

SHAPE COMMERCIALISATION TOOLKIT: TTO PROFESSIONALS

Partner Organisations:



OVERVIEW OF SHAPE COMMERCIALISATION TOOLKIT FOR TTOS

Strategies for engaging and commercialising SHAPE research:

The Technology Transfer Office (TTO) plays a pivotal role in transforming SHAPE (Social Sciences, Humanities, and the Arts for People and the Economy) research into societal and economic benefits. We invite our TTO professionals to collaborate with SHAPE researchers and use our expertise to commercialise innovative academic work.

Objectives of the toolkit:

- 1. Facilitate Strategic Alignment:** The toolkit aims to provide structured frameworks that align academic research with market needs, ensuring that research outcomes are effectively translated into commercial products or services that address real-world problems.
- 2. Enhance Collaboration:** By establishing clear guidelines and processes, the toolkit seeks to foster collaboration between academics, technology transfer professionals, and industry partners, facilitating a cohesive approach to commercialisation.
- 3. Mitigate Risk and Optimize Outcomes:** The toolkit outlines methods to identify potential risks and barriers to commercialisation, along with strategies to mitigate these challenges and optimise academic research's economic and social impact in the marketplace.

Setting up a TTO to engage with SHAPE researchers involves laying a robust foundation, building a supportive infrastructure, and fostering proactive outreach to translate scholarly insights into societal and economic gains. Here are three critical steps in setting up the TTO office to start engaging with SHAPE research:

1. Establish Foundation and Focus:

- Define the TTO's mission and objectives related explicitly to SHAPE (Social Sciences, Humanities, and the Arts for People and the Economy) research.
- Develop an understanding of SHAPE research's unique characteristics, challenges, and commercial potential.
- Assemble a team with diverse skills, including industry knowledge, legal expertise, business development, and an appreciation for the SHAPE disciplines.

2. Build Infrastructure and Networks:

- Create a database to catalogue existing SHAPE research projects, including details on their development stage, marketability, and any intellectual property considerations.
- Develop partnerships with key industry stakeholders, innovation hubs, and other TTOs to expand the network for potential collaboration and commercialisation.
- Implement a CRM system to manage research relationships and track engagement and progress.

3. Initiate Outreach and Engagement:

- Launch an awareness campaign to inform SHAPE researchers about the TTO services and the benefits of commercialisation.
- Host workshops or seminars to guide SHAPE researchers on intellectual property rights, market analysis, and the commercialisation process.
- Set up a pilot program for select SHAPE projects to refine the TTO's engagement strategy and build success stories demonstrating the value of commercials explicitly related to the TTO's mission and objectives related to SHAPE research.

OVERVIEW OF THE TECHNOLOGY TRANSFER OFFICE

Overview and objective of the technology transfer office in the context of SHAPE research

The technology transfer office (TTO) plays a crucial role in the context of SHAPE Commercialisation, a framework designed to support the commercialization of innovations originating from universities, research institutes, or similar settings.

Functions of a Technology Transfer Office:

- 1. Intellectual Property Management:** TTOs handle the identification, protection, and management of intellectual property (IP) created within their institution. This includes patent filing, copyright registration, and managing IP portfolios.
- 2. Commercial Assessment:** They evaluate the commercial potential of research outputs, determining which inventions or technologies are viable for commercial development.
- 3. Licensing and Negotiations:** TTOs are responsible for negotiating terms and agreements with external entities (companies, entrepreneurs, other research institutions) that wish to license or acquire technology developed within the institution.
- 4. Supporting Startups and Spin-offs:** TTOs often assist in the formation of new companies (startups or spin-offs) that are based on institutional technology. This includes providing support in business planning, fundraising, and navigating regulatory requirements.
- 5. Partnership Building:** They foster relationships between researchers and industry partners, facilitating collaborative research and development projects.
- 6. Education and Outreach:** TTOs educate researchers and students about the importance of IP rights, commercialisation processes, and entrepreneurial skills.

As a researcher, understanding the objectives of the TTO within the framework of SHAPE Commercialisation is crucial for realizing the full potential of our research efforts. The primary role of the TTO is to facilitate the transition of academic research into market-ready products and services, thereby maximizing the research's economic and societal impact. Here are other key objectives below.

Objectives of TTOs

- 1. Enhancing Research Impact:** By transferring technology from academic settings to the market, TTOs aim to maximize the societal and economic impact of research.
- 2. Generating Revenue:** Commercialisation activities can generate significant revenue for the institution through licensing fees, royalties, and equity in spin-offs. This revenue can be reinvested in further research and development.
- 3. Encouraging Innovation:** The TTO supports a culture of innovation by providing researchers with the tools and knowledge needed to see the commercial potential in their work.
- 4. Building Partnerships:** Strengthening relationships with industry partners ensures that academic research is aligned with market needs and has pathways to reach end-users.
- 5. Supporting Regional and National Economic Development:** By promoting the commercialization of local research, TTOs contribute to job creation and economic growth in their region.

There are many different professionals that work within a TTO. **Here are common roles that you may encounter:**

- 1. Intellectual Property Managers:** Intellectual Property Managers are responsible for identifying potentially patentable inventions within the research institution. They manage the processes of securing and protecting intellectual property (IP) rights, which include patent filing and maintenance, trademark registration, and copyright management.
- 2. Innovation Commercialisation Managers:** Role: Innovation Commercialisation Managers focus on assessing the commercial viability of research outputs. They work closely with researchers to understand the potential applications of inventions and identify suitable market opportunities. Their role involves developing commercialization strategies, preparing market analysis, and positioning innovations in a way that attracts potential licensees or investors.
- 3. Spin-out Managers:** Spin-out Managers specialize in the creation and support of new companies (spin-outs) that are based on institutional technologies. They guide the spin-out process from concept to reality, which includes business planning, securing initial funding, and navigating regulatory environments. Spin-out Managers also provide ongoing support to ensure these new ventures are successful and sustainable.
- 4. Investment Managers:** Investment Managers in a TTO are tasked with securing funding for projects that have commercial potential. They manage relationships with investors, venture capitalists, and other financial stakeholders. Their work involves presenting promising technologies to potential investors, negotiating investment terms, and managing the institution's equity stakes in spin-offs and startups.

TOOLKIT 1: INTRO TO RESEARCHERS ENGAGING WITH TTOS

Partner Organisations:



OVERVIEW OF INTELLECTUAL PROPERTY MANAGEMENT

Overview of intellectual property management for SHAPE opportunities

Intellectual Property management is a critical aspect of the SHAPE Commercialisation framework, which aims to effectively commercialize research outputs from academic and similar institutions. Researchers work with IP professionals to identify potential IP in their research, such as inventions, software, designs, or original works of authorship.

Process of Identification of Intellectual Property:

- 1. Research Review and Documentation:** Begin by conducting thorough reviews of ongoing and completed research projects. Researchers should document all their findings, processes, methodologies, and any unique ideas or inventions that arise. This documentation is crucial for later stages of IP identification and protection.
- 2. Educational workshops:** TTOs typically organize regular training sessions and workshops for researchers and staff involved in SHAPE projects. These should focus on the basics of IP rights, how to recognize IP in their work, and the importance of IP protection.
- 3. Preliminary IP Screening:** Implement a preliminary screening process where researchers can meet with IP professionals to discuss their findings. This screening helps to evaluate the novelty, utility, and commercial potential of the innovations, determining which aspects may qualify for IP protection.
- 4. Formal IP Evaluation and invention disclosure:** Engage IP experts or legal professionals to conduct a formal evaluation of the identified potential IP. This step involves detailed assessments, including prior art searches to ensure that the IP is novel and non-obvious. The results will guide whether to move forward with patent applications, trademarks, copyrights, or other forms of protection.

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UNDERSTANDING IP MANAGEMENT FOR SHAPE RESEARCH

Overview of the different types of IP and the different management strategies for SHAPE

In the context of SHAPE, effective management of intellectual property (IP) is crucial to maximize the commercial potential and societal impact of research. Understanding the various types of IP and implementing strategic management approaches are key to this process.

Types of Intellectual Property:

1. **Patents:** Protect inventions that are new, non-obvious, and useful. This includes processes, machines, chemical compositions, or any new and useful improvement of an existing invention. Patents give an exclusive right to make, use, sell, or distribute the invention for a specific period, typically 20 years.
2. **Trademarks:** Protect words, phrases, symbols, or designs identifying the source of goods or services and distinguishing them from others in the market. Trademarks can last indefinitely, provided they remain in use and their registrations are properly maintained.
3. **Copyrights:** Protect original works of authorship, including literary, dramatic, musical, and artistic works, such as poetry, novels, movies, songs, computer software, and architecture. Copyrights generally last for the life of the author plus 70 years (or longer in some jurisdictions).
4. **Trade Secrets:** Protect confidential business information that provides a competitive edge, such as formulas, practices, processes, designs, instruments, or patterns. Trade secrets are protected indefinitely as long as the information remains confidential and continues to provide a competitive advantage.
5. **Industrial Designs:** Protect the aesthetic and ornamental aspect of an article. Industrial designs can include three-dimensional features, such as the shape of an article, or two-dimensional features, such as patterns, lines, or color.

Here are common FAQ on Intellectual Property Management

1. What types of intellectual property are most relevant to SHAPE projects? **Answer:** For SHAPE projects, the relevant types of IP may include patents (for new inventions or technology), copyrights (for original creative works such as software, designs, and multimedia content), and trademarks (for branding associated with SHAPE outputs). Industrial designs might also be relevant if your project involves unique product aesthetics.
2. How do I determine if my SHAPE project output is patentable? **Answer:** To qualify for a patent, your innovation must be novel, non-obvious, and have industrial applicability. Before proceeding, engage with our TTO to perform a thorough prior art search and assess your project's eligibility for patent protection.
3. What steps are involved in filing a patent for my SHAPE project? **Answer:** The patent filing process involves initial disclosure to the TTO, prior art searching, drafting a patent application, and submitting it to the patent office. Our TTO provides support at each step, including drafting claims and handling correspondence with patent examiners.
4. For how long does IP protection last under SHAPE projects? **Answer:** Patent protection lasts 20 years from the filing date, copyrights on creative works last for the life of the author plus 70 years, trademarks require renewal but can last indefinitely, and industrial designs are protected for up to 15 years.
5. What should I do if I discover potential IP infringement of SHAPE project assets? **Answer:** Report any suspected infringement to the TTO immediately. We will evaluate the situation and guide you through the appropriate enforcement actions to protect your IP.
6. Can I present my SHAPE project findings at conferences or publish them before securing IP rights? **Answer:** To prevent jeopardizing your IP rights, consult the TTO before publicly disclosing any potentially patentable material. We can help secure preliminary protections like provisional patents to safeguard your rights during discussions or publications.
7. How can I monetize the IP generated from SHAPE projects? **Answer:** IP from SHAPE projects can be monetized through licensing agreements or by creating spin-offs. The TTO negotiates these agreements on your behalf to ensure you receive appropriate financial benefits, including royalties.
8. What role does the TTO play in commercializing IP from SHAPE projects? **Answer:** Our TTO assists in identifying commercial partners, negotiating terms, supporting startup formation, and guiding overall strategy to ensure effective market entry and IP monetization.
9. Who owns the IP developed in SHAPE projects? **Answer:** IP ownership typically depends on specific project agreements and the institution's policies. Generally, the institution owns the IP but researchers often share in the financial returns from commercialization.
10. How should I manage and protect IP in ongoing SHAPE projects? **Answer:** Regular consultations with the TTO are crucial. We help in assessing new outputs, updating IP protection as necessary, and ensuring compliance with both institutional and legal standards for IP management.

TOOLKIT 2: BUSINESS MODELS & THE LIFECYCLE

Partner Organisations:



STRATEGIC MANAGEMENT FRAMEWORK

A strategy focuses on long-term through actions in the present

The strategic management framework is a comprehensive approach to formulating, implementing, and evaluating cross-functional decisions that enable an organization to achieve its objectives. Here's an overview of how to navigate through this process:

1. Strategic Direction:

Vision and Mission: Establish a clear vision and mission to define the long-term aspirations and the core purpose of the organization.

Objectives: Set specific, measurable, achievable, relevant, and time-bound (SMART) objectives that align with the vision and mission

2. Internal and External Analysis:

SWOT Analysis (Internal – Strengths and Weaknesses): Assess internal resources, capabilities, and processes to identify what the organization does well and where it can improve.

PESTEL Analysis and Porter's Five Forces (External – Opportunities and Threats): Examine the broader environment to identify opportunities to exploit and threats to mitigate, considering factors like politics, economy, society, technology, environment, and legal aspects, as well as the competitive forces in the industry.

3. Strategic Formulation:

Resource-Based View: Consider internal resources and competencies as a basis for strategy, aiming to develop a unique competitive advantage.

Business Models: Develop or refine the business model to ensure that the strategy is viable economically and creates value.

Management Discussion: Engage in strategic discussions to consider various strategic options and their implications.

4. Strategic Implementation:

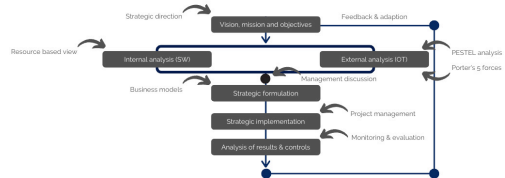
Project Management and Implementation: Translate the strategy into actionable projects and initiatives, manage resources, and ensure alignment with strategic objectives.

Managing a Team, Recruitment, and Communication: Build and maintain a capable team, recruit talent aligned with the strategy, and communicate the strategy effectively within the organization.

5. Monitoring and Evaluation:

Analysis of Results and Controls: Establish performance metrics and monitor them regularly to evaluate the success of the strategic initiatives.

Feedback and Adaptation: Be prepared to adapt the strategy based on feedback and changes in the internal or external environment.



An overview of a strategic plan and tools required

BUSINESS MODEL

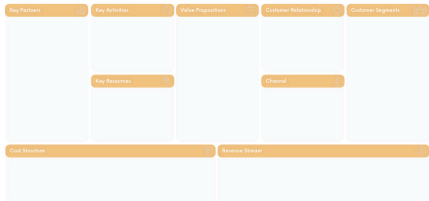
DEFINITION

"A business model is a framework for making money. It is the set of activities which a firm performs, how it performs them and when it performs them so as to offer its customers benefits they want and to earn a profit"

- Afuah, 2003

BUSINESS MODEL CANVAS

The Business Model Canvas is a strategic management template used for developing new business models and documenting existing ones. It offers a visual chart with elements describing a firm's value proposition, infrastructure, customers, and finances, facilitating an understanding of how these aspects interconnect and contribute to the company's operations.



KEY QUESTIONS FOR EACH VARIABLE (SUPPLY-SIDE)

Value Proposition:

What value do we deliver to the customer?

Which one of our customers' problems are we helping to solve?

What bundles of products and services are we offering to each customer segment?

Which customer needs are we satisfying?

Cost Structure:

What are the most important costs inherent in our business model?

Which key resources are most expensive?

Which key activities are most expensive?

Key Partners:

Who are our key partners?

Who are our key suppliers?

Which key resources are we acquiring from partners?

Which key activities do partners perform?

Is there any new partners worth developing?

Are there any partners we may lose?

Key Activities:

What key activities does our value proposition require?

Are our distribution channels prioritised?

Are customer relationships prioritised?

Is our revenue stream predictable and upward trending?

Key Resources:

What key resources does our value proposition require?

What are the key tangible and intangible resources?

How can we achieve a superior advantage extracting and protecting them?

BUSINESS MODEL

KEY QUESTIONS FOR EACH VARIABLE (DEMAND-SIDE)

Revenue Streams:

What values are our customers willing to pay?
What are they currently paying?
How does this compare to our competitors?
How does each value proposition contribute to the revenue stream?

Customer Segments:

For whom are we creating values?
Who are our most important customers?
What is our current potential market?
What is the available market?
Who is our target market? it is growing?
What is our penetrated market?
What are some of the hurdles experienced by our customer?

Customer Relationships:

Which type of relationship does each of our customer segments expect us to establish and maintain with them?
Which ones have we established?

Customer Channels:

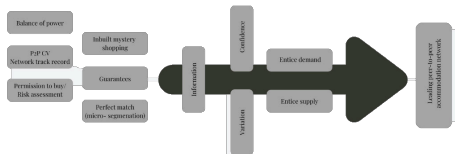
Through which channels do our customer segments want to be reached?
How are we reaching them now?
How are our channels integrated?

AIR BNB BUSINESS MODEL EVOLUTION

The Airbnb business model is showcased as a flow diagram emphasizing the critical success factors of peer-to-peer (P2P) accommodation networks. The model is built upon a foundation of key elements such as balance of power, the platform's ability to act as a P2P curriculum vitae (CV) showcasing users' network track record, the flexibility offered to both hosts and guests, and the inherent risk assessment mechanisms that provide users with permission to buy or book.

Central to the model are the concepts of information and validation, which foster confidence among users. This confidence is critical in enticing both demand (from guests) and supply (from hosts). Airbnb's model is characterized by built-in mechanisms for quality control, such as mystery shopping, and guarantees that ensure the safety and reliability of transactions. Furthermore, the platform's ability to match guests with hosts through micro-segmentation ensures a perfect match for each booking, catering to the specific preferences and needs of users.

The arrow pointing to the right signifies the direction towards which these factors contribute, leading to Airbnb's position as a leading player in the peer-to-peer accommodation network sector. The overall design of the business model is focused on creating a trusted community marketplace that enables people to list, discover, and book unique accommodations around the world.



PROFITABILITY

PROFITABILITY FRAMEWORK

The profitability case interview framework depicted in the image is a structured approach to analyze a company's profitability. It is divided into two main categories: quantitative and qualitative drivers.

Quantitative Drivers:

Revenue: This is typically broken down by the components that directly affect it, such as:

Price: The unit price at which goods or services are sold.

Quantity Sold: The volume of goods or services sold.

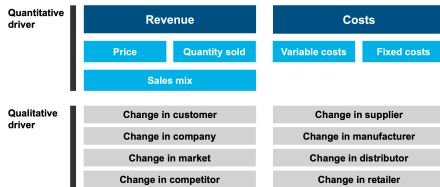
Sales Mix: The composition of different products or services sold, which can affect the overall revenue.

Costs: These are categorized into:

Variable Costs: Costs that vary directly with the level of production or sales volume.

Fixed Costs: Costs that remain constant regardless of the level of production or sales volume.

UNDERSTANDING THE DRIVERS OF THE BUSINESS



Qualitative Drivers:

On the revenue side, qualitative drivers include:

Change in Customer: This could include changes in customer preferences, demographics, or behaviors that could impact profitability.

Change in Company: Internal changes within the company such as management, strategy, or operational efficiency.

Change in Market: External market forces or trends that could affect the industry and the company's profitability.

Change in Competitor: Actions by competitors such as pricing changes, new product introductions, or changes in market share that could impact the company's profitability.

On the cost side, qualitative drivers include:

Change in Supplier: Changes related to the suppliers of raw materials or goods that could affect the costs.

Change in Manufacturer: Adjustments or changes in the manufacturing process or entities that could influence production costs.

Change in Distributor: Variations in distribution channels or partners that could affect the cost to market.

Change in Retailer: Changes at the retail level that might impact the cost structure or sales volume.

BUSINESS LIFECYCLE

OVERVIEW OF THE BUSINESS LIFECYCLE

The business lifecycle image with additional components of sales, operating costs, net profit, and the CEO focus for each stage would present a comprehensive view of a company's growth trajectory and management strategies. Here's an overview:

Stage 1: Start-up

Sales: Minimal to none, as the business is just getting established.
Operating Costs: High relative to sales due to initial investment and setup costs.
Net Profit: Likely negative, as initial sales are not enough to cover high operating costs.
CEO Focus: Vision setting, securing funding, and establishing a customer base.

Stage 2: Young Growth

Sales: Growing as the business starts to gain traction in the market.
Operating Costs: Continue to be high but are now balanced by increasing sales.
Net Profit: May still be negative or break-even as the company reinvests in growth.
CEO Focus: Building brand recognition, expanding market reach, and managing growth sustainably.

Stage 3: High Growth

Sales: Rapidly increasing as the company's products/services gain market acceptance.
Operating Costs: Scaling, but ideally growing at a slower rate than sales.
Net Profit: Positive earnings begin to emerge as sales growth outpaces the increase in operating costs.
CEO Focus: Optimizing growth, managing operational scalability, and ensuring profitability.

Stage 4: Mature Growth

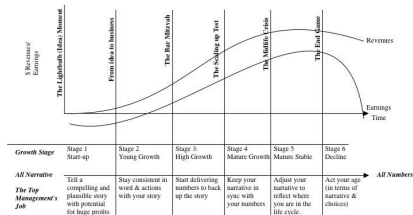
Sales: Continue to grow, but the rate slows as the company reaches more of the market.
Operating Costs: Growth in costs stabilizes or slows, efficiency improvements may be realized.
Net Profit: Increases as sales grow and cost efficiencies are found.
CEO Focus: Maintaining growth, market leadership, innovation, and exploring new markets or products.

Stage 5: Mature Stable

Sales: Plateau or have modest growth as the company has saturated its existing markets.
Operating Costs: Well-managed and predictable.
Net Profit: Stabilizes at a healthy level if the company manages costs effectively.
CEO Focus: Preserving the core business, managing for efficiency, and paying dividends or returning value to shareholders.

Stage 6: Decline

Sales: Begin to decline as products/services become outdated or market conditions change.
Operating Costs: May become a larger percentage of sales; cost-cutting becomes a focus.
Net Profit: Declines, potentially becoming negative if sales decrease faster than costs can be reduced.
CEO Focus: Identifying new growth areas, restructuring, and managing decline to minimize losses.



VALUE PROPOSITION

OVERVIEW OF VALUE PROPOSITIONS

The value proposition is essentially the promise of value to be delivered to the customer. It is a clear statement that explains how a product solves customers' problems or improves their situation (relevancy), delivers specific benefits (quantified value), and tells the ideal customer why they should buy from this company and not from the competition (unique differentiation).

Key Points:

- 1. Customer-Centric Solutions:** The value proposition is centered around solving customer problems or fulfilling their needs and wants.
- 2. Assessing Demand:** It involves evaluating the market demand for the product or service and identifying early trends that could impact its success.
- 3. Differentiation from Fads:** Distinguishing between durable trends that can sustain a business model and temporary fads is essential.
- 4. Gathering Information:** Collecting extensive information about customer interests is vital to shaping the value proposition.
- 5. Complexity and Research:** Crafting a value proposition can be intricate, requiring in-depth research into the product creation process.
- 6. Benefit-Risk Analysis:** Understanding the benefits and risks associated with the product is part of developing the value proposition.
- 7. Expert Consultation:** Often, the expertise of specialist consultants is necessary to navigate complex technological aspects.
- 8. Standardization and Scalability:** Consideration of whether the product can be standardized and scaled is crucial to its long-term viability.
- 9. Consumer Acceptance:** Anticipating and addressing any potential consumer resistance is important to ensure market adoption.

UNDERSTANDING THE ADOPTION RATE

The rate of adoption follows a bell curve and is segmented into different categories of consumers, each representing a stage in the diffusion process. The pace can vary widely depending on various factors including the nature of the product, market readiness, consumer attitudes, and the effectiveness of dissemination strategies.

Key Points:

Innovators (2.5%): This group is the first to adopt a new technology or product. They are willing to take risks and are often seen as the 'tech enthusiasts'.

Early Adopters (13.5%, totaling 16% when combined with innovators):

Representing a larger segment, these are the individuals who are quick to embrace innovation after the innovators. They are usually opinion leaders and have a significant influence over the subsequent groups.

Early Majority (34%, totaling 50% when combined with previous groups): This segment adopts new technology before the average person. They typically need to see that the technology is proven and beneficial before they are willing to use it.

Late Majority (34%, totaling 84% when combined with previous groups): More skeptical and slower to adopt than the early majority, this group often adopts a new product mainly because of peer pressure or the result of increasing market saturation.

Laggards (16%, totaling 100% when combined with previous groups): The last to adopt a new product, these individuals are the most resistant to change. They may only adopt a new product out of necessity or when all alternative options are no longer available.



Practical tips

1. Validate your market early: research, survey, create a minimum viable product (MVP) to test the market.
2. Focus on cash flow management: keep track of expenses, invoicing promptly, and have a clear view of upcoming payables and receivables.
3. Build a strong network: connect with mentors, advisors, peers, and industry professionals through networking events, groups, and co-working spaces.

CUSTOMER MARKETS

BUSINESS TO CUSTOMER (B2C)

In the business-to-consumer market, companies strive to meet a diverse array of customer needs that span from basic functional needs to more complex emotional, life-changing, and social impact needs.

The Elements of Value Pyramid captures these needs across four levels:

- 1. Functional Value:** At the base of the pyramid, this level addresses practical and direct benefits such as saving time, simplifying tasks, making or saving money, reducing risk, and providing sensory appeal.
- 2. Emotional Value:** Moving up the pyramid, the emotional value includes aspects that affect how consumers feel when they use a product or service, like reducing anxiety, offering rewards, nostalgia, design aesthetics, and badge value.
- 3. Life-Changing Value:** This layer encompasses elements that have a more significant impact on the consumer's life, such as providing hope, facilitating self-actualization, motivation, heirloom (suggesting legacy), and creating a sense of affiliation or belonging.
- 4. Social Impact Value:** At the top of the pyramid, social impact refers to the broader effect of a product or service on society, including self-transcendence or contributing to the welfare of others.

Key Points:

- 1. Tailoring Offerings:** Companies can tailor their offerings to include multiple elements from this pyramid to create a compelling value proposition for their customers.
- 2. Customer Loyalty:** Products and services that deliver higher up the pyramid tend to foster stronger customer loyalty and emotional connections.
- 3. Differentiation:** By identifying and focusing on specific elements of value that are most relevant to their customer base, businesses can differentiate themselves in a crowded market.
- 4. Revenue Growth:** There is a correlation between the breadth of values provided and a company's ability to grow its customer base and revenue.
- 5. Strategic Focus:** The pyramid can serve as a strategic tool for businesses to identify potential areas for innovation and improvement in their product and service offerings.

The Elements of Value Pyramid

Products and services deliver fundamental elements of value that address four kinds of needs: functional, emotional, life changing, and social impact. In general, the more elements provided, the greater customers' loyalty and the higher the company's sustained revenue growth.

SOCIAL IMPACT



Self-transcendence

LIFE CHANGING



Provides hope



Self-actualization



Motivation



Heirloom



Affiliation/belonging

EMOTIONAL



Reduces anxiety



Rewards me



Nostalgia



Design/aesthetics



Badge value



Wellness



Therapeutic value



Fun/entertainment



Attractiveness



Provides access

FUNCTIONAL



Saves time



Simplifies



Makes money



Reduces risk



Organizes



Integrates



Connects



Reduces effort



Avoids hassles



Reduces cost



Quality



Variety



Sensory appeal



Informs

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FROM "THE ELEMENTS OF VALUE," SEPTEMBER 2016

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CUSTOMER SEGMENTS

OVERVIEW OF CUSTOMER SEGMENT

The goal of customer segmentation is to identify high-yield segments — that is, those segments most likely to be profitable or that have growth potential. By understanding the different segments, businesses can deliver more targeted and effective marketing messages, which can lead to increased sales, better customer retention, and improved customer satisfaction.

Key Points:

Demographic Segmentation:

Separates customers based on demographic factors such as age, gender, income, education, and family size. It's one of the simplest and most widely used forms of segmentation as these data are easy to obtain and measure.

Geographic Segmentation:

Groups customers based on their location, such as country, region, city, or neighborhood. Geographic segmentation is important for businesses as consumer preferences can vary widely based on where they live.

Psychographic Segmentation:

Divides the market based on lifestyle, personality traits, values, opinions, and interests of consumers. It is more challenging to measure but can lead to very targeted marketing strategies.

Behavioral Segmentation:

Categorizes customers based on their interaction with a brand and their behavior, such as purchasing habits, spending habits, user status, and brand interactions. This form of segmentation looks at patterns of behavior to understand needs and potential desires.

Needs-based Segmentation:

Identifies and targets segments based on the specific needs and wants of customer groups. It is often derived from a deeper understanding of customer jobs to be done, their pain points, and how they use a product or service.

Value-based Segmentation:

Focuses on the segment's overall profitability and values customers based on their economic value to the business. It is a strategic approach that looks at which customers are likely to be the most valuable over time.

FRAMEWORK TO MARKET SIZE

Creating a methodology to estimate market size involves a multi-step process that refines the broad concept of a potential market into the more focused target and penetrated markets. Here's a step-by-step methodology based on the definitions provided:

Define the Potential Market:

Identify the broadest population of consumers who have shown a sufficient level of interest in the product category. This can involve analyzing search trends, market surveys, and industry reports to quantify the number of consumers who might consider the product.

Determine the Available Market:

From the potential market, identify the subset of consumers who not only have the interest but also the financial means (sufficient income) and access to the product. This step may require demographic data analysis, income distribution studies, and distribution channel assessment.

Assess Accessibility and Restrictions:

Refine the available market by accounting for any legal, regulatory, or company-imposed restrictions that limit who can be sold the product. This requires a detailed understanding of market regulations and company policies.

Identify the Target Market:

Segment the available market further to define the target market — the segment that the company intends to actively pursue. Use market segmentation techniques, such as demographic, psychographic, behavioral, and needs-based segmentation, to identify the most attractive segments in terms of size, growth potential, and alignment with the company's capabilities.

Evaluate the Penetrated Market:

Analyze sales data and customer records to understand the size of the penetrated market — those who are already purchasing the product. This will involve sales analysis, customer database mining, and market share assessment.

Calculate Market Size:

Estimate the market size at each stage using the following:

Total Addressable Market (TAM): The revenue opportunity available for a product or service, calculated by multiplying the total number of potential customers by the average revenue per user (ARPU).

Serviceable Available Market (SAM): The segment of the TAM targeted by your products and services which is within your geographical reach.

Serviceable Obtainable Market (SOM): The portion of SAM that you can capture, considering competition and real-world constraints.

Conduct a Continuous Review:

Regularly update and refine these estimates as new information becomes available about consumer behavior, market trends, income levels, access to technology, and competitive landscape changes.

CUSTOMER CHANNELS

OVERVIEW OF CUSTOMER SEGMENT

The journey of a product from production to end customer involves several interconnected channels, each with its specific type of flow. Together, these flows ensure that products are delivered, sales are negotiated, payments are processed, information is exchanged, and promotional messages are disseminated. Optimizing these flows can enhance customer satisfaction, streamline operations, and improve profitability.

Key Points:

Physical Flow:

Definition: The actual movement of goods from the manufacturer to the end consumer.
Importance: It involves logistics, warehousing, inventory management, and distribution.
Objective: To deliver products in a timely, cost-effective manner while maintaining quality.

Negotiation Flow:

Definition: The interactions and processes that lead to the transfer of ownership from seller to buyer.
Importance: This includes sales negotiations, order management, and contractual agreements.
Objective: To ensure clear, mutually beneficial terms of sale that are legally sound.

Payment Flow:

Definition: The transfer of funds from buyer to seller in exchange for goods or services.
Importance: It encompasses billing, collections, payment processing, and credit management.
Objective: To ensure smooth, secure, and efficient handling of all financial transactions.

Informational Flow:

Definition: The exchange of information related to the product, order, customer feedback, and more.
Importance: It's critical for order tracking, customer support, and sharing product information.
Objective: To keep all stakeholders informed and enable data-driven decision-making.

Promotional Flow:

Definition: The dissemination of marketing communications to build product awareness and persuade customers.
Importance: Involves advertising, sales promotions, public relations, and personal selling.
Objective: To generate demand, create brand loyalty, and inform customers of offers.

PRACTICAL TIPS TO OPTIMISE SUPPLY CHAIN

Optimizing supply chain efficiency is crucial for reducing costs, improving speed, maintaining product quality, and enhancing customer satisfaction. Here are five practical tips for achieving this:

Implement Lean Inventory Practices:

Adopt Just-in-Time (JIT) inventory management to reduce waste and lower storage costs. This involves keeping only the inventory you need, precisely when you need it. Employ tools like demand forecasting and inventory optimization software to refine your inventory levels.

Leverage Technology and Automation:

Invest in supply chain management software to streamline operations, from inventory management to order processing. Automation can also include the use of robotics in warehouses or the application of AI for better demand forecasting and route planning.

Enhance Supplier Relationships:

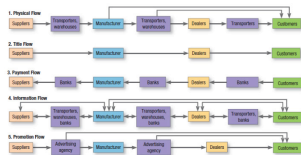
Cultivate strong relationships with a network of reliable suppliers. Consider strategic partnerships or agreements to ensure preferential treatment and reliability. Regularly assess supplier performance to ensure they meet quality and delivery standards.

Optimize Transportation and Logistics:

Evaluate your transportation strategy to identify cost-saving opportunities, such as consolidating shipments, optimizing routing, or switching to more efficient modes of transport. Regularly renegotiate contracts with carriers to ensure you're getting the best rates and service.

Continuous Improvement Culture:

Encourage a culture of continuous improvement within your organization. Use metrics and key performance indicators (KPIs) to track supply chain performance. Conduct regular audits and encourage feedback from staff at all levels for insights on how to improve processes.



CUSTOMER RELATIONSHIPS

OVERVIEW OF CUSTOMER RELATIONSHIPS

In the current business landscape, companies prioritize establishing and nurturing long-term profitable relationships with customers across B2B, internal, and consumer markets. The cornerstone of this approach is enhancing customer value, which in turn drives customer loyalty and retention. The rationale is that retained customers tend to contribute more to a company's profits over time, not only through increased spending but also through full-price purchases and lower operating costs due to streamlined transactions.

Key Points:

Customer Value Focus:

Developing customer relationships is predicated on consistently delivering value that meets or exceeds customer expectations, which is fundamental for retention and loyalty.

Benefits of Retention Marketing:

Retention strategies are cost-effective compared to acquisition strategies, as loyal customers are more likely to repeat purchases and are less price-sensitive, often buying at full margin.

Growth of Customer Profitability:

Over time, as trust between the customer and the company grows, so does the likelihood of customers purchasing more products or services, increasing their lifetime value to the company.

Efficiency Gains:

Long-term customers become more familiar with a company's processes, which can lead to smoother transactions and operational efficiencies.

Pareto Principle in Profits:

Often, a large portion of a company's profits comes from a relatively small fraction of its customers, as illustrated by the 80/20 rule, where 80% of the profits may come from just 20% of existing customers.

PRACTICAL TIPS TO IMPROVE RELATIONSHIPS

Personalize Your Interactions:

Tailor your communication and services to meet the individual needs and preferences of each customer. Use customer data to understand purchasing habits and preferences, and address your customers by name. Personal touches can make customers feel valued and increase loyalty.

Implement a Customer Feedback Loop:

Regularly solicit feedback from your customers through surveys, social media, or direct conversations. More importantly, act on the feedback you receive. Let customers know what changes you have made based on their suggestions to demonstrate that their input is valued.

Provide Excellent Customer Service:

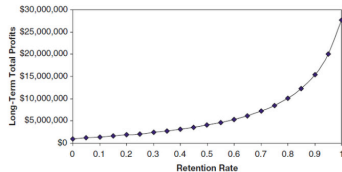
Train your customer service team to handle inquiries and issues efficiently and empathetically. Ensure that your customer service is accessible through multiple channels (phone, email, live chat, social media) and that response times are quick.

Engage Beyond Transactions:

Build relationships with your customers that aren't solely transaction-based. Engage with them through educational content, social media interaction, community events, or loyalty programs. Consistent positive engagement can reinforce their connection to your brand.

Reward Loyalty:

Create a loyalty program that rewards customers for repeat business. This could include discounts, early access to new products, or exclusive deals. Recognizing and rewarding repeat customers can encourage ongoing business and turn customers into brand advocates.



CUSTOMER RELATIONSHIPS

OVERVIEW OF CUSTOMER ACQUISITION COSTS (CAC) & LIFE TIME VALUE (LTV)

Customer Acquisition Cost (CAC) and Customer Lifetime Value (CLV) are two critical metrics used to assess the profitability and sustainability of a company's customer relationship strategy.

Customer Acquisition Cost (CAC): This metric represents the total cost of acquiring a new customer, including all marketing and sales expenses over a given period. It's a critical measure in determining the investment required to expand the customer base and is key to understanding the return on marketing investments.

Customer Lifetime Value (CLV): This metric estimates the total revenue a business can reasonably expect from a single customer account throughout the business relationship. It factors in the customer's revenue contribution, margin, and the projected duration of the business relationship.

Key Points:

Importance of Balance:

It's crucial to balance the CAC with the CLV. A sustainable business model typically sees a CLV that is significantly higher than the CAC.

CAC Calculation:

To calculate CAC, divide the total costs of acquisition (including marketing and sales costs) by the number of new customers acquired in the period the money was spent.

CLV Calculation:

CLV is calculated by multiplying the average purchase value by the number of transactions and the retention time period for the average customer. This figure can be refined by accounting for the cost of goods sold and discount rates.

Improving Efficiency:

Reducing CAC while maintaining or increasing CLV is a common goal. This can be achieved by improving conversion rates through targeted marketing, enhancing the sales process, or increasing customer retention rates.

Retention Over Acquisition:

Focusing on customer retention can be more cost-effective than acquisition. Increasing CLV through upselling, cross-selling, and improving customer loyalty often yields better returns than the constant pursuit of new customers.

PRACTICAL TIPS TO IMPROVE LTV/ CAC RATIO

Enhance Customer Retention:

Implement loyalty programs, personalized communication, and exceptional customer service to retain customers for longer periods. The longer a customer stays with your company, the greater their lifetime value becomes.

Increase Average Order Value:

Use up-selling and cross-selling strategies to encourage customers to purchase more expensive items or additional products. This increases the revenue generated from each customer, which can significantly boost the LTV.

Optimize Marketing Spend:

Analyze the effectiveness of different marketing channels and focus on those that provide the highest quality customers at the lowest cost. Refine targeting strategies to attract customers who are more likely to have a high lifetime value.

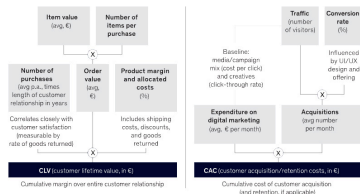
Improve Customer Experience:

Invest in customer experience improvements to differentiate your brand and create more value for your customers. A superior customer experience can lead to higher satisfaction, increased referrals, and reduced churn, all contributing to a higher LTV.

Streamline the Sales Process:

Reduce friction in the sales process to improve conversion rates. A more efficient sales process can lower the CAC by closing more sales with the same or less investment in sales and marketing efforts.

The ratio of CLV to CAC reveals a customer's true value—and the marketing team's investment.



TOOLKIT 3: UNDERSTANDING THE CUSTOMER

Partner Organisations:



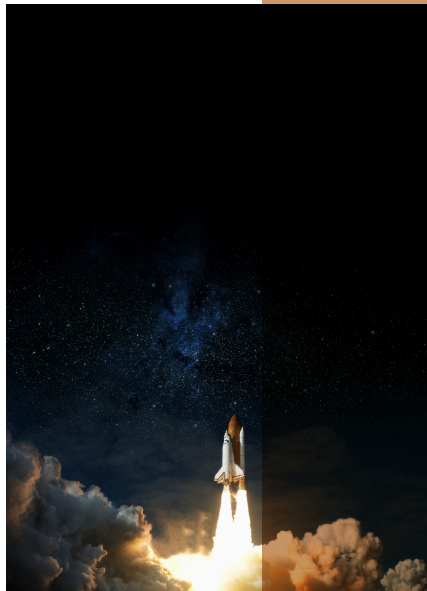
OVERVIEW OF THE TOOLKIT

Understanding the customer through requirements/ specifications

In this session, we delve into the critical process of understanding customer needs and expectations through the lens of requirements and specifications. It's a deep dive into the art and science of customer analysis, focusing on accurately gathering, interpreting, and applying customer requirements to product or service development. Participants will learn techniques for effective communication with customers to extract detailed and meaningful requirements. The session emphasizes the importance of aligning product specifications with customer expectations, ensuring that the end product meets and exceeds market demands.

Key outcomes:

1. Mastery of comprehensive market research techniques to identify and understand customer needs.
2. Development of effective customer engagement strategies to uncover their challenges and preferences.
3. Acquisition of methods to convert customer insights into actionable product specifications.
4. Enhanced ability to design products or services that align with customer expectations.
5. Competitive advantage in the marketplace through the creation of distinctly customer-focused offerings.



UNDERSTANDING THE CUSTOMER

Framework to understand the customer requirements and translate into product specifications

1. Understanding the customer:

To create successful products and services, it's essential to understand customer needs. By following a five-step process and asking key questions, businesses can gather meaningful and actionable data to tailor their offerings. Capturing the customer needs philosophy involves adopting a mindset that prioritizes the customer's voice in every aspect of product development, ensuring that their needs and expectations drive innovation.

Five-Step Process to Understand Customer Needs:

Step 1: Engage with customers through various channels to collect comprehensive feedback.

Step 2: Analyze the feedback to discern patterns and recurring themes that indicate prevalent needs.

Step 3: Validate the findings with a broader customer base to ensure the needs identified are universally relevant.

Step 4: Prioritize the needs based on their frequency and impact on customer satisfaction.

Step 5: Integrate these needs into the product development cycle, ensuring that they inform every decision made.

2. Capturing the customer needs through product specifications

Developing precise product specifications is crucial for creating successful products. A methodical approach that includes measurable metrics, competitive benchmarks, and target values helps to meet market standards and ensures continuous improvement. This approach reflects on results and processes, aligning product specifications with customer needs and industry advancements.

Key Steps:

Step 1: Define a comprehensive set of criteria that will measure the product's performance, quality, and compliance with customer needs and regulatory standards.

Step 2: Gather and analyze data on competitors' products to understand the market landscape, establish performance benchmarks, and identify areas for innovation and differentiation.

Step 3: Determine the optimal performance targets that the product should strive for, as well as the minimum acceptable standards to ensure viability in the marketplace.

Step 4: Evaluate the specified targets against actual performance to identify gaps and areas of improvement. Review the specification process itself to enhance future iterations, ensuring that it adapts to new insights and market changes.

3. Economic Decision-Making to ensure sustainability

Economic specifications align a product's technical attributes with its market viability and profitability. This involves developing technical and cost models to ensure economic feasibility. Strategic trade-offs can balance cost efficiency and quality. Consistently applying specifications at all stages of production and delivery is crucial.

Key steps of economic decision-making:

Step 1: Construct comprehensive models that capture the product's functional and technical requirements, ensuring that all aspects of the design are geared towards economic efficiency without compromising on quality.

Step 2: Create a detailed breakdown of the product's costs, including materials, labor, manufacturing, and overhead, to understand the financial implications of the product specifications.

Step 3: Continuously review and adjust the product specifications to optimize the balance between cost, functionality, and performance, making informed trade-offs as needed to meet economic targets.

Step 4: Ensure that the refined economic specifications are communicated and implemented across the various departments and stages of the product development process, maintaining consistency and alignment with overall product strategy.

Step 5: Assess the effectiveness of the economic specifications in achieving cost and market objectives. Analyze the specification process to identify successes and areas for improvement, fostering a culture of learning and refinement for future projects.

BUILDING A CUSTOMER CENTRIC PHILOSOPHY

Creating a customer centric philosophy into your team ensures product market fit

The philosophy of customer needs is centered around establishing a direct, high-quality communication channel between the customers and the product development team, including engineers and industrial designers. This philosophy is grounded in the belief that firsthand interactions and experiences with the customer's use environment are essential for creating products that genuinely meet the user's needs and preferences.

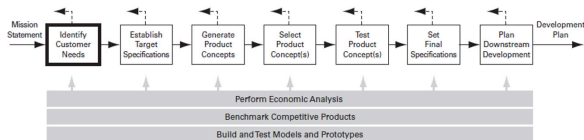
Practical Tips:

Facilitate Direct Interaction: Encourage and organize regular interactions between your development team and customers. This can take the form of shadowing programs, customer visits, or user day events where developers can observe and engage with customers in their natural usage environments.

Experience-Based Design: Implement strategies for your product team to experience the product from the customer's perspective. This could involve using the product in a real-world setting, role-playing different customer scenarios, or participating in empathy exercises to better understand customer challenges and frustrations.

Feedback Integration: Develop systems for capturing customer feedback in a structured way that can be easily translated into actionable insights for the development team. This might include tools for feedback analysis, like sentiment analysis or thematic coding, which can help identify the most critical areas for product improvements or innovation.

Incorporating a customer centric philosophy into your development process



Learning from Amazon's 14 core principles from their annual shareholder reports

The 14 principles outlined in "The Bezos Letters" provide a blueprint for building a successful business by fostering a culture of innovation, customer obsession, and long-term thinking. They encourage companies to take calculated risks and learn from failures, to simplify complex processes, and to embrace technology as a catalyst for acceleration. By maintaining high standards and promoting ownership, businesses can ensure quality and accountability. The principles also stress the importance of measuring what's important and trusting instinct when necessary. Adhering to these principles keeps a business agile, customer-focused, and prepared for continuous growth, embodying the philosophy that every day is "Day 1," which symbolizes perpetual innovation and vigilance against complacency.

1. **Encourage "Successful Failure":** Embrace experiments and accept failures that lead to innovation and learning.
2. **Bet on Big Ideas:** Invest in bold ideas with the potential to radically impact the market.
3. **Practice Dynamic Invention and Innovation:** Continuously improve and innovate products and processes.
4. **Obsess Over Customers:** Prioritize customer satisfaction and base decisions on their needs.
5. **Apply Long-Term Thinking:** Focus on long-term impacts rather than short-term gains.
6. **Understand Your Flywheel:** Recognize and utilize the momentum of business operations to drive growth.
7. **Generate High-Velocity Decisions:** Make quick, effective decisions to stay ahead in the market.
8. **Make Complexity Simple:** Simplify processes and systems for efficiency and clarity.
9. **Accelerate Time with Technology:** Use technology to speed up operations and innovation.
10. **Promote Ownership:** Encourage employees to take ownership and responsibility for their work.
11. **Maintain Your Culture:** Preserve core values and culture as the company scales.
12. **Focus on High Standards:** Uphold a commitment to excellence across all areas of the business.
13. **Measure What Matters:** Track meaningful metrics, critically evaluate them, and sometimes trust instincts over data.
14. **Believe It's Always "Day 1":** Maintain the urgency and innovation mindset of a startup, irrespective of size.

INCORPORATING DESIGN THINKING

Design thinking focuses on identifying and solving real-world problems in a pragmatic way

Design Thinking is an iterative, human-centered approach to innovation that integrates the needs of people, the possibilities of technology, and the requirements for business success. It is a solution-based approach to solving complex problems with five key stages:

Empathize: Understand the experiences and motivations of the users through observation and engagement to gain empathic insights.

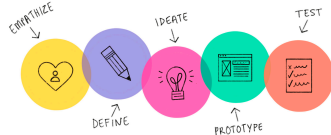
Define: Clarify and focus on the problem by defining user needs and problems based on the insights gathered.

Ideate: Brainstorm a range of creative ideas that address the user-defined problems, often involving cross-disciplinary perspectives.

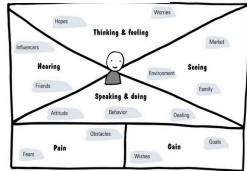
Prototype: Develop scaled-down versions of the product or specific features found within the product to investigate the problem solutions generated in the previous stage.

Test: Rigorously test the completed prototypes with users, gather feedback, and refine the design. This stage helps improve and refine the solution before final implementation.

Design thinking process to understand the customers problems and solutions



An empathy map is a visual tool used in design thinking to gain a deeper insight into the target audience. It's divided into four quadrants surrounding a central character, representing the user. The 'Thinking & Feeling' quadrant captures what the user might be experiencing internally. The 'Seeing' quadrant reflects what the user observes in their environment. The 'Hearing' section documents what the user hears from friends or influencers. The 'Speaking & Doing' quadrant focuses on the user's actions and speech. Below, the 'Pain' and 'Gain' sections note the user's fears and obstacles versus their wishes and goals. This tool helps in understanding the user's perspective and creating a user-centered design.



Practical tips for running your first design-thinking workshop:

- 1. Prepare and Set Clear Objectives:** Ensure you have a clear agenda and objectives for the workshop.
- 2. Foster an Open Environment:** Create an atmosphere that encourages open communication and free sharing of ideas.
- 3. Guide, Don't Lead:** Act as a facilitator rather than a director.

Key points:

- 1. Create a shared understanding of user needs,** and aid in decision making.
- 2. Help teams to identify gaps** in their current knowledge and to understand what they need to learn.
- 3. Enable designers to empathize with users,** which is crucial for creating solutions that are deeply grounded in their needs.

DEVELOPING A CUSTOMER REQUIREMENT STATEMENT

Creating a customer requirement statement for your new product development engineers

A customer requirement statement is a formal document that clearly articulates the needs and expectations of a customer regarding a new or existing product. It serves as a foundational reference for product development, ensuring that the end product aligns with what the customer values and requires.

The statement typically includes:

1. Detailed descriptions of customer needs, including functional and emotional requirements.
2. Prioritization of these needs to guide decision-making in the development process.
3. Any constraints or standards the product must meet to satisfy the customer.

The goal of the customer requirement statement is to provide a clear, concise, and agreed-upon set of criteria that will drive the design and development of a solution that meets or exceeds the customer's expectations.

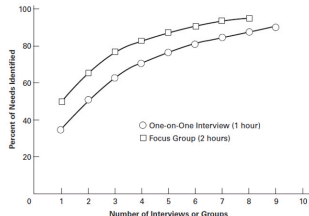
Steps to develop a customer requirement statement:

1. Data Collection: Begin by gathering qualitative and quantitative data directly from your customers through various methods such as surveys, interviews, and observations.
2. Needs Interpretation: Translate the collected data into explicit customer needs, going beyond surface-level desires to uncover deeper requirements.
3. Hierarchy of Needs: Organize the interpreted needs into a structured hierarchy, categorizing them into primary, secondary, and possibly tertiary levels.
4. Prioritization: Determine the relative importance of each need, which can guide decision-making in product development and feature prioritization.
5. Reflection: After developing the customer requirement statement, reflect on the process and results to refine the approach for future iterations, ensuring that it remains aligned with evolving customer expectations.

Delphi Technique: Understanding common customer pain themes

Common questions for customers:

1. When and why do you use this type of product?
2. Walk us through a typical session using the product.
3. What do you like about the existing products?
4. What do you dislike about the existing products?
5. What issues do you consider when purchasing the product?
6. What improvements would you make to the product?



Practical tips for interviewing customers:

1. **Prepare Open-Ended Questions:** Develop questions that encourage detailed responses, allowing customers to express their thoughts and feelings without being restricted by yes-or-no answers.
2. **Listen Actively:** Be an attentive listener, showing genuine interest in what the interviewee is sharing. This not only garners more information but also builds trust.
3. **Follow Up for Clarity:** Don't hesitate to ask follow-up questions to clarify or delve deeper into the customer's responses. This can uncover valuable insights that might not be revealed in their initial answers.

DEVELOPING A PRODUCT SPECIFICATION LIST

Creating a blueprint for success through a product specification list

Product specifications are detailed, structured descriptions that outline the essential requirements, features, and constraints of a product that is to be designed and manufactured. They translate broad customer needs into precise, actionable attributes that engineering and design teams can work towards. These specifications typically include parameters such as dimensions, materials, functionality, performance criteria, and compliance with industry standards. They ensure clarity and set the foundation for the product's development, testing, and quality assurance processes.

Key philosophies:

1. **Precision:** Specifications detail what the product must do, in clear and measurable terms, leaving no room for ambiguity.
2. **Objective Metrics:** Each specification is defined by a metric and a value to quantify the requirement.
3. **Guidance, Not Instruction:** While they define the 'what,' specifications do not dictate the 'how'—they do not provide solutions but set targets for the design team to achieve.
4. **Consensus:** They represent a mutual agreement among stakeholders on what will be delivered to meet customer needs.
5. **Documentation:** These details are recorded in a product requirements document, which becomes a critical reference throughout the product lifecycle.

Focus on metrics (KPIs) to inform the product development:

Metrics are vital in product development and business strategy as they offer quantifiable, objective measures to assess performance, progress, and quality. They facilitate data-driven decision-making, enabling businesses to track the effectiveness of their strategies, identify areas for improvement, and align their efforts with customer needs and market demands.

Key points:

1. **Direct Reflection:** Effective metrics should directly indicate how well a product meets customer needs.
2. **Needs-Metrics Relationship:** Central to specifications, this relationship ensures that fulfilling metrics results in satisfying customer needs.
3. **Completeness and Practicality:** Metrics should cover all aspects of customer needs and be feasible to measure and achieve.
4. **Types of Target Values:** Include ideal values (optimum targets) and marginally acceptable values (minimum viable product standards).
5. **Expression of Values:** Metrics can be defined as minimum thresholds ('at least X'), maximum limits ('at most X'), ranges ('between X and Y'), precise targets ('exactly X'), or a set of discrete choices.

Linking the customer requirement statement to product specifications

Key philosophies:

1. **Direct Translation:** Translate each customer need from the requirement statement into specific, measurable product specifications.
2. **Prioritization Alignment:** Ensure the prioritization in the customer requirement statement is reflected in the urgency and importance of the corresponding product specifications.
3. **Iterative Refinement:** Continuously refine the product specifications as you gain more understanding from the customer requirement statement, ensuring they remain aligned throughout the development process.

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DEVELOPING AN ECONOMIC MODEL TO INFORM DECISION-MAKING

Crucial to decision-making is creating an economic model to understand the drivers and risks of the opportunity

Economic modeling in decision-making is a systematic approach to analyzing the financial aspects of a product or project. It involves creating models that predict the cost, revenue, and profitability, considering various factors like production costs, market demand, and pricing strategies. The purpose of this modeling is to inform strategic decisions, ensuring they are financially viable and sustainable. By providing a clear financial picture, economic modeling is crucial for evaluating different scenarios, managing risks, and communicating the business case to stakeholders, thus playing a key role in guiding a project's direction and success.

Key philosophies:

1. **Develop Technical Models:** Create detailed models outlining the product's technical aspects and performance metrics.
2. **Develop a Cost Model:** Construct a comprehensive cost analysis of the product, considering all aspects of production and distribution.
3. **Refine Specifications:** Adjust and fine-tune specifications, making necessary trade-offs between technical performance and cost.
4. **Flow Down Specifications:** Ensure the refined specifications are effectively communicated and implemented at all stages of development.
5. **Reflect on Results and Process:** Evaluate the outcomes of the specifications and the process, learning and adapting for future projects.

Developing a costing model for the product:

The costing process is a comprehensive approach to ensure all aspects of production and lifecycle costs are accounted for, enabling businesses to price products competitively while maintaining profitability. Accurate costing is crucial for strategic decision-making, budget management, and aligning product development with business objectives.

Key philosophies for costing hardware products:

1. **Set Target Cost:** Define a manufacturing cost that allows for adequate profits while remaining competitive in pricing.
2. **Draft a Bill of Materials:** List all expected parts and estimate the purchase price or fabrication cost for each.
3. **Estimate Early Components:** Even with incomplete information, make preliminary estimations of component costs.
4. **Include Assembly and Manufacturing Costs:** Alongside component costs, estimate assembly and other related manufacturing costs, such as overheads.

Key philosophies for costing software products:

1. **Software Development Costs:** Estimate costs for software design, coding, testing, and debugging.
2. **Software Components:** If the product includes third-party software components, include their licensing or acquisition costs.
3. **Ongoing Maintenance and Updates:** Factor in the costs for maintaining, updating, and providing support for the software post-launch.
4. **Integration Costs:** Consider the expenses involved in integrating software with hardware components.

Key biases in decision-making

1. **Optimism bias** overestimates the benefits and underestimating costs and timelines can lead to overly optimistic projections.
2. **Confirmation bias** is the tendency to favor information that confirms pre-existing beliefs, which can lead to biased outcomes.
3. **Anchoring bias** limits exploration of alternative scenarios or assumptions.

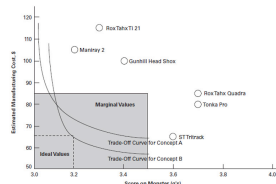


EXHIBIT 6-11 A competitive map showing estimated manufacturing cost versus score on the Monster test. Trade-off curves for two suspension concepts are also drawn on this map.

TOOLKIT 4: NEW PRODUCT DEVELOPMENT

Partner Organisations:



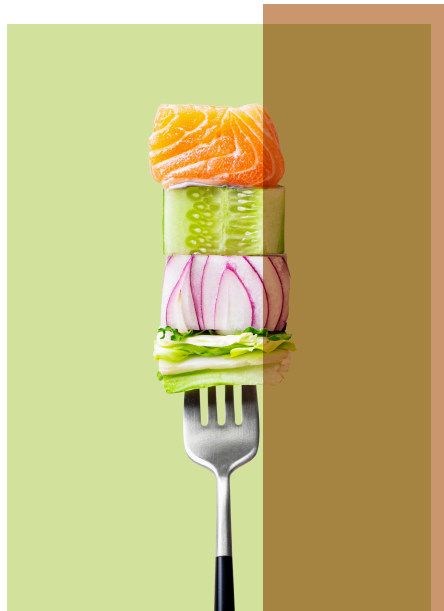
OVERVIEW OF THE NPD TOOLKIT

Developing new product through innovation management

This session focuses on the transformative process of new product development, guided by principles of product and innovation management. It's tailored to shed light on how to effectively bring new products from the idea stage to market reality, intertwining creativity with practical management strategies. Participants will explore the lifecycle of product development, including ideation, design, testing, and launch. Emphasis is placed on innovative thinking and how it can be systematically applied to product development. This includes understanding market trends, customer needs, and technological advancements to create products that are not only novel but also commercially viable.

Key outcomes:

1. Comprehensive Understanding of Product Development Lifecycle: Gain knowledge on navigating each phase from ideation to launch, ensuring effective strategy execution.
2. Balancing Innovation with Practical Management: Learn to integrate creative ideas with structured management practices for successful product implementation.
3. Systematic Application of Innovative Thinking: Understand how to leverage market trends and customer needs to create commercially viable and innovative products.
4. Cultivating an Innovative Team Culture: Discover strategies for fostering a culture of innovation within teams to drive the development process forward.
5. Best Practices in Product Design and Iteration: Acquire insights into designing and refining products based on testing and feedback, aiming for market excellence.



OVERVIEW OF NEW PRODUCT DEVELOPMENT

Developing new products and services within time and scope is crucial strategy of successful companies

The economic vitality of firms is intricately linked to their proficiency in recognizing customer requirements and efficiently developing products that address these needs while maintaining cost-effectiveness. This process not only involves the creation of products but also their successful introduction and distribution in the market. The agility and innovation in product development play pivotal roles in a company's ability to compete and thrive in the marketplace.

Key Definitions:

- 1. Product:** A product is any good or service that is developed, produced, and offered by a business to its customers. It serves as the tangible outcome of the company's efforts to meet specific consumer demands, encompassing a wide range of offerings from physical items to software and services.
- 2. Product Development:** Product development encompasses a comprehensive set of activities initiated by identifying a market opportunity and culminating in the product's production, sale, and delivery. This process involves several stages, including ideation, design, prototyping, testing, and final production.
- 3. Market Opportunity:** A market opportunity refers to a recognized gap in the market or an unmet consumer need that can be fulfilled through the development of a new product or service. Identifying market opportunities is a critical first step in the product development process, requiring market research and analysis to understand customer preferences, trends, and potential demand.
- 4. Cost-effectiveness:** In the context of product development, cost-effectiveness pertains to the ability to design and produce a product in a manner that minimizes costs while maximizing the value delivered to customers.

Characteristics of successful product development:

The characteristics of successful product development revolve around optimizing product quality, minimizing costs, and efficiently managing development time and expenses to enhance competitiveness and profitability. Additionally, the development capability of a firm acts as a foundational asset, enabling more effective and economical product development in the future. Balancing these elements is crucial for achieving market success, driving innovation, and ensuring a firm's long-term sustainability.

Key Points:

Product Quality: High-quality products often command greater market share and allow a firm to set higher prices, reflecting the value perceived by customers. Quality influences customer satisfaction, brand reputation, and the product's competitive edge in the market.

Product Cost: The cost of producing a product directly affects the profit margin a firm can achieve. Keeping production costs low while maintaining quality allows a firm to either price competitively or enjoy higher margins, contributing to financial success.

Development Time: The speed with which a firm can move from concept to market can significantly impact its responsiveness to competitive pressures and technological advancements. Shorter development times enable quicker realization of economic returns and can provide a competitive advantage by being first to market with new innovations.

Development Costs: The investment required for developing a product is a major part of a firm's expenditure. Efficiently managing development costs—through streamlined processes, effective use of resources, and strategic planning—can reduce the financial risk and improve the return on investment.

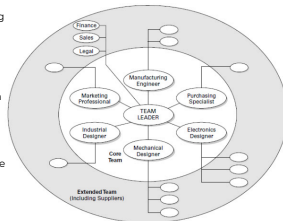
Development Capability: A firm's ability to develop products efficiently and economically is an essential asset. This capability, built through experience, expertise, and the integration of technology, enables a firm to innovate continuously, reduce time-to-market, and optimize development processes for future projects.

Who develops products/ services:

Product development is a collaborative effort involving multiple functions within a firm, each contributing unique skills and perspectives.

Key Points:

- 1. Marketing Function:** Serves as the bridge between the firm and its customers. It plays a crucial role in identifying new product opportunities, defining market segments, and understanding customer needs.
- 2. Design Function:** Takes the lead in determining the product's physical form, focusing on how it will meet customer needs and preferences.
- 3. Manufacturing Function:** Is tasked with the practical aspects of producing the product.



MANAGING THE CHALLENGES OF PRODUCT DEVELOPMENT

Product development is incredibly challenging with high risk, and high return opportunity if managed well

The process of developing new products involves balancing numerous trade-offs, adapting to dynamic market and technological landscapes, managing intricate details, operating under time pressure, and ensuring economic viability. Each of these challenges requires careful consideration and strategic decision-making to optimize product appeal, cost-effectiveness, and market competitiveness.

Key Points:

1. **Trade-offs:** Product development often involves making difficult choices between improving product quality and managing manufacturing costs.
2. **Dynamics:** The product development landscape is continuously changing due to advancements in technology, shifts in customer preferences, competitive actions, and macroeconomic factors.
3. **Details:** Seemingly minor decisions, such as the choice of materials or components (e.g., using screws versus snap-fits for a computer enclosure), can have significant economic implications.
4. **Time Pressure:** While each challenge in product development might be manageable on its own with ample time, the reality is that decisions must often be made swiftly and without complete information.
5. **Economics:** The financial aspect of product development cannot be overstated. The substantial investment required for research, development, production, and marketing necessitates that the final product not only meets customer expectations but is also cost-effective to produce.

A structured product development process acts as a roadmap, detailing the phases and milestones of a project from concept to launch. By clearly defining these elements, organizations can assure product quality, streamline coordination among team members, anchor project schedules, monitor progress effectively, and identify areas for process improvement. This systematic approach helps in mitigating risks, optimizing resources, and enhancing the overall success rate of product development projects.

Key Points:

1. **Quality Assurance:** A well-defined development process outlines specific phases and checkpoints, ensuring that products meet established quality standards. Adhering to this process facilitates the early detection and correction of issues, contributing to the reliability and performance of the final product.
2. **Coordination:** By clearly articulating the development process, each team member understands their role, when their input is required, and with whom they need to collaborate. This clarity prevents overlaps and gaps in responsibilities, enhancing team synergy and efficiency.
3. **Planning:** The development process includes key milestones marking the completion of each phase. These milestones serve as benchmarks for scheduling, helping to manage time effectively and keep the project on track. They provide a clear timeline for deliverables and decision-making points throughout the project lifecycle.
4. **Management:** Managers use the development process as a benchmark to assess progress and performance. Comparing actual progress against planned milestones and phases enables timely identification of deviations or issues, allowing for corrective actions to be taken before they escalate.
5. **Improvement:** Documenting and reviewing the development process and outcomes allows organizations to identify strengths and weaknesses in their approach. This continuous evaluation facilitates ongoing refinement and optimization of the development process, leading to improved efficiency, reduced costs, and better product outcomes over time.

Process of managing new products and services



TYPES OF NEW PRODUCT DEVELOPMENT PROCESSES

Each product is unique, but typically falls into specific categories that provide a framework to manage

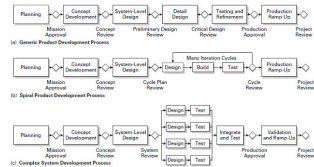
Product development can take various forms depending on the nature of the product, its market, and the strategy behind its creation. Different types of product development cater to specific industry needs, technological advancements, and customer demands.

Overview of the different types of product development:

1. **Technology Push Products:** This approach begins with a novel, proprietary technology. The firm then seeks an appropriate market application for this technology, often creating new market segments or disrupting existing ones.
2. **Platform Products:** Platform products are developed around a pre-existing technological subsystem that serves as a foundation for a family of products.
3. **Process-Intensive Products:** These products, such as semiconductors and chemicals, are defined by the production process itself, which imposes strict constraints on product properties. Design and production processes are tightly integrated, often resulting in high-volume, bulk production.
4. **Customized Products:** Customized products are developed as variations of standard configurations tailored to meet specific customer requirements. This type is typically produced in response to individual orders, allowing firms to address niche markets or specific customer needs directly.
5. **High-Risk Products:** This category includes products that carry significant risks, including technical, market, budget, and schedule risks. These products require rigorous risk management and validation to ensure viability and success.
6. **Quick-Build Products:** Applicable to industries like software and electronics, where prototype development and testing are rapid. This allows for multiple iterations of the design-build-test cycle within a short timeframe, enabling quick refinements based on feedback.

7. **Complex Systems:** These are large-scale products, such as automobiles and aircraft, comprising many interacting subsystems and components. Their development involves extensive coordination across different technical and organizational domains to ensure system-wide integration and performance.
8. **Product Development Process Flows:** Regardless of the type, the product development process typically follows a structured sequence of activities and information flow. This structured approach helps manage the complexity of developing new products, from initial concept through design, development, testing, and launch.

Overview of managing product development processes

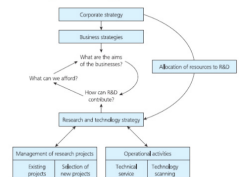


Linking new product development to R&D

Key points:

1. **Alignment with Corporate Strategy:** R&D efforts must align with the overarching corporate strategy, ensuring that research initiatives support the company's long-term goals and objectives.
2. **Supporting Business Strategies:** The specific aims of different business units should be supported by R&D activities. This ensures that R&D projects contribute directly to the competitive positioning and success of each business segment.
3. **Resource Allocation:** Decisions on how much resource to allocate to R&D are influenced by the company's strategic priorities, financial capabilities, and the expected contribution of R&D to business goals.

The R&D strategic decision-making process



KEY QUESTIONS TO MANAGE R&D PORTFOLIO

Managing R&D portfolios is crucial to building a product portfolio

Managing R&D in product development necessitates a multi-faceted approach that assesses the project's technical feasibility, market viability, competitive edge, intellectual property potential, and strategic congruence. It requires a thorough analysis of the company's current capabilities and future goals, the project's fit within the existing research direction, and the financial implications. Ensuring that these elements align with the company's strategic objectives is essential for justifying the investment in new product development.

Common questions to R&D product development team:

1. **Technical Viability:** What is our level of technical expertise with this technology, and do we possess the necessary skills and facilities? What is the estimated probability of achieving technical success based on our current capabilities?
2. **Research Direction and Portfolio Balance:** How does this project align with our research goals, and how does it affect the risk balance within our project portfolio?
3. **Competitive Rationale:** How will this project position us in relation to our competitors, and is it crucial for protecting our market share? Will the resulting product offer superior features or performance compared to existing alternatives?
4. **Intellectual Property Considerations:** Is patent protection attainable for this project, and how would this affect our strategy for defensive research?
5. **Market Dynamics:** How volatile is the technology or market, and are there established industry standards that we need to consider?
6. **Integration and Synergy:** How will this project integrate with our existing product lines and resources, and is it intended to complement them or stand alone?
7. **Market Potential:** What is the estimated size and growth trajectory of the market, and do we have an established customer base to leverage? Is the market opportunity sizable enough to justify the allocation of resources?

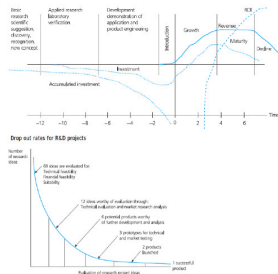
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Overview of managing product development processes

Practical tips:

1. **Validate Your Idea Early and Often:** Engage with potential customers to validate your business idea before fully committing your significant resources. Use tools like surveys, prototypes, and minimum viable products (MVPs) to test market demand. Feedback loops should be constant, and the data collected should directly inform product development and business strategies.
2. **Focus on Building the Right Team:** Your initial team can make or break your startup. Look for individuals who not only have the necessary skills but also share your vision and passion. A team with diverse skills and a unified commitment to the company's goals is essential for overcoming the challenges that startups face. Remember, investors invest in teams as much as they invest in ideas.
3. **Manage Cash Flow with Utmost Care:** Cash flow management is critical for the survival of any new venture. Develop a detailed budget, monitor your finances closely, and maintain a runway that allows for flexibility in the face of unexpected expenses or shifts in the market. Always have a plan for securing additional funds before the need becomes critical.



OVERVIEW OF PROTOTYPES AND WHY WE BUILD PRODUCTS

Building your product is hard. Selling your product is even harder.

Product development is a key driver of business growth and competitiveness. Companies build products to expand their offerings, enhance customer satisfaction, and respond to market opportunities and challenges. By doing so, they aim to increase revenues, tap into new market segments, complete their product range, and maintain or enhance their market share through innovation and improvement.

Charter for Product Development:

- 1. Growing Revenues from Existing Customers:** Develop products that add value to the existing customer base, encouraging repeat business and deepening customer loyalty. By offering complementary or upgraded products, companies can increase the customer's lifetime value.
- 2. Filling the Hole in a Product Line:** Identify and address gaps in the current product line that may be limiting the company's market appeal or customer retention. New products can round out the product line, making it more comprehensive and appealing to a broader customer base.
- 3. Entering a New Market Segment:** Diversify the company's revenue streams by developing products tailored for new market segments. This expansion can mitigate risks associated with dependence on a single market and can also capitalize on emerging trends and customer segments.
- 4. Incremental Improvements to Defend Market Share:** Continuously innovate and enhance existing products to keep them competitive in the market. Incremental improvements help defend against competitors' advancements, retaining the company's market share and relevance.

Prototypes can be categorized primarily based on two dimensions: physicality and comprehensiveness. Physical prototypes are tangible representations of the product that can be interacted with, whereas analytical prototypes are conceptual models or simulations. Comprehensiveness refers to the extent to which the prototype embodies the final product's features, ranging from partial implementations focused on specific aspects to fully functional models that replicate the entire product.

Key Points:

1. Physical vs. Analytical Prototypes:

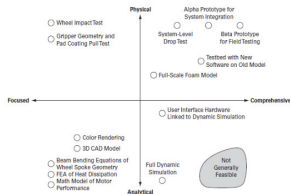
- a. Physical Prototypes:** These are three-dimensional, tangible models of the product that allow designers and stakeholders to interact with it physically. They are especially useful for assessing ergonomics, aesthetics, and the user interface.
- b. Analytical Prototypes:** These are often digital or paper-based models, including simulations or computer-generated models, used to analyze the product's behavior under various conditions without the need for a physical build.

2. Comprehensive vs. Focused Prototypes:

- a. Comprehensive Prototypes:** These are detailed and fully operational versions of the product that encompass all its features and functions. They are often used in final stages of testing, including user testing, to identify any design flaws before mass production.
- b. Focused Prototypes:** Also known as partial or "looks-like, works-like" prototypes, these are created to explore particular aspects or components of the product. They are not fully operational but are designed to test specific hypotheses about the product's design or function.

Examples of Prototypes:

- 1. Look and Feel Models:** These physical prototypes replicate the appearance and tactile experience of the product but may not be functional.
- 2. Proof-of-Concept Prototypes:** Quick and often crude models to test the feasibility of an idea or a specific feature.
- 3. Experimental Hardware:** Functional components that validate the technical feasibility and performance of the product.
- 4. Pre-Production Prototypes:** Near-final comprehensive prototypes that are used for extensive testing and evaluation before the product goes into production.



TOOLKIT 5: PROJECT MANAGEMENT & IMPLEMENTATION

Partner Organisations:



OVERVIEW OF THE TOOLKIT

Managing a project from conception to closure

This session delves into the essential skills and strategies required for effective project management and implementation. It's designed to equip participants with the tools and methodologies needed to successfully oversee and execute projects from inception to completion. The focus will be on core principles of project management, including planning, organizing, staffing, leading, and controlling various project activities.

Key outcomes:

1. Understanding Core Project Management Principles: Attendees will gain a comprehensive understanding of the fundamental principles of project management.
2. Planning and Resource Allocation: Participants will learn how to effectively set clear objectives for their projects, allocate resources efficiently, and manage project timelines.
3. Risk Management and Problem-Solving Abilities: The session will enable attendees to identify potential risks and challenges in projects and equip them with strategies to address these issues.
4. Practical Application of Theoretical Strategies: A significant focus of the lecture is on translating theoretical strategies into practical, actionable steps.
5. Leadership and Team Management Skills: As the lecture covers aspects of staffing and leading, participants will develop skills in leading project teams and managing diverse groups of individuals.



FOUNDATIONS OF PROJECT MANAGEMENT

Managing a project is an essential skill to ensure you achieve the venture's vision

Project management is a systematic approach to planning, organizing, and guiding project processes from start to finish. It involves applying knowledge, skills, tools, and techniques to project activities to meet the project requirements. Project management is often visualized as a process with several stages including initiation, planning, execution, monitoring and controlling, and closing.

Key definitions:

- 1. Project:** A project is a temporary endeavor undertaken to create a unique product, service, or result. It has a defined beginning and end, usually constrained by date, but can also be constrained by funding or deliverables. Unlike regular business operations, projects are specific and have a clear goal.
- 2. Project Life Cycle:** The project life cycle refers to the series of phases that a project goes through from its initiation to its closure. The standard phases include initiation, planning, execution, monitoring and controlling, and closing. Each phase of the life cycle has distinct tasks and objectives that contribute to the overall goal of the project.
- 3. Stakeholder:** A stakeholder in project management is an individual, group, or organization that may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project. Stakeholders can be internal (within the organization) or external (outside the organization), and their interests and influence can vary greatly.
- 4. Scope Management:** Scope management in project management involves defining and controlling what is and is not included in the project. It ensures that the project includes all the work required, and only the work required, to complete the project successfully. This involves scope planning, scope definition, work breakdown, scope verification, and scope control processes.

Key concepts to achieving a sustainable venture:

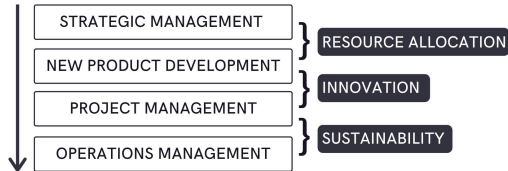
Corporate Strategy: This is the overarching plan that defines the long-term vision and goals of an organization. It sets the direction for all activities and is informed by the organization's mission, values, and objectives. Corporate strategy determines the areas in which the company will compete and allocate its resources. It also involves making decisions about how to position the organization against competitors and respond to changes in the external environment.

New Product Development (NPD): This is the process of bringing a new product or service to the market. NPD is crucial for growth, competitiveness, and the long-term survival of a company. It is guided by the corporate strategy to ensure that the new products align with the company's overall goals and market positioning. Effective NPD requires creativity, innovation, and a solid understanding of customer needs and market trends.

Project Management: This is the discipline of planning, organizing, and managing resources and procedures to successfully complete specific project goals and objectives. It is the bridge between the strategic vision and practical execution. In the context of NPD, project management is critical for turning the conceptual ideas of a new product into reality, ensuring that projects are delivered on time, within budget, and to the required quality standards.

Operations Management: This area focuses on the administration of business practices to create the highest level of efficiency possible within an organization. It involves managing the process that converts inputs (in the form of materials, labor, and energy) into outputs (in the form of goods and services). Operations management is essential for maintaining the viability of ongoing company activities and ensuring that new products are integrated smoothly into the existing operations.

Framework to sustainable venture



OVERVIEW OF PROJECT MANAGEMENT

Setting up a project within your start-up establishes early objectives and resources (time, money, people)

Characteristics of a project:

- 1. Established Objective:** Every project is driven by a clear goal or set of goals. These objectives are what define the scope of the project and the desired end results. They are established at the beginning and guide all subsequent planning and decision-making.
- 2. Defined Life Span:** Unlike ongoing operations, a project has a specific start and end date. This finite nature requires careful scheduling and time management to ensure that objectives are met within the established timeframe.
- 3. Cross-Functional Involvement:** Projects often require the collaboration of various departments and professionals with different expertise. This multidisciplinary approach is necessary to address the complex facets of a project, which may span across different areas of the business.
- 4. Uniqueness:** Projects typically involve doing something that has not been done before in the exact same way. Even if the project resembles past initiatives, there will be elements of novelty—whether it's a new location, different team, updated technology, or an altered business environment.
- 5. Specific Time, Cost, and Performance Requirements:** Every project is constrained by its timeframes, budget allocations, and performance specifications. These constraints are interrelated, and changes to one can affect the others. Managing these constraints—often referred to as the "triple constraint" or "project management triangle"—is a fundamental part of project management.

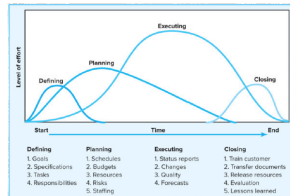
Overview of the project management lifecycle:

- 1. Defining:** This is the initial phase where the project's foundation is laid.
 - a. Goals:** Establishing what the project is supposed to achieve.
 - b. Specifications:** Detailing the requirements and deliverables.
 - c. Tasks:** Identifying the work that needs to be done.
 - d. Responsibilities:** Assigning roles and responsibilities to team members.
- 2. Planning:** In this phase, detailed plans for how to achieve the project's goals are developed.
 - a. Schedules:** Developing timelines for when tasks need to be completed.
 - b. Budgets:** Allocating financial resources to various parts of the project.
 - c. Resources:** Determining what resources (people, equipment, materials) are needed.
 - d. Risks:** Identifying potential risks and planning how to mitigate them.
 - e. Staffing:** Building the project team and ensuring it has the necessary skills.
- 3. Executing:** This is where the bulk of the project work is carried out.
 - a. Status Reports:** Regular updates on the project's progress.
 - b. Changes:** Managing and implementing changes to the project plan.
 - c. Quality:** Ensuring the project's outputs meet the required standards.
 - d. Forecasts:** Updating the project's progress and predicting future status.
- 4. Closing:** The final phase involves formalizing acceptance of the project and bringing it to an orderly end.
 - a. Train Customer:** Ensuring that the end-users are ready to use the project's deliverables.
 - b. Transfer Documents:** Handing over project documentation to the relevant stakeholders or clients.
 - c. Release Resources:** Reallocating project resources, including staff, to other areas.
 - d. Evaluation:** Assessing what went well and what didn't for future reference.
 - e. Lessons Learned:** Documenting insights and experiences gained during the project for future projects.

The role of a project manager practical tips:

- 1. Understand the Project Inside Out:** Begin by getting a deep understanding of the project scope, goals, deliverables, stakeholders, and constraints.
- 2. Develop a Detailed Plan:** Create a comprehensive project plan that includes timelines, resources, budgets, and milestones.
- 3. Assemble the Right Team:** Select team members with the appropriate skills and experience. Take time to understand their strengths and assign roles and responsibilities accordingly.
- 4. Set Clear Expectations:** Communicate clearly with your team about their responsibilities and the project objectives.

Framework to sustainable venture



PROJECT SCOPE OVERVIEW AND STRUCTURE

Defining and managing the scope of the project is critical to achieving project delivery

Overview of Project Scope:

1. **Purpose:** The primary purpose of defining the project scope is to clearly describe the outcomes that the project will produce. This clarity helps in focusing project planning efforts and guides the team in what needs to be done.
2. **Scope Document:** The project scope is typically documented in a scope statement, which is agreed upon by stakeholders and serves as a reference throughout the project lifecycle.

Key Terms in Project Scope:

1. **Project Objective:** This refers to the high-level goals that are to be achieved by the project. It answers the "what" and "why" of the project, providing a clear statement of the expected outcomes.
2. **Deliverables:** These are the specific, tangible products or results that the project is expected to produce. Deliverables should be measurable and verifiable.
3. **Milestones:** Significant points or events in the project timeline are known as milestones. They are used to gauge the progress of the project and are typically associated with the completion of key deliverables.
4. **Technical Requirements:** These are the details within the project scope that outline the necessary specifications, systems, tools, and technology that the project must adhere to or deliver.
5. **Limits and Exclusions:** Clearly defines what is outside the scope of the project. Limits set the boundaries of the project, while exclusions identify what is not included, preventing scope creep.
6. **Reviews with Customer:** Regularly scheduled meetings with the client or customer to go over progress, make decisions, and refine the project deliverables.

Responsibilities of a Project Manager in Scope Management:

1. **Agreement on Objectives:** The project manager must ensure that there is a mutual understanding and agreement on project objectives between the project team and the stakeholders.
2. **Clarification of Deliverables:** It's the project manager's duty to clarify and gain consensus on the deliverables for each stage of the project.
3. **Technical Specifications Agreement:** The project manager is responsible for ensuring that the technical requirements of the project are well understood and agreed upon.
4. **Scope Verification:** The project manager must regularly verify that the project remains within scope, and manage changes to the scope through formal change control processes.
5. **Customer Engagement:** Maintaining continuous engagement with the customer to ensure that the project meets their needs and any changes are communicated effectively.

Managing the iron triangle: Ensuring quality to your customer

1. **Quality:** This is placed at the center of the triangle to highlight that the balance of scope, time, and cost directly affects the quality of the final deliverable. If any one of the constraints is altered, it impacts the overall quality of the project output.
2. **Scope:** Defines what will and will not be included in the project. It outlines the boundaries and deliverables of the project. The scope is directly proportional to cost and time; more scope typically means more time and money needed.
3. **Time:** Refers to the schedule or the timeline for the project to be completed. The time constraint includes the deadlines for deliverables and milestones within the project.
4. **Cost:** Represents the budgeted amount available for the project. Cost encompasses all financial resources required for the project, including labor, materials, and other expenses.

Overview of the Iron Triangle:

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WORK BREAKDOWN STRUCTURE (WBS)

Structuring the delivery of the project and managing the resources (time, money, people)

The Work Breakdown Structure (WBS) is a foundational project management tool that breaks down the total scope of work for a project into smaller, more manageable components.

Overview of the Work Breakdown Structure (WBS):

- Hierarchical Structure:** The WBS organizes the team's work into multiple levels of detail. At the top is the project itself, which is then systematically broken down into smaller pieces, often referred to as work packages.
- Defines Work ('What'):** Each level of the WBS details specific outcomes or deliverables, not the activities needed to produce them. This ensures that the project team focuses on deliverables rather than just tasks.
- Time Estimation ('How Long'):** The WBS allows for the estimation of how much time each component of work will take, facilitating better planning and scheduling.
- Budgeting ('Cost'):** It also provides a framework for developing a time-phased project budget by assigning costs to each level of work. This makes it easier to monitor and control project expenditures.
- Resource Allocation ('How Much'):** By breaking down the project into smaller parts, the WBS makes it clearer what resources will be required at different stages of the project.
- Responsibility Assignment ('Who'):** The WBS allows for the assignment of responsibility for each work package to an individual or a team, creating clear accountability.
- Progress Monitoring ('How Well'):** Finally, the WBS includes monitoring points for measuring progress, which helps in tracking project performance and identifying any variances from the plan early on.

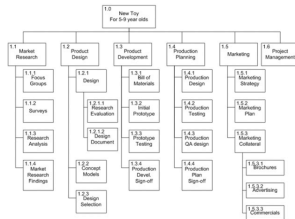
Key Points for the Work Breakdown Structure:

- Work Package:** The smallest unit of work that can be scheduled and managed, often with a unique identifier.
- Decomposition:** The process of dividing project deliverables into smaller, more manageable components.
- WBS Dictionary:** Accompanies the WBS, providing detailed deliverable, activity, and scheduling information about each component of the work breakdown structure.
- Control Accounts:** Budgetary control points for work packages where performance can be measured and managed.
- Baseline:** The approved WBS serves as a baseline against which project performance can be compared.
- Scope Creep Management:** The WBS helps prevent scope creep by clearly defining the project deliverables at a granular level.
- Integration with Other Project Management Tools:** The WBS is often used in conjunction with other project management tools such as Gantt charts, network diagrams, and cost estimating tools.

Practical tips

- Understand the Project Goals:** Before you start breaking down the work, make sure you have a clear understanding of the project's objectives and deliverables.
- Start with a Brainstorming Session:** Gather your team and subject matter experts to brainstorm the tasks that need to be completed.
- Use the 100% Rule:** Make sure that the WBS includes 100% of the work defined by the project scope and captures all deliverables—internal, external, and interim.
- Break Down to Work Packages:** Decompose the project into work packages that are small enough to be managed and estimated, but large enough to avoid micromanagement.
- Follow the MECE Principle:** Make sure the breakdown is Mutually Exclusive and Collectively Exhaustive. Each element should be separate and distinct, with no overlap, and all together, they should cover all aspects of the project.

Sample of a product development WBS



FACTORS EFFECTING THE QUALITY OF ESTIMATES

Estimates influence the expectations of the project and customer satisfaction

Estimation in project management involves predicting the most realistic amount of time, effort, costs, and resources required to complete a project based on the best available information. Accurate estimates are crucial for planning, budgeting, and scheduling, and they play a significant role in determining a project's success.

Key Points:

Top-Down Estimates: These estimates are generally provided by senior management or those with a broad view of the project. This approach often relies on historical data, analogy, or the experience of senior team members. It can be quicker and less expensive than bottom-up estimating but may be less accurate due to its high-level perspective. Common techniques include analogous estimating (using a similar past project as a baseline), parametric estimating (using mathematical models), and expert judgment.

Bottom-Up Estimates: These are detailed estimates done by the team members who will perform the work. Estimates are made for each component of the work breakdown structure (WBS), then aggregated to arrive at a total estimate for the project. This method tends to be more accurate as it is more granular and involves the insights of those closest to the work. It is, however, more time-consuming and resource-intensive than top-down estimating.

Estimates Based on WBS: The WBS is a key tool in bottom-up estimating, breaking the project down into smaller, more estimable parts. Each element of the WBS is estimated separately, and then those estimates are compiled to create an overall project estimate.

1. Types of Estimates:

- a. **Cost Estimates:** This includes direct costs like labor, materials, equipment, and indirect costs such as overheads.
- b. **Time Estimates:** This involves predicting how long it will take to complete each task or the project as a whole.
- c. **Budget Estimates:** This is a cost forecast for the project and often includes a contingency reserve.

2. Estimate Accuracy:

- a. Early in the project, estimates will naturally have a wider range of variability, which should narrow as the project progresses and more information becomes available. Progressive elaboration is used to continuously improve the accuracy of estimates as more details are known.

3. Contingencies and Assumptions:

- a. Good estimates always include contingencies for uncertainty and assumptions that the estimate is based on.
- b. These should be documented and revisited throughout the project.

4. Importance of Estimation:

- a. Estimates are crucial for securing funding, setting expectations, and guiding decision-making.
- b. Poor estimates can lead to project delays, cost overruns, and can impact the overall feasibility of the project.

Top down vs bottom up

Practical tips:

- 1. Start with a Clear Scope:** Understand what the project is expected to deliver. A well-defined scope is the foundation for accurate estimates.
- 2. Consult the Experts:** Engage with team members who have experience with similar tasks, as well as stakeholders and senior management. Their insights can be invaluable for both top-down and bottom-up estimates.
- 3. Use Multiple Estimation Techniques:** Don't rely on a single method. Combine top-down and bottom-up approaches, use analogous estimating, parametric models, and three-point estimating to cover all bases.
- 4. Be Realistic:** Avoid overly optimistic or pessimistic estimates. Consider the best case, most likely case, and worst case, and then use your judgment to find a realistic middle ground.
- 5. Account for Non-Working Time:** Remember to include holidays, vacation days, and other non-working time when estimating durations.

Top-Down Estimates	Bottom-Up Estimates
Intended Use Feasibility/conceptual phase Rough time/cost estimate Fund requirements Resource capacity planning	Intended Use Budgeting Scheduling Resource requirements Fund timing
Preparation Cost 1/10 to 3/10 of a percent of total project cost	Preparation Cost 3/10 of a percent to 1.0 percent of total project cost
Accuracy Minus 20%, to plus 60%	Accuracy Minus 10%, to plus 30%
Method Consensus Ratio Apportion Function point Learning curves	Method Template Parametric WBS packages Range estimates

TRANSITIONING FROM AGILE TO TRADITIONAL PROJECT MANAGEMENT

Use agile management at the start-of the project and transition into a traditional project management

Agile project management is an iterative approach to delivering a project throughout its life cycle. Iterative or agile life cycles are composed of several iterations or incremental steps towards the completion of a project. Agile methodologies are open to changing requirements over time and encourage constant feedback from the end users.

Overview of Agile Management:

Iterative Process: Unlike traditional project management, the agile approach delivers work in small, consumable increments. Requirements, plans, and results are evaluated continuously so teams have a natural mechanism for responding to change quickly.

Flexibility: Agile management is adaptive in nature and can respond to the changing requirements of the project as they arise.

Customer Collaboration: In agile project management, customer collaboration is more important than contract negotiation. The customer has frequent and early opportunities to look at the product and make decision changes.

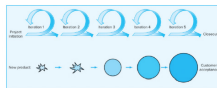
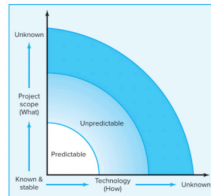
Cross-Functional Teams: Agile management typically involves teams that are cross-functional and self-organizing. Team members take responsibility for tasks and make decisions independently, which can speed up the development process.

Regular Reflection: Agile teams regularly reflect on how to become more effective and then tune and adjust their behavior accordingly.

Choosing between Agile and traditional project management (often referred to as Waterfall) methodologies depends on the nature of the project, the needs of the stakeholders, and the environment in which the project operates. Here are three points for when each might be more appropriate:

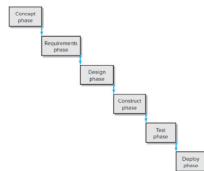
When to Use Agile Management:

1. **Complex and Uncertain Environments:** Agile is well-suited for projects in dynamic environments where change is expected and the final product cannot be clearly defined from the outset. This includes projects where rapid technological changes occur or where the product requirements are expected to evolve over time.
2. **Customer-Centric Projects:** If the project benefits from continuous stakeholder or customer feedback, and there is a need for incremental delivery of features or products, Agile allows for regular revisions based on user input.
3. **Collaborative Approach:** Agile is beneficial for projects that require a high level of collaboration among cross-functional teams, where team members are empowered to make decisions and a flat organizational structure is preferred.



When to Use Traditional Project Management:

1. **Stable Environments with Well-Defined Requirements:** Traditional project management is suitable for projects in stable environments with well-defined requirements that are unlikely to change. This can include construction projects, manufacturing, or other industries where a sequential design process is beneficial.
2. **Regulated and Compliance-Driven Projects:** For projects that must adhere to strict regulations or where comprehensive documentation is required at each phase before moving to the next, the structured nature of traditional project management offers the necessary control and documentation.
3. **Budget and Schedule Constraints:** If the project's success is heavily dependent on meeting a fixed budget and a set timeline, the predictive nature of traditional project management allows for detailed planning and control, which can help in adhering to these constraints.



MANAGING MEETINGS AND TEAMS: SCRUM

Managing meetings through scrum is crucial to improving communication

Scrum is an Agile framework for completing complex projects. Originally formalized for software development projects, it works well for any complex, innovative scope of work. The Scrum process is distinctive: it is iterative and incremental, emphasizing flexibility and collaboration. Scrum is based on a set of values, roles, ceremonies, and artifacts that help teams structure and manage their work. Here are the key components:

Scrum Values:

Commitment: Team members personally commit to achieving their team goals.

Courage: Team members have the courage to do the right thing and work on tough problems.

Focus: Everyone focuses on the work of the Sprint and the goals of the Scrum Team.

Openness: The team and its stakeholders are open about all the work and the challenges.

Respect: Scrum Team members respect each other to be capable and independent.

Scrum Roles:

Product Owner: This person represents the stakeholders and is the voice of the customer. They are responsible for ensuring that the team delivers value to the business. The Product Owner writes customer-centric items (usually user stories), prioritizes them, and adds them to the product backlog.

Development Team: These are the professionals who deliver the product. A scrum team is cross-functional, meaning the members have all the skills necessary to create the product increment. The team is self-organizing, with no team leader to delegate tasks; the team figures out how to go about the work.

Scrum Master: The Scrum Master acts as a servant leader who helps the team self-organize, self-manage, and deliver via effective Scrum practices. They help to remove impediments and foster an environment where the team can be effective, they protect the team from outside interruptions and distractions, and they ensure the Scrum framework is followed.

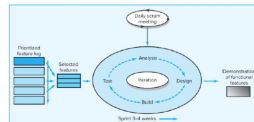
Scrum Ceremonies:

Sprint Planning: A meeting at the start of each sprint where the team commits to a set of work from the backlog that they can complete during the sprint.

Daily Scrum: Also known as the daily stand-up, this is a short meeting where the team shares progress and challenges and aligns on the day's work.

Sprint Review: Held at the end of a sprint to demonstrate the work completed and gather feedback.

Sprint Retrospective: A meeting where the team discusses the just-concluded sprint and determines what could be changed to make the next sprint more productive.

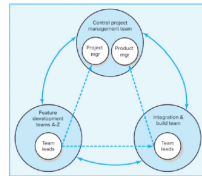


Scrum Artifacts:

Product Backlog: An ordered list of everything that might be needed in the product, and is the single source of requirements for any changes to be made to the product.

Sprint Backlog: A set of items, user stories, or bug fixes, selected from the product backlog to be completed during the sprint.

Increment: The sum of all the product backlog items completed during a sprint and all previous sprints. At the end of a sprint, the new increment must be "Done," which means it must be in useable condition and meet the Scrum team's definition of "Done".



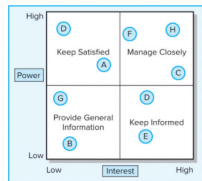
Key Points on Scrum:

Adaptability: Scrum accommodates changes in requirements as the project evolves, offering a way to incorporate feedback and make adjustments rapidly.

Transparency: Regular meetings and frequent updates ensure transparency in the work process and progress.

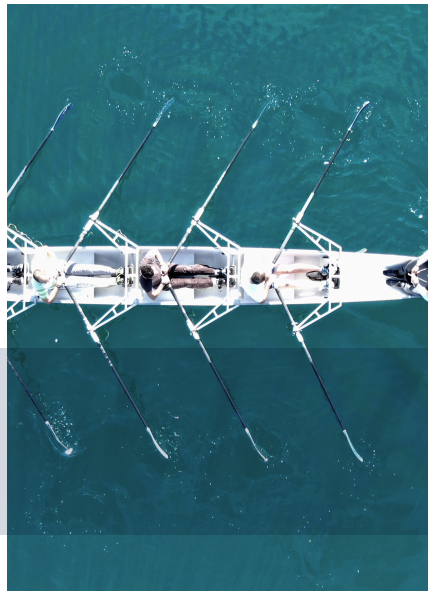
Efficiency: Scrum aims to deliver the most valuable work to customers in the shortest time, often resulting in faster product releases.

Continuous Improvement: The regular reflection and adjustment processes inherent in Scrum ceremonies support the team in continually improving their processes.



TOOLKIT 6: MANAGING A TEAM, COMMUNICATION, & RECRUITMENT

Partner Organisations:



OVERVIEW OF THE TEAM TOOLKIT

Managing a project from conception to closure

This session addresses the critical components of team management, focusing on effective recruitment strategies and communication skills. It is designed to provide insights into building and leading high-performing teams, essential for any successful business or project. A significant emphasis is placed on communication, recognizing it as the cornerstone of effective team management. Attendees will learn techniques for clear and constructive communication, essential for maintaining team harmony, fostering collaboration, and ensuring everyone is aligned with the team's objectives.

Key outcomes:

1. **Understanding Effective Recruitment Strategies:** Learn effective strategies to recruit team members who possess the right skills, experience, and fit the team culture.
2. **Mastering Clear and Constructive Communication:** This outcome focuses on the importance of clear and constructive communication skills for learners.
3. **Building High-Performing Teams:** Learn how to build high-performing teams by setting clear goals, establishing a shared vision, and fostering a culture of continuous improvement through understanding team dynamics and leveraging individual strengths.
4. **Fostering Collaboration and Team Harmony:** Learn techniques for team collaboration, conflict resolution, inclusivity, and trust-building to maximize performance and maintain team harmony.
5. **Aligning Team Objectives with Organizational Goals:** This outcome aligns team objectives with organizational goals. Participants learn to communicate values and objectives to their teams, ensuring motivation and effective contribution.



MANAGING ONE'S SELF

First you need to manage yourself before you manage a team

As a startup founder, managing oneself is crucial for setting the direction of the company and ensuring its success. This process involves understanding your own strengths, working styles, values, and the environment in which you thrive. By aligning these personal attributes with the needs of your startup, you can make significant contributions to its growth and success.

Key Points:

- 1. Identifying Strengths through Feedback Analysis:** Use feedback analysis to identify your strengths by writing down expected outcomes of key decisions and comparing them with actual results. Focus on building your strengths rather than improving areas of weakness.
- 2. Understanding Your Working Style:** Determine how you process information and interact with others most effectively. Understand whether you thrive in collaborative environments, under stress, or in predictable settings.
- 3. Aligning with Your Values:** Reflect on your core ethics and responsibilities to lead a life aligned with your values. Ensure your startup's ethics and culture resonate with your personal values to avoid frustration and underperformance.
- 4. Finding Where You Belong:** Assess your strengths, working style, and values to identify the work environment where you can excel. The right fit can transform you from an average to an exceptional performer.
- 5. Deciding What You Can Contribute:** In today's flexible work culture, evaluate how you can best contribute to your organization based on the current situation, your strengths, work style, and values. Aim to make the greatest impact by aligning your contributions with the needs of your startup.

Seven types of leadership styles

1. **Opportunist:** Self-oriented and power-driven, excelling in emergencies and sales but lacking long-term followership due to manipulative tactics.
2. **Diplomat:** Seeks harmony and belonging, acts as a supportive team player, yet struggles with providing tough feedback or making difficult decisions.
3. **Expert:** Relies on logic and expertise to command, making good individual contributions but often lacks emotional intelligence and struggles to value non-experts.
4. **Achiever:** Focuses on meeting strategic goals and promoting teamwork, adept at managerial roles but may suppress innovative thinking.
5. **Individualist:** Breaks the mold with unconventional approaches, suited for ventures and consulting but can frustrate others by overlooking important processes and people.
6. **Strategist:** Facilitates organizational and personal transformations, collaborates well and challenges norms, with a knack for creating short and long-term change without clear weaknesses.
7. **Alchemist:** Drives significant societal changes, like reinventing organizations in historically important ways, leading wide-scale transformation without apparent weaknesses.

Managing a team

Planning

1. **Strategies:** Define the team's overall strategic objectives. How will individual strengths contribute to these strategies?
2. **Relationships:** Determine how team members will interact. Who works well together? Where can mentorship or partnerships amplify team strengths?
3. **Communication:** Plan for how the team will communicate. What methods will play to the team's communication strengths?

Execution

1. **Solutions:** Develop solutions by leveraging team members' problem-solving abilities. Assign roles in solution development based on these strengths.
2. **Processes:** Design processes that align with the team's working styles. Ensure these processes harness their collective strengths for efficient execution.
3. **Systems:** Implement systems that support the team's best practices. How can systems help in augmenting the strengths and mitigating the weaknesses of the team?

Resources

1. **People:** Focus on the team's human resources. Consider how each individual's strengths and career aspirations fit into the team's needs and the organization's goals.
2. **Structures:** Build structures that support the team's optimal working conditions. Does the team's structure allow members to use their strengths to the fullest?
3. **Knowledge:** Align the team's knowledge and skills with the necessary resources for continuous learning and improvement. Are there gaps in knowledge that need to be filled to make better use of the team's strengths?

MANAGING A HIGH PERFORMANCE TEAM

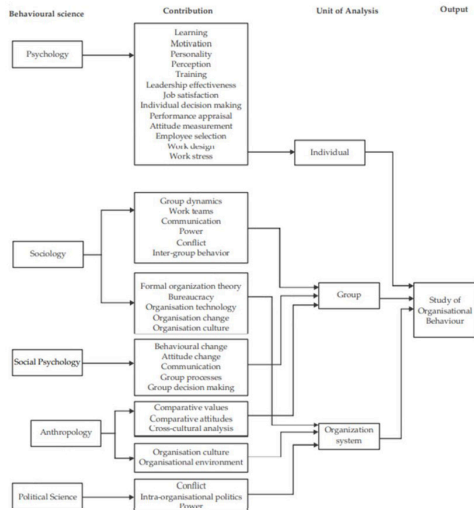
Creating and managing a high-performance team is crucial for a start-up

High-performance teams are groups of individuals with specialized expertise and complementary skills who collaborate to achieve common goals effectively and efficiently. These teams are marked by a robust work ethic, a high degree of coordination, and a culture of mutual respect and accountability. They leverage collective strengths to address complex problems, innovate, and deliver superior results.

Key Points:

- 1. Synergy and Common Purpose:** High-performance teams embody synergy, where the collective output exceeds the sum of individual contributions.
- 2. Utilization of Individual Talents:** These teams are adept at recognizing and deploying individual talents and expertise as needed throughout the company's lifecycle.
- 3. Balanced Roles and Cohesion:** Roles within high-performance teams are balanced and often interchangeable, fostering flexibility and resilience.
- 4. Positive Approach to Challenges:** Members of high-performance teams channel their energy towards creative problem-solving instead of being hindered by interpersonal issues or internal competition.
- 5. Culture of Learning and High Standards:** Mistakes are viewed as learning opportunities, promoting an atmosphere where risk-taking and creativity are encouraged. Team members set high personal performance standards and support one another to meet, and often exceed, the collective objectives of the project. There's a strong sense of identification with the team, with members viewing their involvement as a vital part of their professional and personal development.

Overview of organisational psychology: A founder's framework to success



RECRUITMENT OF HIGH-PERFORMANCE TEAMS

Recruiting a team without resources is the biggest challenge for a founder

Building a high-performance team involves identifying individuals who demonstrate a blend of technical competence, problem-solving skills, and the ability to work collaboratively. It requires a keen eye for talent that not only aligns with the company's technological needs and cultural values but also brings a mix of reliability, credibility, and the right network. The goal is to assemble a group that will push the boundaries of performance through ambition, initiative, and a collective sense of purpose.

Key Points:

- 1. Problem-Solving Ability:** Look for candidates with a proven track record of solving complex problems and a willingness to tackle challenges creatively and effectively.
- 2. Availability and Capacity:** Ensure potential team members have the time and energy to devote to new projects. They should be able to manage their workload effectively and have the capacity to take on the responsibilities required.
- 3. Technological Expertise:** Recruits should have the necessary technical skills and knowledge relevant to your industry and the specific roles they are being hired for.
- 4. Member Credibility:** It's crucial that team members are credible and can be trusted to deliver on their promises. This includes checking references and past work experiences for consistency and success.
- 5. Ambition, Initiative, and Energy:** Seek individuals who show a strong drive, are self-motivated, and have the energy to put ideas into action. Their ambition should align with the organization's vision and goals.

The recruitment process:

Recruitment is a systematic process that seeks to efficiently and effectively match organizational needs with the skills and attributes of potential employees. The aim is to attract qualified candidates and select the best fit for the organization's culture and job requirements.

Key Steps:

- 1. Job Design:** Job design is the foundation of the recruitment process, focusing on defining the role and the ideal candidate. It involves detailing the responsibilities, required skills, competencies, and qualifications needed for the job. Collaboration between line managers and HR is crucial to ensure an accurate job profile is created.
- 2. Opening Job Position:** The HR Recruiter is responsible for announcing the open position and deciding on the recruitment strategies to be used. This includes choosing the right mix of job advertising platforms and sourcing methods to reach a wide and relevant audience.
- 3. Collecting and Presenting Job Resumes:** Collecting resumes and conducting an initial screening are essential to identify potentially suitable candidates. Timeliness in resume review and preselection is important to keep the process moving and engage interested candidates.
- 4. Job Interviews:** Interviews are pivotal in the recruitment process for assessing candidates' skills, cultural fit, and compatibility with the job requirements. A structured interview process should be agreed upon by HR and line managers, with clear criteria for evaluation.
- 5. Job Offer:** The job offer is the culmination of the recruitment process where the selected candidate is formally invited to join the organization. HR finalizes the details of the employment package and communicates the offer, negotiating any terms if necessary.

A whopping 82 percent of Fortune 500 executives don't believe that their companies recruit highly talented people.

% of Fortune 500 executives who agree that their organizations ...



McKinsey & Company | Source: "McKinsey Global Survey: War for talent 2000," refreshed in 2012

The Grass Is Always Greener...

Organizations are much more interested in external talent than in their own employees to fill vacancies. Top channels for quality hires:



Note: Based on a 2017 survey of 3,973 talent-acquisition decision-makers who work in corporate HR departments and are LinkedIn members.
Source: LinkedIn

COMMUNICATION WITHIN THE START-UP

Communication is crucial to ensuring the team is heading in the right direction

Building a high-performance team involves identifying individuals who demonstrate a blend of technical competence, problem-solving skills, and the ability to work collaboratively. It requires a keen eye for talent that not only aligns with the company's technological needs and cultural values but also brings a mix of reliability, credibility, and the right network. The goal is to assemble a group that will push the boundaries of performance through ambition, initiative, and a collective sense of purpose.

Key Points:

- 1. Creation of the Communication Plan:** Typically drafted by the project manager in collaboration with the team during the early stages of project planning. It should be tailored to the needs of the project, taking into account the complexity, size, and stakeholder landscape.
- 2. Identification of Stakeholders:** Clearly identify all project stakeholders, including team members, management, clients, and any other relevant parties. Understand the information needs and expectations of each stakeholder group.
- 3. Communication Methods and Tools:** Determine the most effective methods and tools for communication, which may include meetings, emails, project management software, or collaboration platforms. Ensure that the selected tools are accessible and user-friendly for all stakeholders.
- 4. Frequency and Types of Communication:** Establish the frequency of regular updates, meetings, and reports to keep stakeholders informed without overwhelming them with information. Decide on the types of communication (formal reports, informal updates, ad-hoc meetings) that will be used throughout the project.
- 5. Tracking and Documentation:** Maintain records of all communications, decisions, and changes that occur during the project to provide a clear audit trail.

Running meetings efficiently:

Recruitment is a systematic process that seeks to efficiently and effectively match organizational needs with the skills and attributes of potential employees. The aim is to attract qualified candidates and select the best fit for the organization's culture and job requirements.

Key points:

1. Start meetings on time regardless of whether everyone is present.
2. Prepare and distribute an agenda prior to the meeting.
3. Periodically take time to review how effective previous meetings have been.
4. Solicit recommendations and implement changes.
5. Assign good recordkeeping
6. Review the agenda before beginning, and tentatively allocate time for each item.
7. Prioritize issues so that adjustments can be made given time constraints.
8. Encourage active participation of all members by asking questions instead of making statements.
9. Summarize decisions, and review assignments for the next meeting.
11. Prepare and distribute a summary of the meeting to appropriate people.
12. Recognize accomplishments and positive behavior.

Responsibility matrix

Deliverables	Organization							
	Design	Development	Documentation	Assembly	Testing	Purchasing	Quality Assur.	Manufacturing
Architectural designs	1	2			2		3	3
Hardware specifications	2	1				2	3	
Kernel specifications	1	3						3
Utilities specifications	2	1			3			
Hardware design	1			3		3		3
Disk drivers	3	1	2					
Memory management	1	3			3			
Operating system documentation	2	2	1					3
Prototypes	5		4	1	3	3	3	4
Integrated acceptance test	5	2	2		1		5	5

1 Responsible

2 Support

3 Consult

4 Notification

5 Approval

TOOLKIT 7: ENGAGING VC AND INVESTORS

Partner Organisations:



OVERVIEW OF THE FUNDING TOOLKIT

When, how, and when to raise money

This session is focused on the crucial skills of building a robust financial model and effectively pitching a business idea. It's tailored for entrepreneurs, business managers, and anyone involved in the financial planning or fundraising aspects of a business. The second part of the session shifts focus to the art of pitching. Attendees will explore techniques for crafting a compelling and persuasive pitch that communicates the value and potential of their business idea effectively to investors, stakeholders, or partners. This includes structuring a pitch, storytelling techniques, and presenting financial data in an accessible manner.

Key outcomes:

1. **Financial Modeling Mastery:** Participants will gain the ability to construct detailed and accurate financial models that forecast the financial performance of their business, incorporating various scenarios and sensitivity analyses.
2. **Understanding Financial Data Communication:** Learners will learn how to present complex financial data in a clear, concise, and accessible manner to non-financial stakeholders.
3. **Pitch Crafting Skills:** Attendees will develop the competence to craft compelling business pitches that effectively communicate the value proposition of their business idea.
4. **Persuasive Communication Techniques:** Participants will explore advanced techniques in persuasive communication, learning how to argue effectively for the viability and potential success of their business idea.
5. **Investor Engagement Strategies:** The session will equip learners with strategies for engaging with investors and stakeholders, teaching them how to tailor pitches to different audiences, navigate the fundraising process, and build lasting relationships with potential investors.



OVERVIEW OF FUNDING LANDSCAPE

Understanding the landscape to make good financial decisions

Understanding the funding landscape is crucial for founders who are looking to raise capital for their startups. Each funding option has its unique characteristics, benefits, and downsides. Here's an overview and key points about the main types of funding: equity, debt, convertibles, and grants. The choice among these options depends on several factors, including the stage of the company, the amount of funding needed, the founders' willingness to share control, and the strategic value that investors might bring. It's also common for businesses to use a combination of these funding sources over their lifecycle to balance growth, control, and financial health.

Key Points:

1. **Dilution of Ownership:** Founders will have to give up a share of their company's ownership.
2. **No Repayment Obligation:** Unlike debt, there's no requirement to repay the funds, which can be beneficial for early-stage companies without steady revenue.
3. **Alignment of Interests:** Investors often bring valuable resources, networks, and expertise to the table, in addition to capital.
4. **Potential for High Expectations:** Investors seek a return on their investment, often expecting significant growth and a clear path to profitability.

Debt financing

Debt financing means borrowing money that must be repaid over time, with interest. This can be through bank loans, lines of credit, or bond issues. Debt financing is a method by which a company raises funds by borrowing money, which it must repay with interest over a predetermined period. This form of financing can be advantageous for businesses that prefer not to dilute ownership by issuing equity. Here's a more detailed look at debt financing, covering its types, advantages, disadvantages, and considerations for startups and established companies.

Key points:

1. **Interest and Repayment:** Companies are obligated to repay the principal amount along with interest, which can strain cash flows.
2. **No Ownership Dilution:** Since there's no equity given up, founders retain full ownership.
3. **Creditworthiness:** Lenders will assess a company's creditworthiness, which can be challenging for startups without a solid financial history.
4. **Collateral:** Often, debt financing requires collateral, posing a risk to company assets.

Equity financing

Equity financing involves selling a portion of your company's equity in exchange for capital. This can be through venture capital, angel investors, or equity crowdfunding. Equity financing involves raising capital through the sale of shares in a company. This method allows businesses to obtain funds without incurring debt or having to repay a specific amount of money over time.

Key points:

1. **Dilution of Ownership:** Founders will have to give up a share of their company's ownership.
2. **No Repayment Obligation:** Unlike debt, there's no requirement to repay the funds, which can be beneficial for early-stage companies without steady revenue.
3. **Alignment of Interests:** Investors often bring valuable resources, networks, and expertise to the table, in addition to capital.
4. **Potential for High Expectations:** Investors seek a return on their investment, often expecting significant growth and a clear path to profitability.

Grant financing

Grant funding represents a form of non-repayable finance provided by entities such as governments, foundations, trusts, or corporations to support specific projects, research, businesses, or initiatives. Unlike loans or equity investments, grants do not require repayment or equity stakes in return. They are typically awarded based on merit, project potential, or alignment with the grantor's objectives.

Key points:

1. **Government Grants:** Offered by federal, state, and local government bodies, these grants support a wide range of sectors such as technology, healthcare, education, and the arts.
2. **Corporate Grants:** Provided by businesses as part of their corporate social responsibility (CSR) initiatives. These grants support projects and organizations with missions that align with the company's values, such as environmental sustainability, education, or community development.
3. **Foundation Grants:** Offered by private or family foundations to support projects and organizations that align with their philanthropic goals.
4. **Research Grants:** Specifically aimed at funding scientific research, technological development, or scholarly studies.

OVERVIEW OF VENTURE CAPITAL BUSINESS MODEL

Understanding the business model of venture capital

The venture capital (VC) business model is designed to invest in high-growth startups with the potential for substantial financial returns. This model involves several key steps and components that work together to achieve the dual goals of driving innovation and generating financial returns for the fund's investors. Here's an overview based on the diagram provided:

Key Points:

1. Develop Investment Strategy:

- a. Identify Opportunities:** Venture capitalists seek out underserved markets or sectors with high growth potential to find investment opportunities.

2. Attract Investors:

- a. Limited Partners (LPs):** VCs attract LPs, such as institutional investors and high-net-worth individuals, who provide the capital for the fund.
- b. Fund Management Fee:** Typically, LPs pay a management fee (around 2%) on the committed capital to cover the operating expenses of the VC firm.

3. Build Portfolio:

- a. Investment Focus:** The VC firm invests in a portfolio of target companies over a period, usually within three to five years, aiming to diversify risk while focusing on their investment thesis.

4. Focus on Value Creation:

- a. Guidance and Support:** VCs provide portfolio companies with guidance on best practices, strategy, customer relations, and recruiting to enhance their value and growth potential.

5. Generate Returns:

- a. Exit Strategies:** VCs work closely with company leadership to identify the right timing and methods for exit strategies, such as an IPO or acquisition, to maximize returns.

6. Effectively Manage Venture Firm's Bandwidth:

- a. Operational Efficiency:** The VC firm needs to manage its own resources effectively, including people and processes, to ensure it can support its portfolio adequately.

7. Return on Investment:

- a. Profit Sharing:** Investors collect the bulk of investment profits (typically around 80%), and the balance (about 20%) is shared by the fund managers as carried interest, which is a share of the profits of the investments.

Choosing a VC to approach

LPs invest in VC funds to diversify their portfolios and potentially achieve higher returns than traditional investments. However, each type of LP has its own mandate and return expectations, which can shape the investment strategy of the VC funds that a founder needs to understand before approaching:

Key Points:

- a. Fund Mandate:** The specific mandate of an LP can dictate the sectors, stages of growth, and geographic regions a VC firm will focus on.
- b. Return Expectations:** The pressure for high returns can lead VC firms to push for aggressive growth strategies within their portfolio companies.
- c. Duration of Investment:** Different LPs have varying time horizons for their investment returns. Pension funds may be more patient investors, while individual investors might seek quicker exits.
- d. Risk Tolerance:** The level of risk tolerance of the LPs can influence the types of companies and founders VC funds choose to back.
- e. Reporting and Transparency:** Founders may face more stringent reporting requirements and expectations for transparency if the VC's LPs demand detailed accounting.
- f. Strategic Alignment:** Founders may need to align their business strategies with the interests and mandates of the VC fund's LPs to secure and maintain investment.

TYPES OF FUNDING BASED ON STAGE OF BUSINESS

Understanding the types of funding per stage of company:

Founders looking for funding will encounter different types of investors and investment vehicles depending on the stage of their business. Each stage presents unique challenges and funding requirements, which are best met by specific kinds of financing.

Formative Stage

The formative stage is where the business is just an idea or concept. The focus is on developing a business plan and assessing the feasibility of the idea.

Key Points:

1. Initial Capital: Often comes from the founders, friends, and family.
2. Risk: Highest at this stage, as there is no product or market validation.
3. Investor Type: Typically not attractive to institutional investors due to the high level of uncertainty.

Angel Investing

Angel investing occurs at the very early stages of a startup, often when the business is more than just an idea but less than a fully operational company.

Key Points:

1. Business Plan Development: Angel investors provide capital to help finalize the business plan and begin initial development.
2. Early Support: Angels may also offer mentoring and networking opportunities.
3. Investment Size: Tends to be smaller, ranging from tens to hundreds of thousands of dollars.

Seed Stage Financing

Seed stage financing supports product development and initial market research.

Key Points:

1. Product Development: Focus is on creating a viable product prototype or minimum viable product (MVP).
2. Market Research: Funding is used to identify target markets and consumer needs.
3. Initial Team Building: Funds might be used to assemble a small team to take the product to the next stage.

Early Stage Financing

Early stage financing is for companies moving towards commercial production but not yet generating significant revenue.

Key Points:

Product Refinement: Investment goes into finalizing the product for market.
Business Model Testing: Capital is used to test and refine the business model.
First Customers: Funds may be used for initial marketing and sales efforts to secure early adopters.

Later Stage Financing (Series Rounds)

Later stage financing is typically structured as Series A, B, C, etc., rounds of financing and is provided for expansion after the company has established commercial production and sales.

Key Points:

1. Growth and Scaling: Funds are used for significant expansion efforts, such as scaling production, growing the team, and expanding market reach.
2. Professionalizing the Company: Investment in management and systems to support a larger scale operation.
3. Valuation Increases: Each round typically comes at a higher valuation with larger amounts of money raised.

Mezzanine Stage Financing

Mezzanine stage financing is a form of late-stage venture capital or bridge financing intended to prepare a company for an IPO.

Key Points:

1. Pre-IPO Stage: Focuses on positioning the company for public markets.
2. Debt-Equity Hybrids: Often takes the form of convertible debt or preferred equity to minimize dilution before the IPO.
3. Exit Strategy: Investors at this stage are looking for a clear exit, typically within a short time frame post-IPO.

EXITING THE BUSINESS AND GENERATING A RETURN

How to exit the business and think through the investment thesis

Exiting a business is a critical phase for business owners and investors, as it is the process through which they realize the value of their investment. There are several exit strategies that owners and investors might use, each with its own context and implications.

Trade Sale

Selling the company to another business, often a competitor, or creating a strategic alliance.

Key Points:

1. Strategic Fit: Buyers are usually looking for synergies or strategic advantages such as expanding their market share, acquiring new technology, or eliminating competition.
2. Valuation: The sale price is often a premium over market value due to these strategic benefits.
3. Negotiation Process: Can be complex, requiring due diligence, negotiation of terms, and possibly regulatory approval.

Initial Public Offering (IPO)

Taking the company public by listing its shares on a stock exchange.

Key Points:

1. Fundraising: Allows the company to raise additional capital from public investors.
2. Market Valuation: The business is valued based on market forces, which can be higher than private valuations.
3. Regulatory Requirements: Involves significant preparation, including financial auditing, regulatory compliance, and the establishment of public company governance structures.

Recapitalization

Restructuring the company's capital structure, often by taking on new debt to buy back equity.

Key Points:

1. Leverage: This process may be undertaken when interest rates are low, allowing the business to increase leverage with cheaper debt.
2. Shareholder Liquidity: Can provide liquidity to shareholders without selling the entire business or going public.
3. Risk: Increases the company's debt load, which can impact financial stability if not managed properly

Secondary Sale

One private equity firm sells its stake in a company to another private equity firm.

Key Points:

1. Private Equity Market: Allows for an exit that keeps the company private, often appealing to businesses that do not want to go public or sell to a competitor.
2. Continued Growth: New investors may bring additional capital for growth or may have a strategic reason for the purchase.
3. Investor Alignment: The new private equity firm may have a different strategy or timeline for the company's growth and exit.

Write Off/Liquidation

Recognizing that the business is not viable and dissolving it, selling off assets to pay creditors.

Key Points:

1. Losses: Investors and owners may not recover their invested capital.
2. Legal Process: Liquidation may be voluntary or forced by creditors and involves a legal process to ensure fair distribution of assets.
3. Finality: This marks the end of the business, with no ongoing concern or operations remaining.

BUILDING AN INVESTMENT THESIS AND PITCHING

Communicating the benefits of the company

An investment thesis is a clear and strategic plan that outlines the reasons for investing in a particular company or sector. It forms the basis of any investment decision and is particularly crucial for founders to understand, as it directly influences their ability to attract funding. Here's an overview and key points to consider when developing an investment thesis for founders.

Key Points

1. **Purpose:** The investment thesis is a statement by the investor that provides a logical argument for choosing a particular investment strategy over others, based on an analysis of various factors such as market conditions, competitive landscape, and financial performance.
2. **Alignment:** For founders, aligning their business strategy with the investment theses of potential investors is essential. It can significantly increase their chances of securing funding.
3. **Communication:** A well-articulated investment thesis helps investors quickly understand a business's value proposition and growth potential.

A founder's investment thesis should articulate a compelling and well-researched argument for why their business represents a strong investment opportunity. It should be a blend of the founder's vision for the company and practical, data-driven analysis. An effective investment thesis not only helps founders secure funding but also serves as a strategic blueprint guiding the company's growth and development. Founders should be prepared to communicate their investment thesis clearly to potential investors and demonstrate how their strategy aligns with the investors' goals and risk appetite.

Key Points to Include in an Investment Thesis for Founders/ pitch deck

1. **Market Opportunity:**
 - a. Define the size of the market and its growth potential.
 - b. Identify unmet needs or pain points in the market that the company is poised to address.
2. **Competitive Advantage:**
 - a. Explain what sets the company apart from competitors.
 - b. Highlight proprietary technology, first-mover advantage, or superior business models.
3. **Business Model:**
 - a. Describe how the company will generate revenue and secure a profitable market position.
 - b. Discuss pricing strategies, cost structures, and customer acquisition plans.
4. **Scalability:**
 - a. Detail how the business can grow over time and the strategies for scaling operations.
 - b. Include plans for geographic expansion, product line extensions, or new market segments.
5. **Management Team:**
 - a. Showcase the experience and track record of the management team.
 - b. Emphasize relevant expertise and past successes that indicate the team's ability to execute the business plan.
6. **Financial Projections:**
 - a. Provide realistic financial forecasts that outline expected growth.
 - b. Offer clear assumptions behind revenue projections and cash flow estimates.
7. **Use of Funds:**
 - a. Specify how the investment will be used to achieve business objectives.
 - b. Link funding to clear milestones and potential for return on investment.
8. **Risk Analysis:**
 - a. Acknowledge potential risks and challenges, and outline strategies for risk mitigation.
 - b. Include industry risks, market risks, and execution risks.
9. **Exit Strategy:**
 - a. Present potential exit options, such as an IPO or acquisition.
 - b. Discuss the expected timeline to exit and the anticipated return on investment.