

# **ENTREPRENEURSHIP**

## **for Computer Science and Engineering**

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

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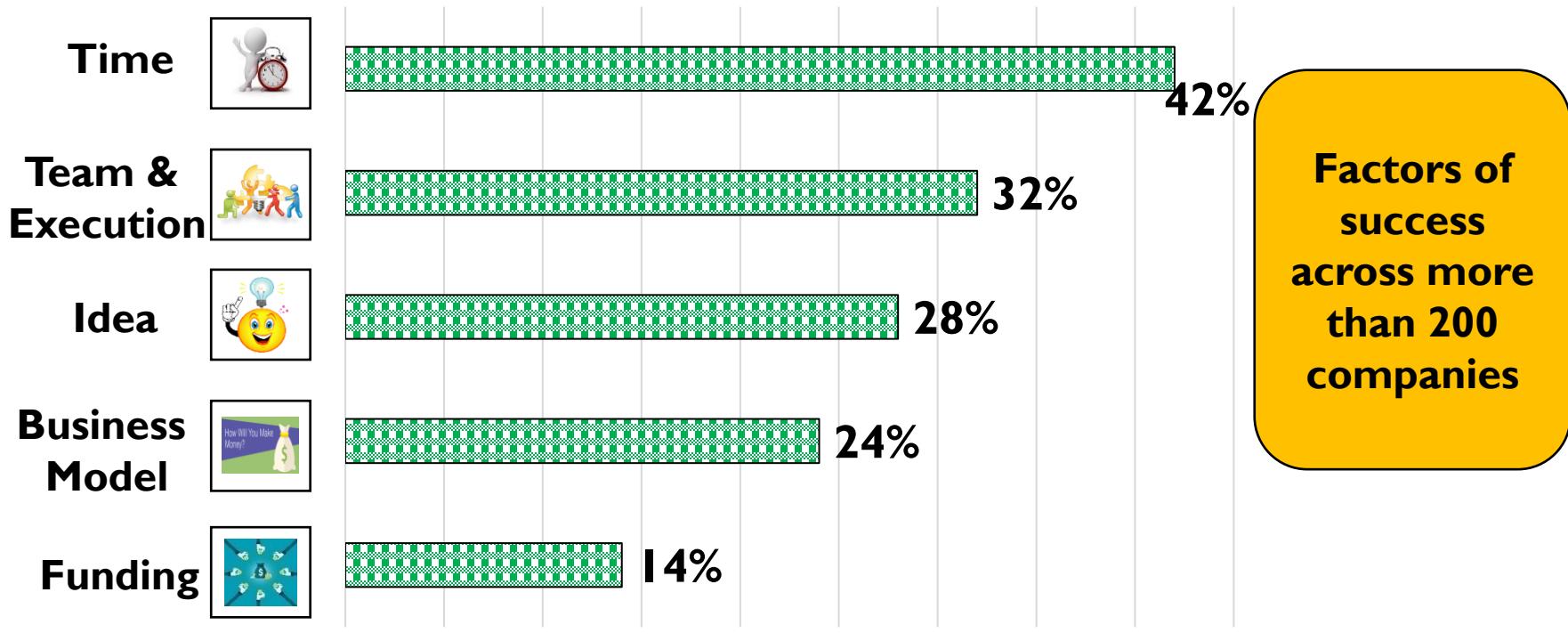
# Outline

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- **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/>

# 7<sup>th</sup> National Informatics Conference

- <https://cs.ipm.ac.ir/nic/I404/>



# Business Plan (BP)

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- 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)

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- 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

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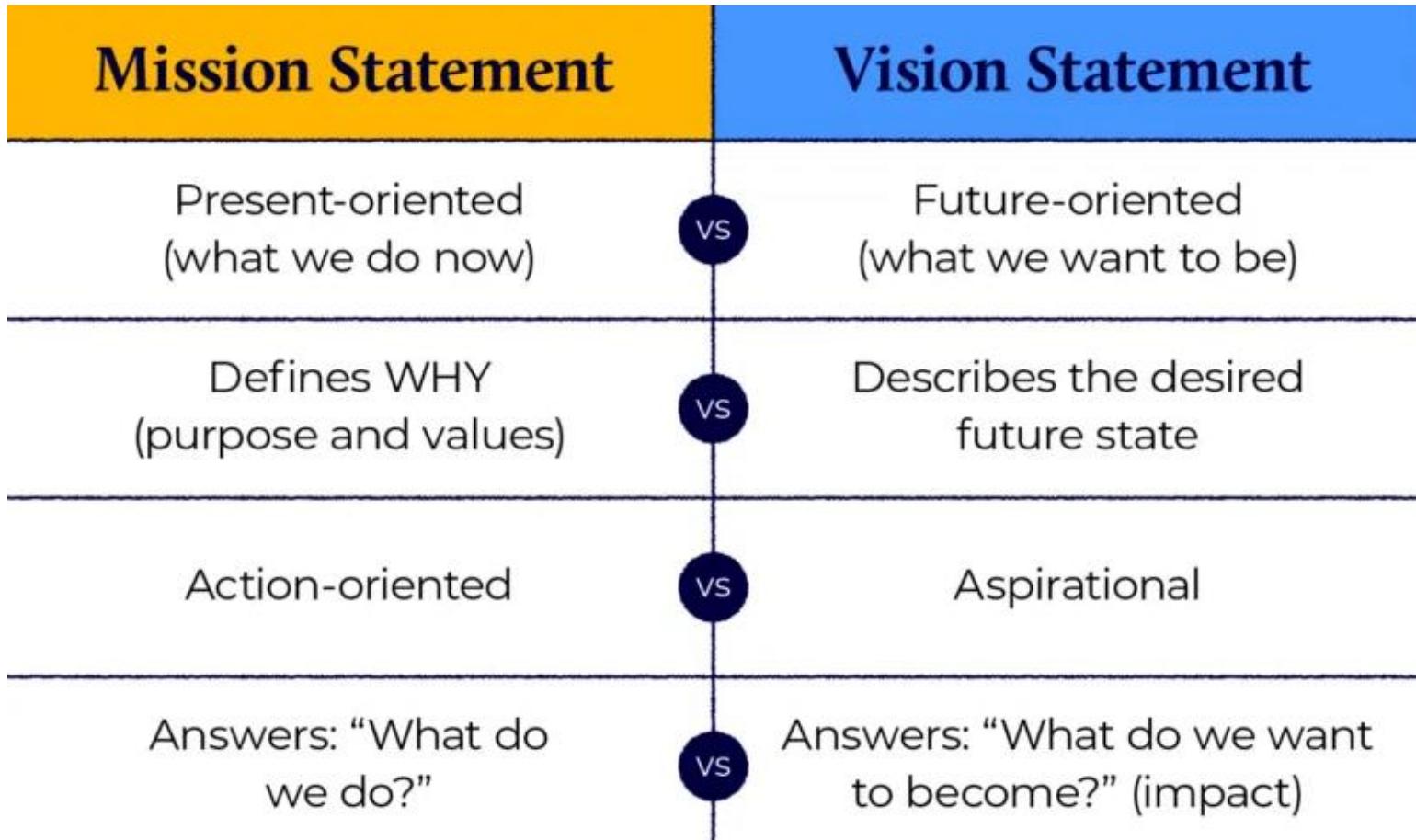
- Your Business Idea
  - Briefly describe your business idea and what makes it unique
- Goals, Missions, and Vision
  - State your business goals, missions, and vision clearly
- Key Points Summary
  - Summarize key points from your plan (product, market, finances)

# Section I: Executive Summary

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  - 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)
- **Evaluation Tip:** Is the summary clear, concise, and compelling?

# Mission and Vision



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

# Section 2: Business Description

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- **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) (شركت با مسئوليت محدود)?

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- **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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  - Identify your competitive advantage or unique selling proposition.
- **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

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- 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

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- **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

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  - 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

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- 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

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- 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!)

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- 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)

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- 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**

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- 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
  - Financial feasibility
  - 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)

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- 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)

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- 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:

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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

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- 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

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- 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

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- 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

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- 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

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- 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).

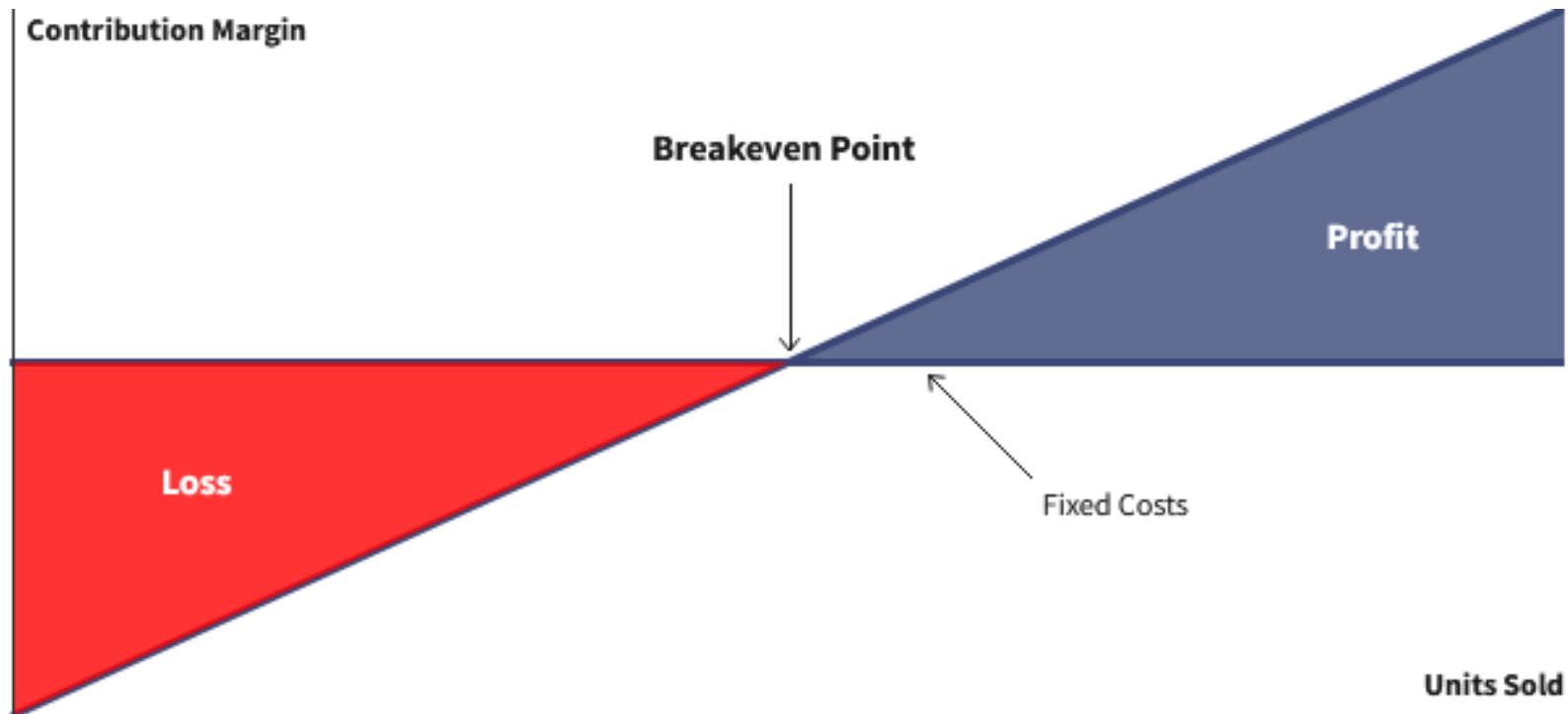
# Break-Even Point Calculations

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- 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

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- 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

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- 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

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- 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

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- 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

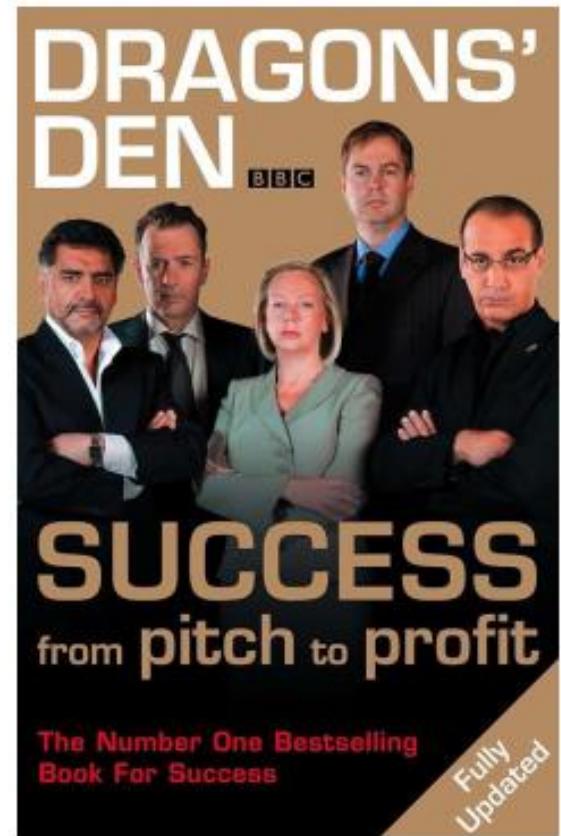
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- Instead of rushing to a solution, writing a problem statement enables you to reflect on the challenge and plan your response.
  - “*Give me six hours to chop down a tree and I will spend the first four sharpening the axe*”
- How to write one in five 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

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- **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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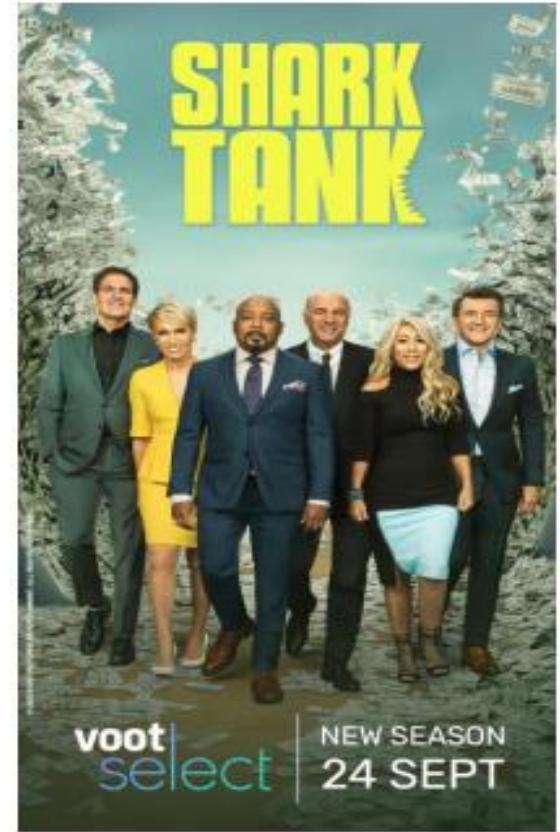
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# Pitch Deck Examples: Shark Tank

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- **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



Shark Tank Global  
1.07M subscribers

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267K



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# Pitch Deck Examples: شتاب

- برنامه تلویزیونی شتاب در ایران
  - <https://www.aparat.com/v/p2891x7>



فصل دوم برنامه شتاب - ترب

# Pitch Deck Events

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- 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/UCugufWHbWYSs44hTn-ZssiQ/videos>

# Pitch Deck Recap

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- 1 Keep it concise
- 2 Tell a compelling story
- 3 Use visuals and graphics
- 4 Practice your delivery



# Elevator Pitch

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- 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.

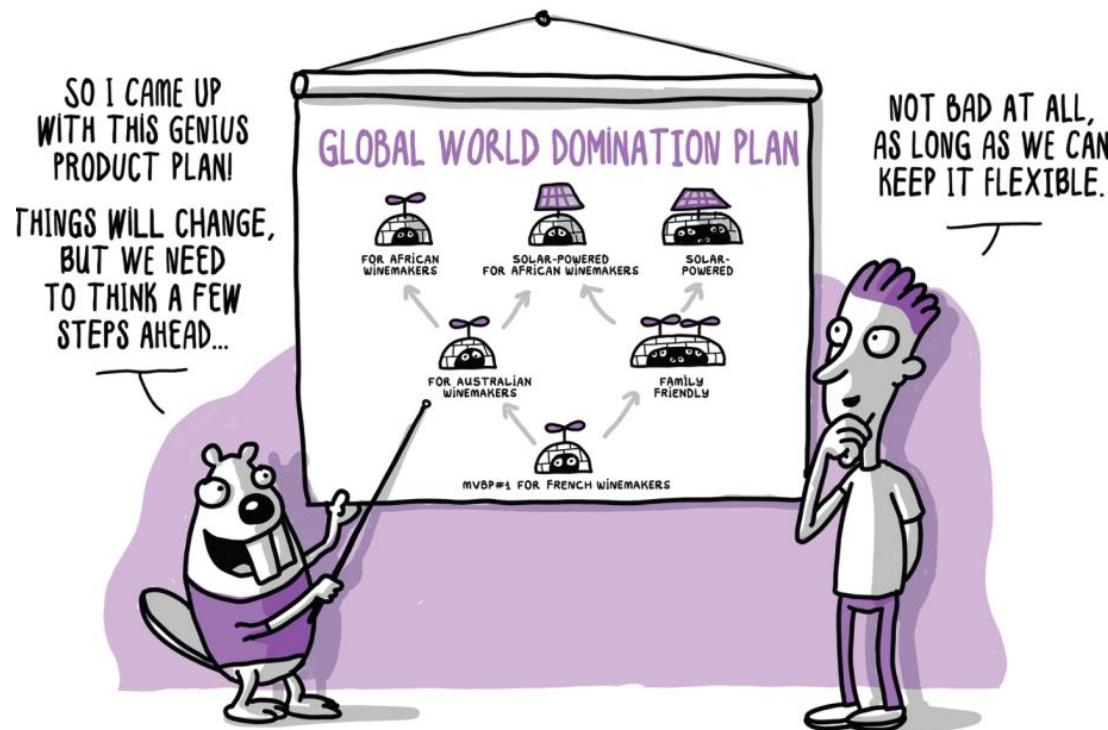
# Elevator Pitch

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- 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

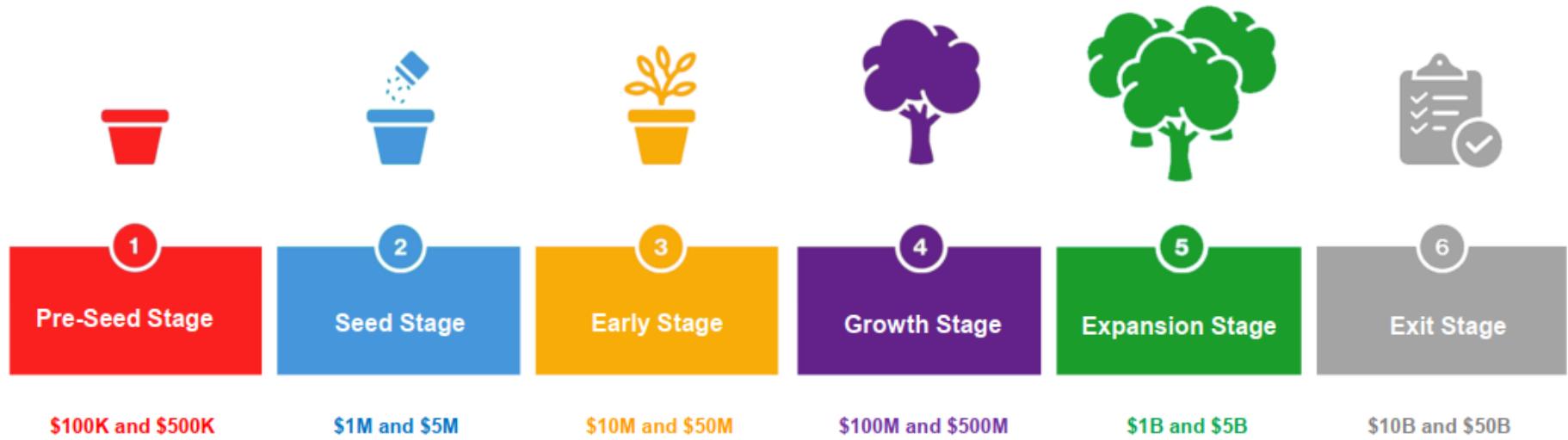
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- In the **Product Plan**, you will select which of product features, based on your Persona's needs, to incorporate back into the product in follow-on releases.
- The Product Plan is subject to change as you move forward.
  - Do not sweat the details 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.



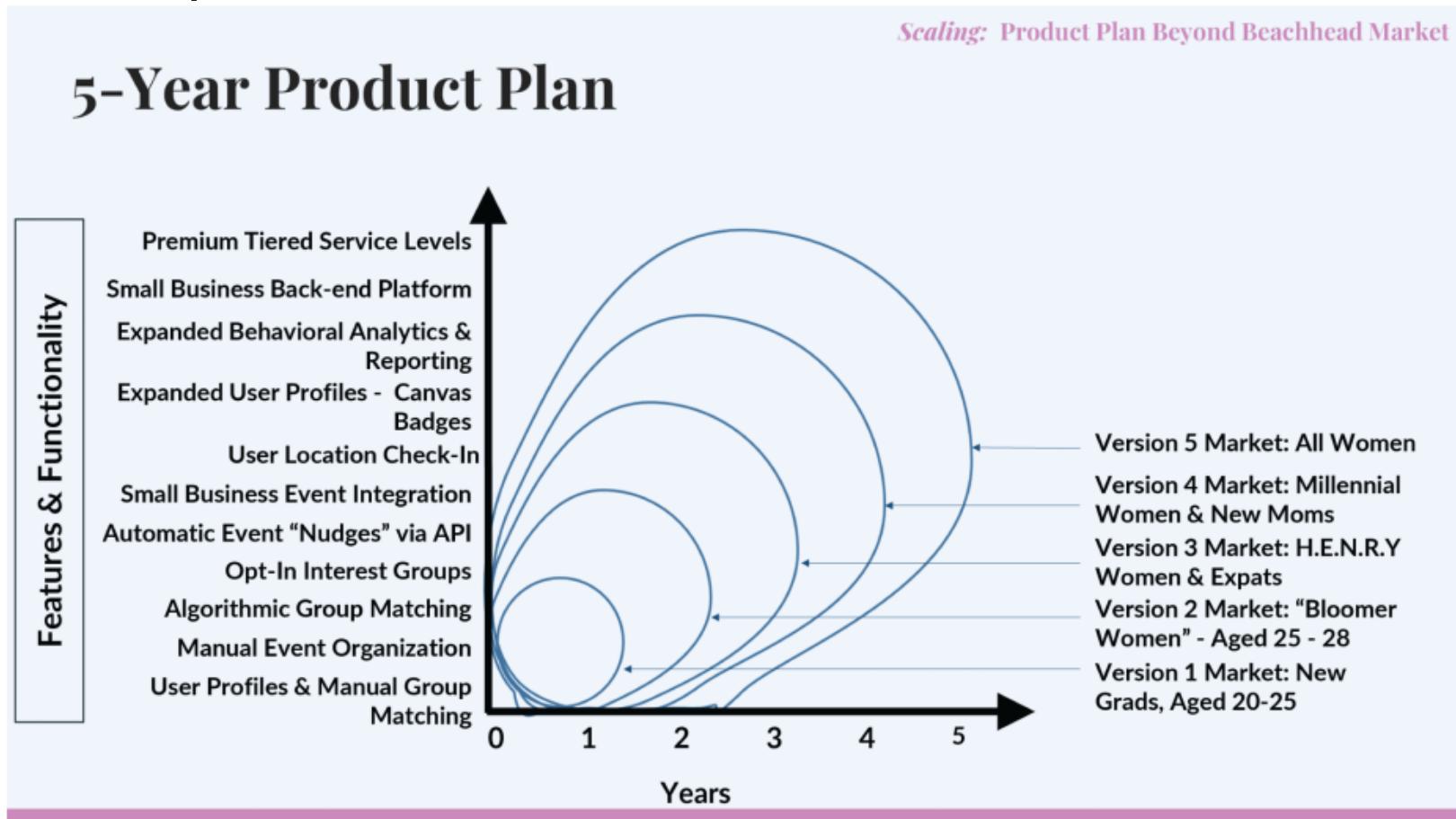
# Develop a Product Plan

- Business launching steps



# Product Plan Example

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



# Adjacent Market

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- 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

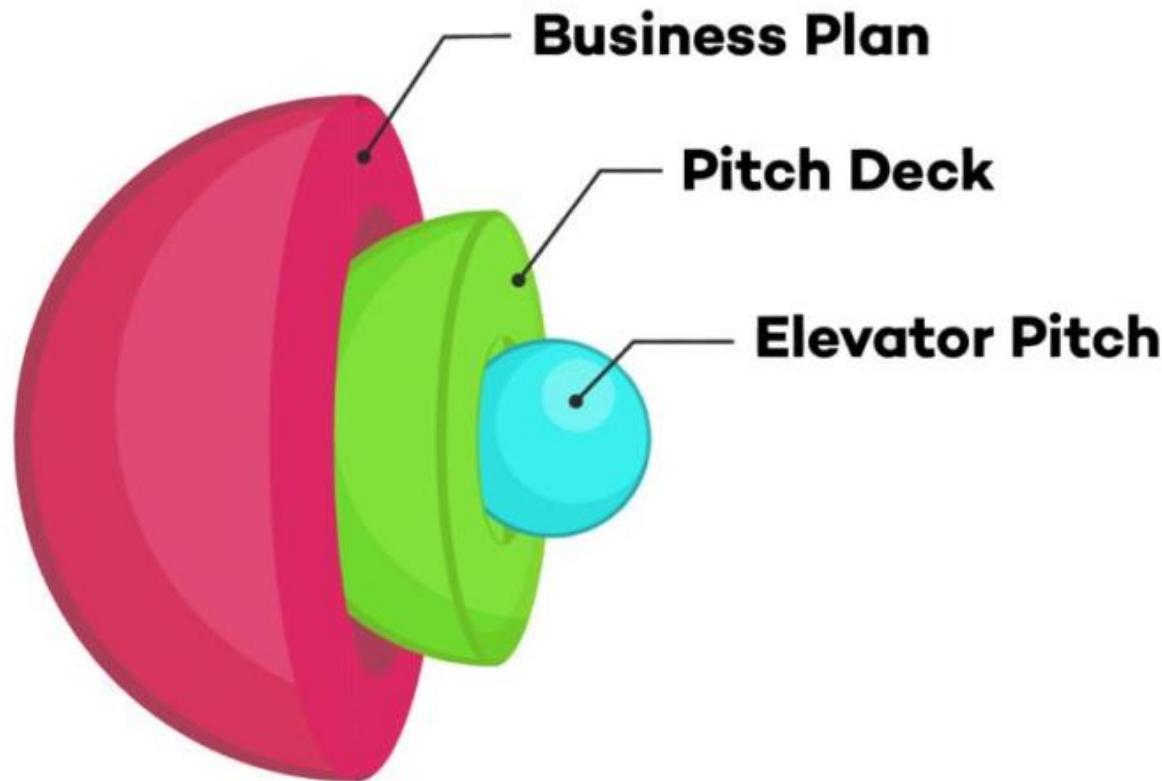
- PB vs. EP vs. PD

	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

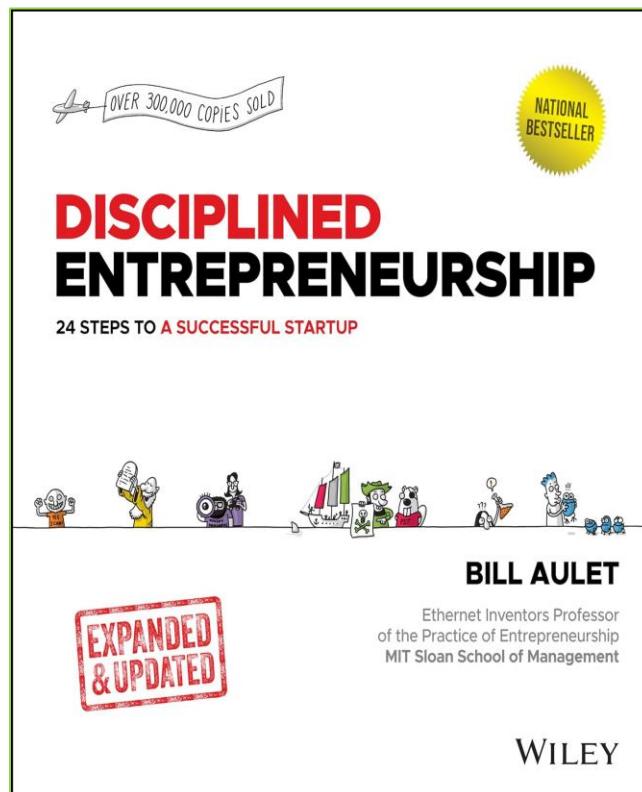
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- PB vs. EP vs. PD



# Reading Exercise

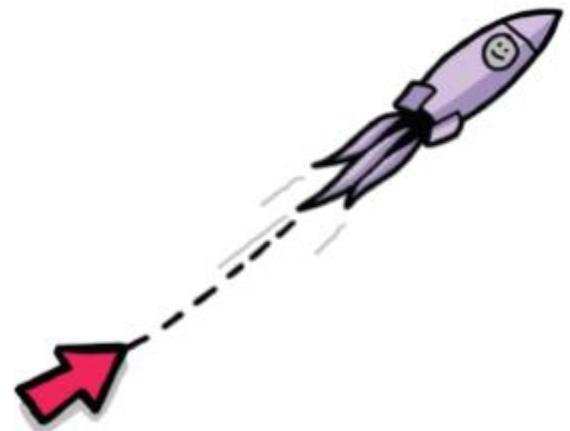
- Read **Steps 23 and 24** of the “*Disciplined Entrepreneurship*” book
  - 2024 by [Bill Aulet](#)



# Next Class

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- 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

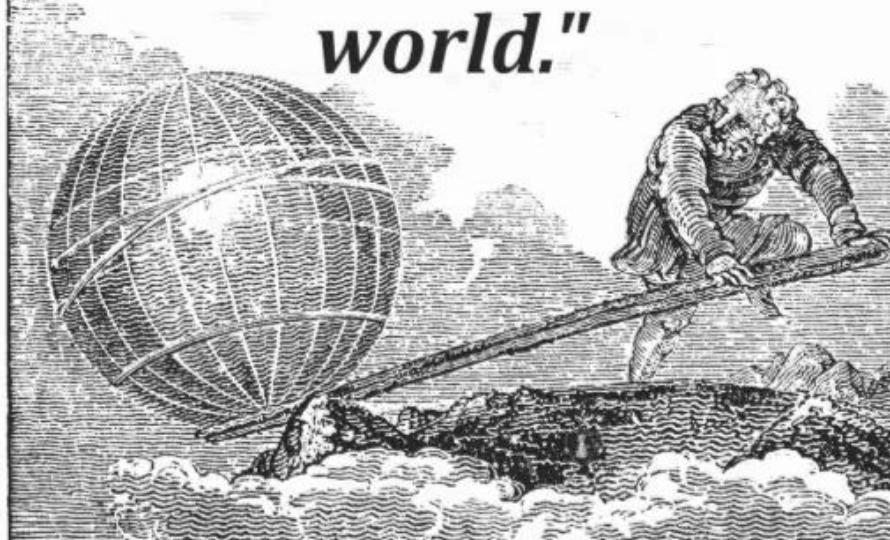


# Time magazine's 2025 person of the year



# Final Words

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



**ARCHIMEDES OF SYRACUSE**