **The Tigers of Money**.



Pitch Deck Examples: Dragons' Den

- **Steve Jobs** pitches iPad on Dragons' Den
 - <https://www.youtube.com/watch?v=QKsPLPZPkEI>



Steve Jobs pitches iPad on Dragons' Den - 2010 Unwrapped with Miranda Hart - Preview - BBC Two



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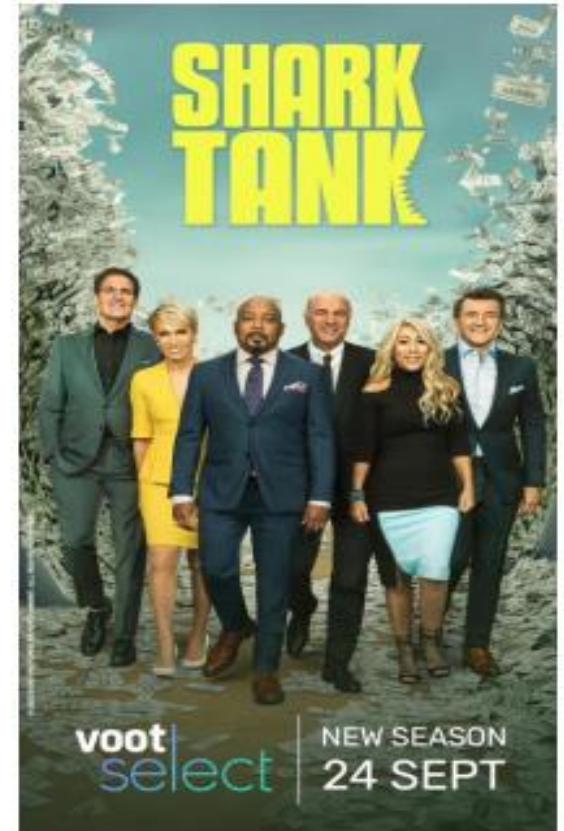
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Pitch Deck Examples: Shark Tank

- **Shark Tank** is an American business reality television series that premiered on August 9, 2009, on **ABC**.
 - The show is the American **franchise** of the international format Dragons' Den.
 - It shows entrepreneurs making business presentations to a panel of five venture capitalists called "sharks" on the program who decide whether to invest in their companies.



Pitch Deck Examples: Shark Tank

- A Bidding War Breaks Out During Scrub Daddy's Pitch
 - Pitches a high-tech **scrubbing tool**
 - <https://www.youtube.com/watch?v=ae5MssJ8en4>



A Bidding War Breaks Out During Scrub Daddy's Pitch | Shark Tank US | Shark Tank Global



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شتاب Pitch Deck Examples

• برنامه تلویزیونی شتاب در ایران

- <https://www.aparat.com/v/p2891x7>



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فصل دوم برنامه شتاب - ترب

Pitch Deck Events

- The **Entrepreneurship Avenue** is an **event series** designed to encourage students to explore their opportunities in the startup scene and try out entrepreneurship first hand.
 - The **Entrepreneurship Avenue** is designed to inspire and encourage students from various fields.
 - <https://entrepreneurshipavenue.com/>
 - <https://www.youtube.com/channel/UCugufVHbWYSs44hTn-ZssiQ/videos>

Pitch Deck Recap



Elevator Pitch

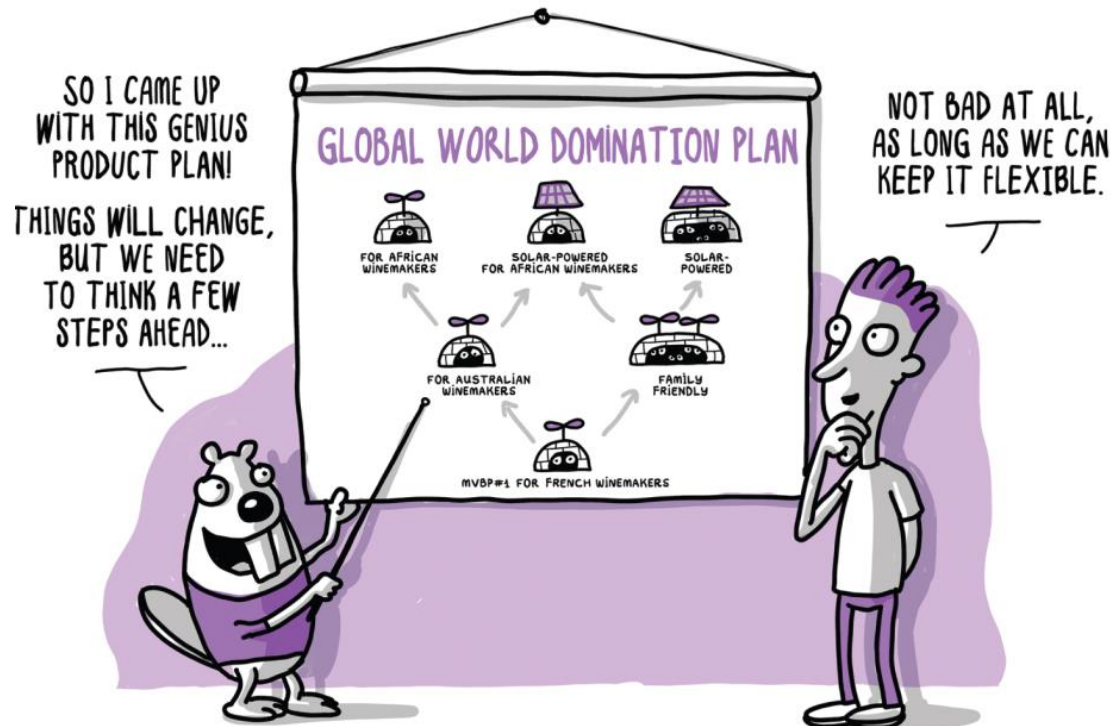
- An elevator pitch is a concise, 30- to 60-second speech that captures the essence of an idea, product, or project.
- Its purpose is to **spark interest** and **open the door** to **further conversation** or opportunities, whether with investors, employers, or clients.
- Entrepreneurs, sales professionals, and job seekers alike use elevator pitches
 - To make quick, compelling impressions that can lead to funding, partnerships, or career advancement.

Elevator Pitch

- Key takeaways:
 - An **elevator pitch** is a concise, **30- to 60-second** overview of an idea, used to spark interest.
 - **Entrepreneurs** use elevator pitches to **attract venture capitalists** and secure **seed funding**.
 - Successful elevator pitches explain why a product or proposal **is unique** and promising.
 - Elevator pitches can be used by **job seekers**, salespeople, and project managers to market themselves or their ideas.
 - A well-crafted elevator pitch sets the stage for **future opportunities**, like **meetings** or **partnerships**.

Develop a Product Plan

- You have not achieved your goals if you simply win the Beachhead Market, because it will be the first of many victories for you.
 - It is time to revisit your Follow-on Market TAM and develop a Product Plan.



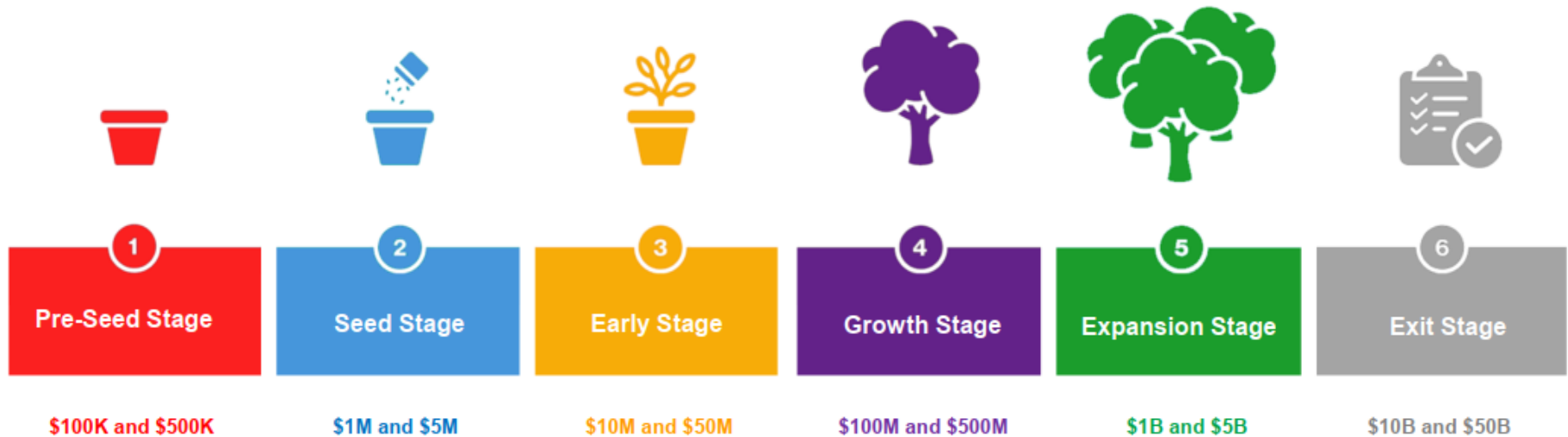
Develop a Product Plan

- In the **Product Plan**, you will select which of product features, based on your Persona's needs, to incorporate back into the product in follow-on releases.
- The Product Plan is subject to change as you move forward.
 - Do not sweat the details and **do not spend too much time** on it.
 - You should have a **general vision** of where you see things going next so that you capture some of the broader TAM.



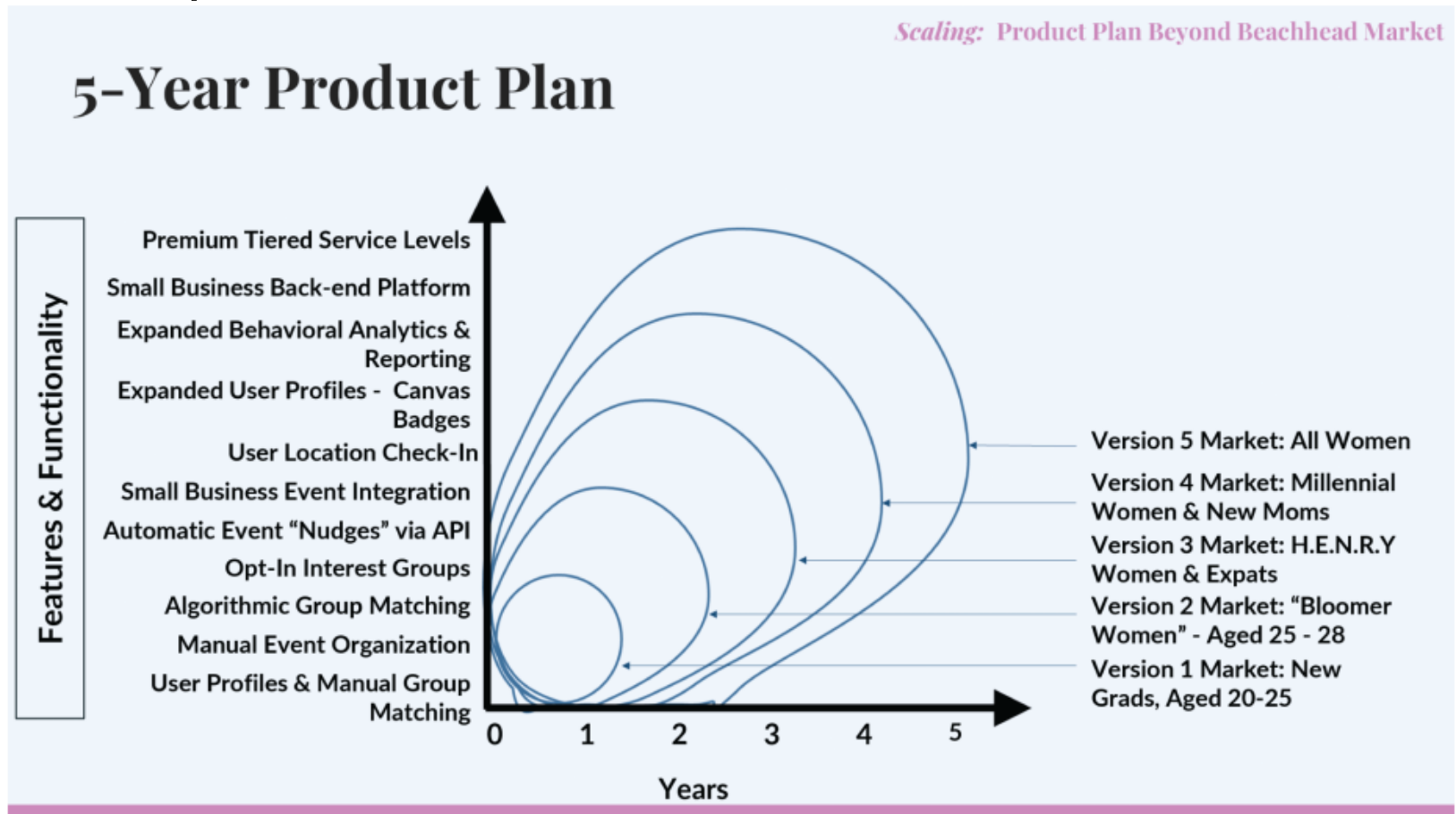
Develop a Product Plan

- Business launching steps



Product Plan Example

- **Bloom** first-draft five-year Product Plan to expand business and impact.



Adjacent Market

- An **adjacent market** is a new market that you can easily enter from the market you are currently in; requires its own Persona.
- The **beachhead market** is only your first step as a business; you want to expand from it.
- Not to have a plan is to put yourself in the hands of luck as opposed to your own methodical process.



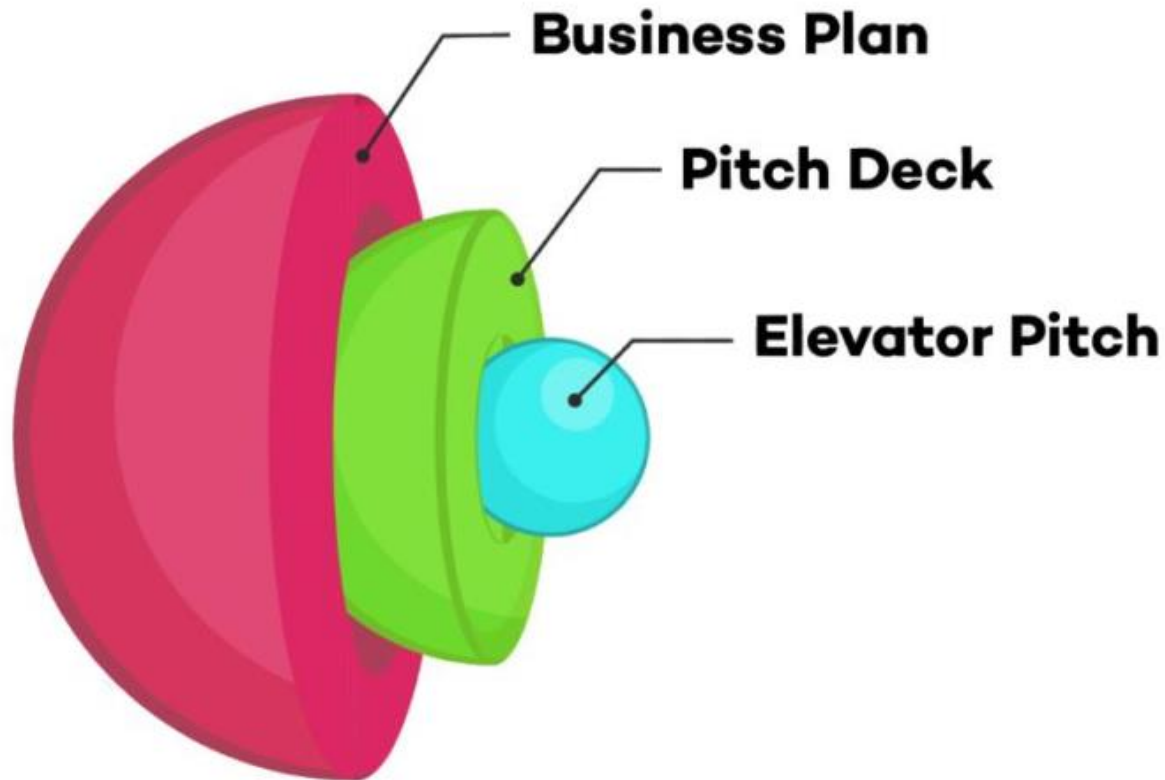
Summary

- PB vs. EP vs. PD

	Elevator Pitch	Pitch Deck	Business Plan
Format	Conversation	Presentation	Document
Purpose	Start the conversation and pique interest	Get funding or convince people into a partnership	Show the investor how the business would run
Length	Fewer than 10 sentences	10-15 slides	10-20 pages
Duration	Under a minute	10-15 minutes	Over an hour

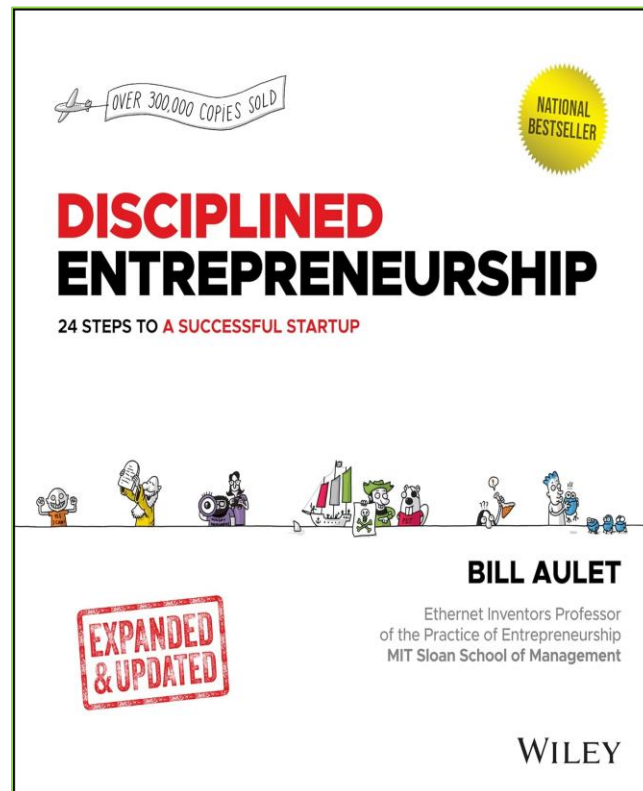
Summary

- PB vs. EP vs. PD



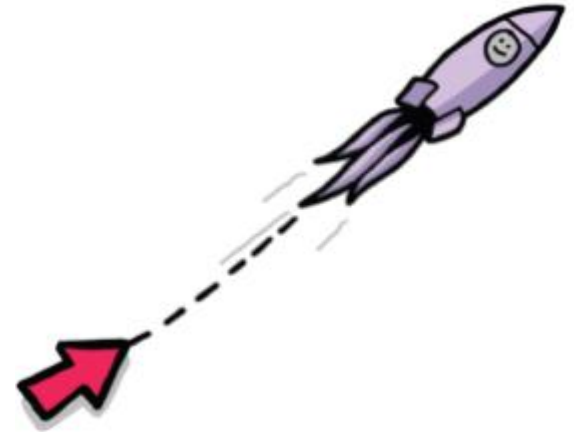
Reading Exercise

- Read **Steps 23** and **24** of the “*Disciplined Entrepreneurship*” book
 - 2024 by **Bill Aulet**



Next Class

- Your tutorial lectures
- Your startups' pitch decks
- Advanced Entrepreneurship?! 😊
 - Maybe!
 - What else?
 - Growing and building a company culture
 - Entrepreneurial leadership
 - Raising money to scale your business
 - Building and utilizing good corporate governance

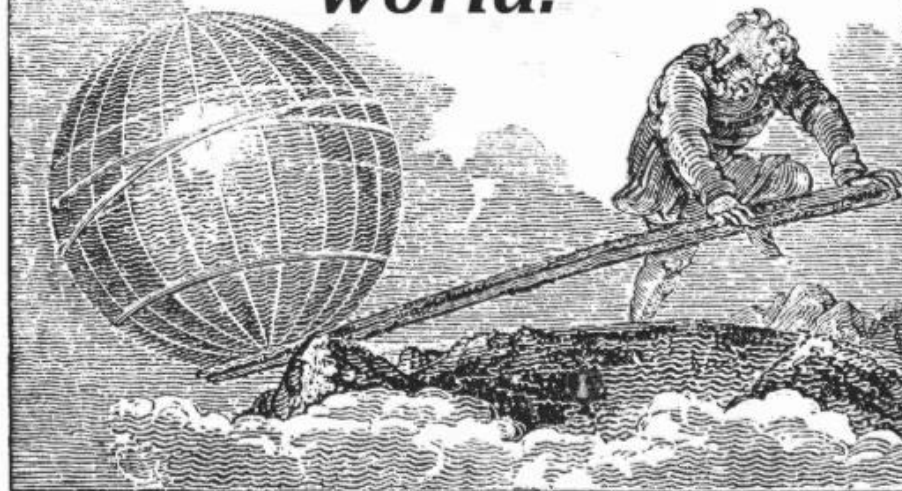


Time magazine's 2025 person of the year



Final Words

"Give me a lever long enough and a fulcrum on which to place it, and I shall move the world."



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