SRM Institute of Science and Technology

UDS21D05J – TECHNOLOGY LEADERSHIP AND INNOVAITON MANAGEMENTBCA DS – VI Semester

Unit V

Unit 9: Technology Assessment: Technology Choice, Technology Assessment Process

Technology Assessment overview:

Technology assessment is the process of evaluating new technologies to determine their suitability for a specific purpose. It involves analyzing the potential benefits and risks of a technology and determining whether it is the right fit for an organization.

Why is Technology Assessment Important?

Technology assessment is crucial for several reasons. First, it helps businesses make informed decisions about which technologies to invest in. By evaluating the potential benefits and risks of a technology, organizations can determine whether it will help them achieve their goals and improve their operations.

Second, technology assessment helps businesses avoid costly mistakes. By evaluating a technology before investing in it, organizations can identify potential issues and address them before they become major problems. This can save businesses time and money in the long run.

Third, technology assessment can help businesses stay competitive. By adopting new technologies, organizations can stay ahead of the curve and gain a competitive advantage over their rivals.

Benefits of Technology Assessment

Technology assessment offers several benefits for businesses and individuals, including:

Improved Operations

By adopting new technologies, organizations can improve their operations and become more efficient. This can lead to cost savings and improved productivity.

Competitive Advantage

By staying ahead of the curve and adopting new technologies, organizations can gain a competitive advantage over their rivals.

Risk Mitigation

Technology assessment helps businesses identify potential risks and address them before they become major problems. This can help organizations avoid costly mistakes and reduce their overall risk.

Promoting Responsible Innovation:

- Guiding ethical development: TA encourages developers to consider the broader societal implications of their technologies, leading to more ethical and responsible innovation.
- Building public trust: By ensuring transparency and stakeholder involvement in technology development, TA can help build public trust and acceptance of new technologies.

Adapting to Change:

- Understanding complex systems: TA provides a framework for understanding the complex interactions between technology, society, and the environment.
- Navigating uncertainty: In a rapidly changing world, TA helps us anticipate and adapt to the potential impacts of new technologies, ensuring responsible progress.

Challenges of technology assessment

Technology assessment faces several challenges, including rapid technological evolution, the complexity of interconnected systems, resource intensiveness, resistance to change from stakeholders, privacy and security concerns, lack of standardized assessment methods, a tendency to prioritize short-term gains over long-term benefits, integration challenges with existing systems, ethical dilemmas, incomplete information leading to uncertainty, and regulatory/legal ambiguities. Navigating these challenges requires organizations to adopt a strategic and adaptive approach, balancing the potential benefits of technology adoption with careful consideration of associated risks and implications.

The Technology Assessment Process

The technology assessment process involves several steps, including:

Step 1: Identify the Need

The first step in the technology assessment process is to identify the need for a new technology. This could be a need to improve operations, reduce costs, or meet a customer demand.

Step 2: Define the Problem

Once the need has been identified, the next step is to define the problem that the new technology will address. This involves identifying the specific challenges that need to be overcome and the goals that need to be achieved.

Step 3: Research

The third step in the technology assessment process is to research potential solutions. This involves gathering information about the available technologies and evaluating their suitability for the organization's needs.

Step 4: Evaluate

After researching potential solutions, the next step is to evaluate them. This involves analyzing the potential benefits and risks of each technology and determining which one is the best fit for the organization.

Step 5: Implement

Once a technology has been selected, the next step is to implement it. This involves planning and executing a strategy for adopting and integrating the new technology into the organization's operations.

Step 6: Monitor and Review

The final step in the technology assessment process is to monitor and review the new technology's performance. This involves measuring its impact on the organization's operations and making adjustments as needed.

Evaluating and Choosing Technologies, Evaluating Criteria

1. Adoption cost

Before choosing a technology, assess the costs and workload required to implement it. The expected benefits need to compensate for the costs.

2. Threat

New technologies come with risks. Unanticipated outcomes can impact society and ruin a business. What may seem like a breakthrough innovation could carry health, environmental, legal, and privacy risks.

3. Capability

What does the technology enable your company to do? It might unlock new capabilities to deliver products and services. Or, its potential to benefit the business may actually be small. Think this through with your team, and rate technologies together on these relevant criteria: “Business Potential”, “Application Scope”, and “Potential Impact”.

4. Usability

New technology might have tremendous disruptive potential, but if its implementation is not easy for people to use, it won’t likely be adopted. Usability is how effectively and efficiently consumers can use a product. It is important for a company to understand user needs.

The ITONICS Insights tool allows you to research drivers of change and trends in consumer expectations. Using it for environmental scanning helps you adapt to an ever-evolving landscape of user needs. Usability can be subjective and affected by skill level. A good way to get diverse perspectives internally and externally is by involving participants in ideation campaigns on how a new technology can be used.

5. Interoperability

Adopting new technologies must advance the company’s competitive advantage. The new technology has to complement other existing technologies or be able to replace outdated technologies while still maintaining interoperability. The market success of a device, for instance, is affected by how it complements and connects with consumers’ other devices.

6. Integration

Consider the difficulty of integrating a new technology into existing IT systems. When the aspiration is to incorporate a new technology into a company’s service offering, the ideal is that it can integrate seamlessly into existing systems and processes. Let knowledgeable colleagues assess the complexity of a technology and how easy it will be to integrate.

7. Application

Analyze whether the technology's ecosystem is expanding or shrinking. Leading companies offer a set of services that interconnect with their own and those of complementary companies.

8. Legal compliance

The unanticipated legal implications of new technologies may instill caution, and delay innovation. A company that anticipates and understands the implications is equipped to make a bold leap and gain an advantage against cautious competitors.

9. Security and privacy

While increasing connectivity and easier access to digital services have broadly benefited consumers, these developments come with increased security and privacy risks. Hacks and data thefts, enabled by weak security, cost companies millions in fines and ransom payments.

10. Social and cultural

New technologies can alter the behavior and operation of society. Consider the potential social and cultural impact of the technology you plan to implement. Is there a risk that it will be met by push-back from consumers? People often reject new technologies when it is perceived as a threat to our humanity. A societal trend may even emerge that purposefully rejects your product or service.

Unit 10: Technology and Innovation Business Case Development

Business cases overview

A business case is developed during the early stages of a project and outlines the why, what, how, and who necessary to decide if it is worthwhile continuing a project. One of the first things you need to know when starting a new project are the benefits of the proposed business change and how to communicate those benefits to the business.

While the project proposal focuses on why you want a project, it will only contain an outline of the project:

- business vision
- business need
- expected benefits
- strategic fit
- products produced
- broad estimates of time and cost
- and impact on the organization

Why you need a business case

Preparing the business case involves an assessment of:

- Business problem or opportunity
- Benefits
- Risk
- Costs including investment appraisal

- Technical solutions
- Timescale
- Impact on operations
- Organizational capability to deliver the project outcomes

These project issues are an important part of the business case. They express the problems with the current situation and demonstrate the benefits of the new business vision.

When to use a business case

The business case is needed when resources or expenditure on a project has to be justified. Approval is usually sought from the project sponsor and other interested parties. For instance, the finance function may authorize funds and the IT department provide resources.

How to write a business case

The purpose of the business case is communication. Therefore, each section should be written in the parlance of the intended audience.

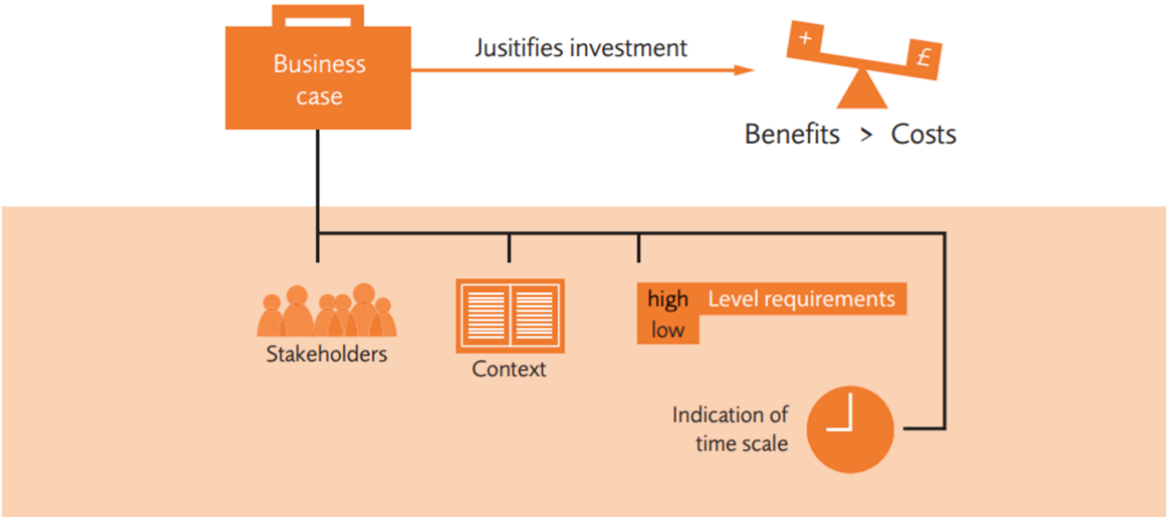
Moreover, it should only contain enough information to help decision making. When writing a business case keep the following in mind:

- Be brief and convey only the essentials.
- Make it interesting, clear, and concise.
- Eliminate conjecture and minimize jargon.
- Describe your vision of the future.
- Demonstrate the value and benefits the project brings to the business.
- Ensure consistent style and readability.

Data and Assumptions

A large number of data and assumptions are required to estimate costs and benefits of the proposed standards. Some of these data, such as the number of facilities (by type) are drawn directly from Census data. Other data, such as the number of uses of an element during a facility visit must be determined from discussions with experts. Other data values are estimated from closely related data using reasonable proportions or proxies.

Assumptions and professional judgment are applied when data is not available. Assumptions play an important role in determining outcomes. Arguably, they are as important as data since they generally multiply with the same numbers. Uncertainty is higher with assumptions and accordingly, they are assumed to also have a larger parameter range around a most likely value.



Five elements of a business case

A common way of thinking about a business case is using these five elements:

Strategic context: The compelling case for change.

Economic analysis: Return on investment based on investment appraisal of options.

Commercial approach: Derived from the sourcing strategy and procurement strategy.

Financial case: Affordability to the organisation in the time frame.

Management approach: Roles, governance structure, life cycle choice, etc.

The business case is reviewed and revised at decision gates as more mature estimates and information become available. The approved business case provides a record of the decisions made by governance about how to achieve the required return on investment from the work. It documents the options considered and it is normal practice to include the 'do-nothing' option as a reference. Through this approach, the business case becomes a record of the recommended option with rationale and evidence to support the decision.

The presentation of the business case, if approved, results in the formal startup of the project, programme or portfolio. The sponsor owns the business case.

It brings together the investment appraisal with evidence of how the investment is intended to lead to realisation of the intended benefits. All projects must have a business case that demonstrates the value of the work and it is outlined during the concept phase of the life cycle.

What is a Business Opportunity?

A business opportunity provides an individual or a company with an amazing chance to expand their current operations, initiate new offerings, and turn a profit. It can be found in any industry and often exists due to factors such as technology advancements, product development, market changes, skill gaps, and even financial benefits. Identification of entrepreneurial opportunities is an effective way to jumpstart your business endeavors.

The world best business opportunity offers advantages that include better access to resources, relatively easy entry into competitive markets, lower start-up costs, and the potential for significant profits. Whether you are a budding entrepreneur or an established business owner, exploring opportunities can open the door to increased success.

Importance of Business Opportunity

Business opportunities are essential for business growth and success. Having the right opportunities gives business owners, entrepreneurs, and investors the ability to maximize their potential and create a successful business enterprise. Identifying business opportunities can allow companies to increase their revenue streams by providing unique products, services, or an innovative approach to a problem.

Identification of business opportunities in entrepreneurship is an important step to kickstarting your career as an entrepreneur. There are numerous possibilities for entrepreneurs to explore, including harnessing technology or creating a new niche in an industry or sector, as well as identifying opportunities that involve taking advantage of changes in consumer behavior or leveraging resources from other businesses. By correctly following well-defined steps in the identification of business opportunities, anyone has the potential to find success in entrepreneurship and create lucrative business ventures.

Having new business opportunities also provides access to increased capital resources, enabling businesses to invest in employee development, technology upgrades, and other growth strategies that can help propel business objectives. Therefore, paying close attention to available entrepreneurial opportunities is incredibly important for any business, regardless of size or industry.

Traits of a Good Business Opportunity

Let's explore the traits of the world best business opportunity. These traits are extremely useful if you are wondering along the lines of how to identify business opportunities.

Clarity

Clarity is an essential trait of business opportunities, enabling entrepreneurs to make well-informed decisions. Having a clear understanding of business opportunities allows business owners to know exactly what they are getting and how the business will truly benefit them.

Clear business opportunities provide reassurance that business owners can trust the opportunity, allowing them to confidently capitalize on it. Therefore, identifying business opportunities with crystal clear clarity on all aspects of entrepreneurship is important for your future success.

Feasibility

Understanding the feasibility of business opportunities in India is an important trait when considering any business venture. For business owners, opportunities identification through

this lens can provide vital feedback on what elements need to be addressed to make the business successful.
By assessing all aspects of the business—including its financial impacts, longer-term goals, and timelines for completion—business owners can better understand how likely an opportunity is to bring positive returns.

Relevance

Relevance is an essential factor to consider when you identify business opportunities and helps pick the ones that stand out from the rest. It ensures that business owners select business ideas that match industry trends and customer demand, which can help them acquire a larger customer base and generate more business profits.
By remaining on top of trending topics, companies have a better chance of creating products and services in line with market demand and staying ahead of the competition.

Scalability

Scalability is often the highly desirable trait for the world no 1 business opportunity. An opportunity can transition from small to large with minimal effort and increased benefit, allowing business owners to increase the returns from investments without having to dedicate more resources or effort.
For business owners looking to identify opportunities that can quickly and efficiently generate growth, scalability must be carefully considered and evaluated before investing in a business.

Profitability

Profitability is certainly one of the most important traits of business opportunities identification; it indicates that the business is successful and capable of providing its owners with legitimate returns. Consistent profitability serves as an indication of long-term sustainability and can be used as a measuring stick for business growth over time.

Types of Business Opportunity

New Market Opportunity

New Market Opportunity is a specific type of business opportunity that focuses on growing an existing business into a new and untapped market. They are attracted to companies that seek the potential for rapid growth but can be risky because the risks may be in markets where the business is unfamiliar.
Companies looking to take advantage of new market opportunities need to understand the market conditions, do their due diligence on needs and regulations, and make sure expectations are realistic.

Distributorship

For business owners looking to generate business growth, a distributorship business opportunity can prove to be an invaluable asset. Distributors sell products for manufacturers, thus giving them access to a wider customer base with less effort.
There are no entry barriers when joining a distributorship business, so this business opportunity is perfect for those hoping to make their mark on the business world with minimal investment. Furthermore, by collaborating with professionals in their field, business owners have the potential to learn and grow their skill sets while also growing their businesses.

Competitive Opportunity

Competitive opportunity is one such business opportunity that stands out. It allows business owners to secure more business and stay ahead of the competition. This business opportunity offers a better return on investment through strategic planning, dynamic marketing strategies, and leveraging technology and data to drive growth efficiently.

Franchising

Franchising is a business opportunity that provides an innovative way to start and expand a business. It allows an individual or business to leverage the proven business model of another company and grow their business quickly while typically involving fewer risks.

This business opportunity supports the development of new business models, bringing more flexible options to entrepreneurs who are just starting or established business owners looking to diversify their brands.

Technology Opportunity

Technology opportunity is a great business prospect for those interested in staying abreast of today's cutting-edge developments. Rather than relying solely on traditional business models, savvy entrepreneurs are turning to these new tools and services that can provide the means to bridge the gap between their business goals and the technology solutions necessary to achieve them.

As a business opportunity, technological solutions offer sizable returns due to their flexible deployment, cost efficiency, and ability to tailor solutions specifically designed for each enterprise's needs.

Marketing

Marketing is an ever-evolving business opportunity that should be given serious consideration by prospective business owners. By using techniques to understand customer needs, create interesting and effective campaigns, and measure the success of those campaigns, business owners have the potential to dramatically increase the profit margins of their clients while also creating a positive brand identity and strong customer base.

Licensing

Licensing is a business opportunity that offers the perfect balance of autonomy and support. Through licensing agreements, business owners join forces with existing business entities to share branding, resources, and customer bases. This offers the chance to benefit from the existing strength of a business without having to build up your market presence from scratch.

Niche Opportunity

By honing in on a particular market or demographic, you can identify needs that would not be apparent in heavily saturated business arenas. Focusing on niche markets allows for the development of customized approaches to business success with greater precision and accuracy than the traditional business model.

Business Opportunities from Home

Business opportunities from home are increasingly popular in opportunities identification, allowing entrepreneurs to start and maintain their businesses without having to leave the comfort of their own homes. From freelance writing to web design, business owners can take advantage of the various opportunities available through a home-based business model.

This way they can have more control over their working hours, benefit from lower overhead costs and develop something that would bring flexible financial success. By taking control of your business operations in the comfort of your own home, you'll be better positioned to increase productivity while making firm strides toward growth and prosperity.

Online Business Opportunity

Online business opportunities from home provide entrepreneurs a chance to leverage their business ideas, develop their business plans, and launch their companies into the global marketplace without the traditional overhead cost of renting commercial space.

A business opportunity example of this kind would be setting up an online retail store that will allow customers to purchase products with ease and convenience. Drop shipping business is another best business opportunity example to consider with low risk and investment costs.

These opportunities provide access to products and services for business owners who are looking for faster and more efficient ways to reach potential customers. It also allows business owners to customize their offerings with creative marketing solutions and to have better control of business operations.

Identify Business Opportunity

Whether it's new business opportunities or entrepreneurial opportunities, there are many ways to identify business opportunities. Let's take a look:

Observe changes in the Environment

Society is a living organism changing with time and space. Therefore, observing the social, political, economic and technological changes in the Environment is relevant in the identification of business opportunities.

- Social changes are crucial for the inception of new business opportunities. For instance, the merging perspective on beauty and cosmetic industry has paved the way for clean and guilt-free products. Many brands have taken advantage of this and launched their niche products to compete with the ever-dominant brands. You should keep a keen eye on the political changes as well. Introducing new government policies can impact market behavior and expand the scope of various sectors as we know. For instance, the economic policy introduced in 1992 liberalized the Indian market to enhance free trade.
- Economic changes are highly relevant to business opportunities identification. Many factors can contribute to economic changes, social, and technological, policies, and regulations. It's all interconnected and who knows, it could lead to the identification of business opportunities in entrepreneurship. Most technological changes pave the way for entrepreneurial opportunities and new business opportunities. Some of the

world best business opportunities have been a result of the technological impact, like AI's penetration.

- Identify Unsatisfied Need Often unsatisfied needs give birth to world best business opportunity. Listen to your customers and identify problems that need solving, and potentially identify opportunities. Malls came into existence, replacing the traditional marketplace and highlighting convenient shopping under one roof. Now online business opportunity like E-commerce is challenging the mall culture.
- Understand Problems Another way for identifying business opportunities is to understand the problems faced by people. Understand what they want and how they want their needs met. For how people needed groceries delivered at home, and now we do.
- Find Solution Often finding a solution to the problems faced by people presents innovative and new business opportunities. For instance, instant grocery delivery services like Swiggy Instamart or Blink are thriving.

Steps in Identification of Business Opportunities
Here are some of the steps in identification of business opportunities:

1. Conduct market research to identify industry trends, customer needs, and potential gaps in the market.
2. Analyze the competition to understand their strengths and weaknesses.
3. Identify potential target markets and customer segments.
4. Evaluate the feasibility of the opportunity, including a financial analysis of the potential revenue and expe
5. Develop a business plan outlining the strategy for pursuing the opportunity.
6. Test and validate the opportunity through market research and pilot projects.
7. Take the necessary steps to capitalize on the opportunity, like acquiring funding or assembling a team.

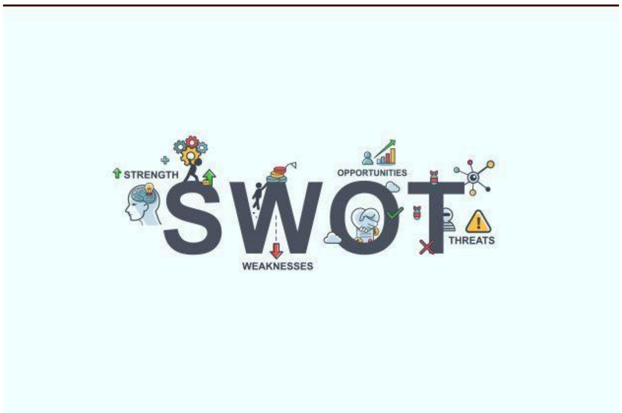
Methods of Identifying Business Opportunities

There are many business opportunities in India, given the diverse market and demographics. But how can you identify the business opportunity suitable for you? Here are some ways how to identify business opportunities.

Environment Scanning

Environmental scanning involves monitoring external factors like economic, political, and technological trends that can impact a business. It helps to identify opportunities and threats that may affect the business in the future. Keeping a close watch on the changing Environment can facilitate business expansion or explore new business opportunities.

SWOT Analysis



SWOT analysis is a strategic planning tool to helps businesses identify their strengths, weaknesses, opportunities, and threats. It helps in identifying internal and external factors that can impact the business and can be used to develop a plan of action.

Innovation Brainstorming

Innovation involves continuously exploring new technologies, processes, or business models to find new ways to create value for customers. With innovative brainstorming, new ideas and possibilities for products, services, or business models could be discovered by gathering a group of people to brainstorm. It can help identify new opportunities for growth and expansion- like online business opportunities for your current business or automating certain aspects of it like inventory planning.

Market Research

Market research involves analyzing data on consumer preferences, market trends, and industry statistics to identify potential areas for growth or untapped markets. Conducting market research will enable you to identify entrepreneurial business opportunities to come with products or services your customers are looking for.

Social Listening & Monitoring

Social listening and monitoring entail observing or monitoring social media and other online platforms to stay informed about industry trends, customer preferences, and competitors' activities. It can help identify the best business opportunities in India for reaching new customers or improving products and services.

Factors to Consider While Identifying Business Opportunities

Are you seeking the world no 1 business opportunity like every aspiring entrepreneur out there? Here are some factors to consider to identify the business opportunity suitable for you:

Availability of Raw Materials

This ensures you have the necessary resources, such as materials, equipment, and labor, to produce a product or provide a service. Raw materials are essential for any business opportunity to manifest into a functional one.

Internal Demand Analysis

Internal demand analysis analyses the potential demand for a product or service within the company or organization. This can lead to business expansion and identify opportunities within your current business. Who knows, you could even end up starting an online business for a new business dimension altogether.

Market Size

Market size helps to determine the potential demand for a product or service in the broader market. Knowing the market size for a particular product or service can help determine the potential demand and growth and lead to the identification of business opportunity.

Management Skillsets

Management skills are crucial for world no 1 business opportunity to manifest into a successful venture. The skills and experience of the management team are necessary for your business to run.

Access to the customers

The ability to reach and sell to the target market for a particular product or service is important for your business opportunities to flourish. You need to have the right marketing strategy to reach your customers and ensure they have access to the service or products you are providing. (*Here are some good customer acquisition strategies for your reference.)*

Need for Financing

Most importantly, ensure the financial resources required to start and run the business, including funding for initial start-up costs, ongoing expenses, order management, and future growth.

Passion

An entrepreneur's enthusiasm and drive for the business opportunity drive the business forward. Likewise, a passion for the business can sustain motivation and effort through the challenges of starting and growing a business.

Objectives of Identifying Business Opportunity

You may wonder why you should put effort and energy into identification of business opportunity. Here are some objectives behind discovering business opportunities:

Types of Small Business Opportunity

Taking a chance with business opportunities is not easy for everyone and the fear of not succeeding stops many. You don't have to start big. Here are some small business opportunities to explore:

Service-based businesses: The service sector is on the rise. Why not try your luck with it? You could offer consulting, accounting, or cleaning services to your consumers based on your interest.

Retail Business: If you like managing a store and selling products, try retail business. Retail business opportunities enable you to sell the products to customers. It could be anything from a beauty store, clothing, stationery or grocery store.

Online Businesses: There are also many online business opportunities like tutoring, digital marketing, e-commerce (be it B2B ecommerce or B2C), web designing, e-learning, etc.

Home-bases Business: You could even explore new business opportunities from home. For instance, day care, e-commerce store, chocolate making, baking, handmade products, etc.

Mobile Business: These businesses operate primarily out of vehicles, such as food trucks or hair salons. *(Register with Amazon Business to explore the supplies for your mobile business.)*

Social Enterprise: Ever thought of establishing a social enterprise? You could develop business strategies to achieve social or environmental goals, like starting an NGO or cause-based organization.

Niche Market Business: People are becoming more conscious and looking for specific products to sustain their lifestyles or choices. And niche businesses focus on a specific market or customer segment, such as organic food, eco-friendly products or pet grooming.

Dropshipping Business: A popular business model in the e-commerce industry. Droshipping business saves you the hassle of inventory planning and management. You have to find the right suppliers with quality products to ensure the right product reaches your consumers.

Online Education or e-learning Business: The e-learning sector is booming and online education is helping learners across. If you have the skills and subject expertise, why not offer customers online courses, webinars, or other educational content?

Types of Online Business Opportunity

Identification of entrepreneurial opportunities to test your luck is easier in the digital era. We have listed some of the online business opportunities from home or otherwise for you to consider:

E-commerce: It is a tested business to explore. Selling products online is easier than you think. With a descriptive website and quality products, tapping into the online market is possible.

Digital Marketing: If you have got a knack for marketing, with digital marketing, you could help companies or business to promote their products or services online through various channels such as SEO, PPC, social media marketing, and email marketing.

Content Creation: Content creation has a vast scope. Put your love for writing to good use and create digital content like blogs, videos, podcasts, or e-books for businesses.

Online Education/ e-learning: E-learning is a vastly growing sector. Working professionals, students, housewives, and people resuming from career breaks are looking for a convenient way to learn and that's where online education takes precedence.

Consulting or Coaching: You could also offer consulting and expert advice to clients via online platforms. Being a life coach is also another option to explore. This is also one of the online business opportunities from home to consider.

Affiliate Marketing: Affiliate marketing enables you to promote products and services from other companies or businesses and earn a commission for each sale. You could also use social media influences to push the products and gain commission.

Offer Online Services: You could also start an online service business and deploy skills like graphic design, video editing, photography, web designing & development, virtual assistance, etc.

Online Marketplace: Why not help businesses and create a platform or online marketplace for the buyers and sellers to conduct business? Amazon Business or Amazon is doing just that.

Online Survey or Research: Business, organization, or companies needs to study the market, product reception, consumer behavior, and more to find new avenues to grow and understand where they lack. With an online survey or research business, you could provide the data and information for businesses or organizations.

Online Gaming: A very popular business option to explore. There is a community of online gamers out there and you would be helping them with their favortie activity by starting an online gaming platform. One of the fun online business opportunities from home as well for gamers.

Dropshipping: Dropshipping is yet another business venture to consider for online business opportunities. Be the front man offering the goods to your consumer without the tension of managing the inventory.

Types of Business Opportunities from Home
Identification of entrepreneurial opportunities is also possible for home-based businesses. You can run and manage a business from the comfort of your home. Here's a list of business opportunities to consider if you like work from home set up:

Freelancing: You could try freelancing from home. Based on the skill or skills you have to offer, like content writing, teaching, video editing, graphics designing, etc. If you want flexibility, then freelancing is the way to go.

Consultancy: Put your knowledge and experience to good use and start a consulting firm. Help companies or organizations with their problems. Make a list of your skills and experience and decide how that could be utilized in the market.

Art and Crafts Teaching: Love teaching and have a knack for creativity? Try teaching art and crafts. DIY is in trend and people want to create things themselves, help them create handmade items and feel fulfilled.

Graphics Designing: Many businesses, micro or large, rely on graphic designers for their logos, posters, newsletters, etc. Thus, graphic designing is a great online business opportunity to consider. If you got the skills and the equipment, go for it.

Home-based food business: If you enjoy cooking or baking, there are several home-based food businesses to consider. You could start a bakery, tiffin service, homey restaurant, etc., cook your heart out, and make some money.

Coaching or tutoring: You could also try coaching or tutoring from the comfort of your home. You just need to decide your target audience, kind of service offered (one-on-one or group), decide on rates, and market your business well.

Blogging: Blogging is an old and tested work from home business opportunity if you enjoy writing. Many companies and businesses use blogs to generate traffic and create potential leads, and you could help them do that with the right skills.

Nutritionist or Health Guide: Everyone cares about their health, but some need guidance to realign their eating habits, nutrition intake, and maintain and healthy lifestyle. Being a health guide and nutritionist will come in handy for them.

Event Planning: Event planning is another fun business opportunity if you like planning events. Find the right clients and do an impeccable job on your first project and your portfolio will write itself.

Starting YouTube Channel: You could start a YouTube channel and follow your passion. It could be anything from a cooking channel to teaching, DIY, hacks, etc.

How can Amazon Business Help with your Business Opportunity?

Amazon Business can give you a helping hand in many ways to support the business opportunities you have undertaken.

- It's the ideal digital marketplace to sell your products or goods. Become an Amazon seller and list your products to reach a wide client base.
- Have all your business-related requirements met via Amazon Business. Whether it's laptops, printers, projectors, speakers, office supplies, etc., you can get bulk discounts, GST invoice, Tax credits, and doorstep delivery with Amazon Business.
- The ideal procurement solution for you offering a wide range of products across categories with one-click check out.
- Events like Small Business Day, Prime Day Sale, Republic Day Sale, etc., give you a chance to save big.

- Platforms like Saheli, Amazon Launchpad, Amazon Karigar, etc., empower small businesses and innovators.

Unit 11: Evaluating Industry Trend, Market Demand, and Business Needs

Market Research and competitive analysis

Market research is the way in which Product Managers gather information about customer needs and market drivers. If you want to gather information from actual customers to make a decision, then you need to understand and use market research.

Competitive analysis is a subset of market research. When you investigate your competition, you use market research techniques and concepts to understand what your competition is doing today and gain insight into their plans for tomorrow.

What problems can market research solve?

Market research informs your decisions as a Product Manager. Here are four categories of decisions Product Managers use market research for.

Identifying markets

- Identifying market needs and customer problems
- Segmenting markets
- Documenting the customer journey
- Evaluating new markets

Scoping products

- Defining or testing new product concepts
- Solidifying pricing
- Prioritizing features and releases

Investigating the best marketing options

- Creating or testing messaging
- Measuring marketing program results

Analyzing business success

- Measuring customer satisfaction
- Learning about the competition

What are market research methods?

Here are the most common types of market research. Investigate them and see which one suits your situation best.

Market Research Methods

Competitive Analysis

Which competitors should I look at during competitive analysis?

Competitive analysis can mean the difference between success and being blindsided by a competitive move you didn't see coming. While you may operate in a crowded market, focus on the top 3 and you'll have enough information to not worry about the smaller players.

Competitive analysis model – Porter's 5 forces

Michael Porter developed a model to break down the competitive forces in any market. In the field of competitive analysis, he identified the bargaining power of customers, bargaining power of suppliers, the threat of substitute products, the threat of new entrants into the market and the intensity of competitive rivalry as key aspects to understand the nature of competition in your industry. Read up on this important thinking process to become more aware of where the competitive threats are likely to come from in your industry.

Product Comparisons for Competitive Analysis

The most common competitive analysis that Product Managers use is a side-by-side product comparison chart that compares features. Remember to add in aspects of service, warranties, finance, service, and reliability that may add more strength to the competitive argument. Organize your findings in a table that you share with your sales people. One word of caution: beware of what information you want to share outside the company.

Competitive Analysis – Porters Five Forces

Competitive Analysis Beyond Product Comparisons

Go beyond this initial analysis to understand the company in much more depth. How are their finances? What is the background and bias of their leaders? How about the team that takes products to market? Understanding a competitor's sales, channel and marketing actions and reflexes helps you become more able to counteract their moves.

Use market research to find customers

Market research blends consumer behavior and economic trends to confirm and improve your business idea.

It's crucial to understand your consumer base from the outset. Market research lets you reduce risks even while your business is still just a gleam in your eye.

Gather demographic information to better understand opportunities and limitations for gaining customers. This could include population data on age, wealth, family, interests, or anything else that's relevant for your business.

Then answer the following questions to get a good sense of your market:

- Demand: Is there a desire for your product or service?
- Market size: How many people would be interested in your offering?
- Economic indicators: What is the income range and employment rate?
- Location: Where do your customers live and where can your business reach?
- Market saturation: How many similar options are already available to consumers?
- Pricing: What do potential customers pay for these alternatives?

You'll also want to keep up with the latest small business trends. It's important to gain a sense of the specific market share that will impact your profits.

You can do market research using existing sources, or you can do the research yourself and go direct to consumers.

Existing sources can save you a lot of time and energy, but the information might not be as specific to your audience as you'd like. Use it to answer questions that are both general and quantifiable, like industry trends, demographics, and household incomes. Check online or start with our list of market research resources.

Asking consumers yourself can give you a nuanced understanding of your specific target audience. But, direct research can be time consuming and expensive. Use it to answer questions about your specific business or customers, like reactions to your logo, improvements you could make to buying experience, and where customers might go instead of your business.

Here are a few methods you can use to do direct research:

- Surveys
- Questionnaires
- Focus groups

- In-depth interviews

For guidance on deciding which methods are worthwhile for your small business, the U.S. Small Business Administration (SBA) provides counseling services through our resource partner network.

Use competitive analysis to find a market advantage

Competitive analysis helps you learn from businesses competing for your potential customers. This is key to defining a competitive edge that creates sustainable revenue.

Your competitive analysis should identify your competition by product line or service and market segment. Assess the following characteristics of the competitive landscape:

- Market share
- Strengths and weaknesses
- Your window of opportunity to enter the market
- The importance of your target market to your competitors
- Any barriers that may hinder you as you enter the market
- Indirect or secondary competitors who may impact your success

Five force analysis

- Porter's five forces are used to identify and analyze an industry's competitive forces.
- The five forces are competition, the threat of new entrants to the industry, supplier bargaining power, customer bargaining power, and the ability of customers to find substitutes for the sector's products.
- The model guides businesses in determining the intensity of competition and potential profitability within their market, helping them better understand where power lies in their sector.
- Strategic analysis at the time of Porter's article tended not only to love acronyms (SWOT, PEST, PESTEL, BCG Matrix, ETPS, etc.) but also models focused on the internal dynamics of individual companies.[2] While it would be unfair to suggest they ignored the competitive environment companies face, they were typically vague while doing so—e.g., the "opportunities" and "threats" of SWOT analysis were too "macro" for many dealing with the challenges of specific industries.
- Porter's 1979 article was also a broadside against the theoretical models found in the curriculums of the major business schools, where future strategists dealt with a "perfectly competitive" market characterized by equilibrium and no specific firm influencing prices—a model they were unlikely to find in the real world.

Understanding Porter's Five Forces

The first sentence of Porter's 1979 article could hardly be less controversial: "The essence of strategy formulation is coping with competition."[1] It's the following sentence that, in its understated way, would prove far more consequential: "Yet it is easy to view competition too narrowly and too pessimistically." Rather than viewing competition narrowly as rivalry among existing competitors, his first force, Porter expanded the concept to include four others: the bargaining power of suppliers and buyers, the threat of new entrants, and the threat of substitute products or services. Let's take these in turn.

1. Competitive Rivals
Porter's first force is what we usually mean when discussing business competition. We think of Pepsi and Coca-Cola for soft drinks, Apple and Samsung for smartphones, Nike and Adidas for sneakers, and Ford and General Motors for autos. Indeed, some of these rivalries are so influential that consumers split almost culturally among those who have an iPhone, drive a Ford, or prefer Netflix to Hulu. Thus, it's no accident that we also consider business competition chiefly a war among rivals.

Such rivalries can lead to price wars, high-priced marketing battles, and races for slight advances that could mean a competitive advantage. These tactics can stimulate companies to make ever better products but also erode profits and market stability.[3] Several factors contribute to the intensity of competitive rivalry in an industry:

- The number of competitors: The more competitors in an industry, the more fierce the rivalry, each fighting for scraps of market share.
- Industry growth: In an expanding industry, competition is usually less dramatic because the market is growing so fast that competitors have little need to fight for customers—think of the automobile industry of the early 20th century and the dot-com boom of the late 1990s. However, in a stagnant or declining industry, competition can be ferocious as firms fight for a larger piece of a shrinking pie, such as in the global coal mining or print media industries of today.
- Similarities in what's offered: When the products or services in a market are awfully similar (think of the lower page of results in any Amazon product search), competition tends to be intense because customers can easily switch. However, if a company offers a unique product or service or has earned brand loyalty, this can reduce competitive rivalry. Apple, Inc. (AAPL) comes to mind in tech goods, just as Rao's Italian sauces or King Arthur flour do in your supermarket aisles, each charging a higher price given its style, taste, or whatever makes it unique.
- Exit barriers: When it's difficult or costly for companies to leave the industry due to specialized assets, contractual obligations, or emotional attachment, they may choose to stay and compete, even if the market's prospects grow dimmer by the day. The airline industry is a classic example. Airlines have high costs for their assets, contractual obligations (leasing agreements and labor contracts), and regulatory requirements, which means that when airlines face a shrinking market—or even an unprofitable route—they can't retreat from the market quickly.
- Fixed costs: Porter notes that if an industry has high fixed costs, companies have a "strong temptation" to cut prices rather than slow production when demand slackens. Paper and aluminum manufacturing are two good examples that Porter gives.[1]

2. Potential for New Entrants in an Industry
Industries where new firms can enter more easily almost always have lower profit margins, and the firms involved each have less market share.[1] The sector for local restaurants has relatively low entry requirements: there aren't significant investments or regulatory hurdles to surmount before opening to the public. Thus, it's also the case that your favorite restaurant may not stay open for long, given the hypercompetitive environment and constant entrance of new restaurants opening.

Here are factors in measuring how much new entrants threaten an industry:

- Economies of scale: Industries where large-scale production leads to lower costs face less of a threat from new entrants. New firms would need to achieve a similar size to compete on price, which might be difficult or costly.
- Product differentiation: When existing firms have strong brand identities or customer loyalty, it's harder for new entrants to gain market share, reducing the threat of entry.
- Capital requirements: High startup costs for equipment, facilities, etc., can deter new entrants. For example, starting a car manufacturing business requires significant investment, so until Tesla Inc.'s (TSLA) growth in the early 2010s, Americans from the 1950s could have named the major U.S. car brands of the early 2000s.
- Access to distribution channels: If existing firms control the distribution channels—retail stores, online platforms, cable infrastructure, etc.—then new entrants would need to find a way to replicate that structure while competing with the established firms on price, a tricky proposition.
- Regulations: Licenses, safety standards, and other regulatory standards can create barriers, making it too ungainly or costly for new firms to enter the market. Examples would include those looking to build new hotels in downtown areas or supply power to a region.
- Switching costs: If it's costly or difficult for customers to switch from existing firms to new entrants, the threat of entry is lower.

3. Supplier Power

Suppliers are powerful when they are the only source of something important that a firm needs, can differentiate their product, or have strong brands.[1] When the power of suppliers in an industry is high, this raises costs or otherwise limits the resources a firm needs. Here are some factors used to measure the supplier power of an industry:

- The number of suppliers: When few firms can give a company something it needs to stay in business, each has greater negotiating power. They can raise prices or reduce quality without fear of losing business.
- Uniqueness: If a supplier provides a unique product or it's not easy to find a substitute, it is more dominant. Businesses can't easily switch to another supplier.
- Switching costs: If it's costly or time-consuming to switch suppliers, then they have more power. Businesses are less likely to switch, even if prices increase.
- Forward integration: If suppliers can move into the buyer's industry, they have more power. They already have access to the necessary supplies, making it difficult for their former buyers to compete once they decide to enter the market themselves.
- Industry importance: Some sectors are tightly intertwined, such as automotive suppliers and the major auto companies or the semiconductor and tech industries, which can balance the power between the suppliers and those in the sector. This is because the supplier needs these buyers to do well so that it can, too. When a supplier can just as easily sell its products elsewhere, that gives it a great deal more power.

4. Customer Power

When customers have more strength, they can exert pressure on businesses to provide better products or services at lower prices. This force intensifies under certain conditions:

- The number of buyers: The fewer the buyers, the more they have power. In sectors like aerospace manufacturing, each major airline, the industry's customers, has significant leverage in negotiations and can demand favorable terms because the sellers depend on their business.

- Purchase size: Just like you head off to the big box stores to buy in bulk for a cheaper per-unit cost on whatever now fills up your garage, major retail chains like Walmart Inc. (WMT) buy in large volumes and can negotiate better terms and discounts.
- Switching costs: In industries like telecommunications, where it's easy for consumers to switch providers, companies such as Verizon Communications, Inc. (VZ) and AT&T Inc. (T) have to offer competitive terms.
- Price sensitivity: In the fast-fashion industry, where customers are highly price-sensitive, brands must keep their prices low to attract cost-conscious consumers.
- Informed buyers: In many sectors, the customers are savvy, know the competitive terrain well, and thus can negotiate better prices.

Porter chose the metaphor of forces because they aren't static, so business must constantly adjust their strategies as forces in an industry change.

5. Threat of Substitutes

When customers can find substitutes for a sector's services, that's a major threat to the companies in that industry.2 Here are some ways that this threat can be magnified:

- Relative price performance: If the cost of a substitute is lower and its performance is comparable or better, customers are likely to switch to the substitute. For instance, streaming services like Netflix became a substitute for traditional cable TV, providing a lower price that soon threatened the cable industry.
- Customer willingness to go elsewhere: The threat is high if buyers find it easy to switch to a substitute. For example, in the early 2010s, customers found switching from taxis to ride-sharing apps like Uber or Lyft cheaper and easier.
- The sense that products are similar: If buyers perceive that there are few differences between your product and a substitute, even if there are, they may be more likely to switch.
- Availability of close substitutes: Though this sounds the same as the last bullet point, you have to strategize differently around it. There are times when potential substitutes are very different from a company's products but consumers still treat them as the same. But in other cases, there are genuinely similar products in the market and the threat of substitutes is high, such as between brand-name and generic medications.

Competitive Measures

When published, Michael Porter's framework marked a departure from the then-dominant models of business strategy, steeped in classic competition theory.4 Those models, still echoed in Economics 101 textbooks, rested on several key, if questionable, assumptions: markets as arenas for many small firms with no significant market power, homogeneous products, perfect information symmetry, and no barriers to market entry or exit. While helpful for learning basic principles, this idealized view could be taken to an extreme when strategizing with neatly constructed supply and demand curves, assuming, for instance, new market entrants would stabilize rising prices by increasing supply.

Business strategists need to deal with sectors where information asymmetry, product differentiation, and significant entry and exit barriers are common. Firms do have some control over prices, contradicting classical assumptions. In short, where economists assumed most markets acted like the model, for Porter, most firms are in industries with entrenched interests and different supplier and customer relations. They need strategies for dealing with anything but perfect competition.[5]

Mild-to-Intense Competition

Porter's five forces come together in different ways for any given sector. He labeled industry competition as ranging from "intense" to "mild," with profits harder to achieve as the intensity in a sector rises. In intensely competitive industries, all or most of the five forces have a strong influence.[1]

The fast food industry is Porter's own example, which still remains the case.[1] In this sector, there's a fierce rivalry among established players like McDonald's and Burger King, high bargaining power for suppliers and customers, and a relentless threat of new entrants and substitutes, all of which means profits are constantly getting squeezed for anyone in the sector.

Meanwhile, in "mild" industries, such as commercial aircraft manufacturing, there are weaker forces. Here, low supplier bargaining power, a minimal threat of new entrants, and a lack of direct substitutes (like commercial aircraft for long-distance travel) help form a sector more conducive to higher profits.

Applying the Model

Since his 1979 *Harvard Business Review* article, Porter has published many books on strategic analysis, including works where he has expanded on his five-force model. He's also become very concise in providing the specific steps in performing an industry analysis:[3]

1. Define the industry: The process begins with a clear description of the industry, helping you to focus your analysis.
2. Identify the key players: Specify and group the major actors in the sector into strategic categories based on relevant criteria.
3. Assess the strategic strengths: This means evaluating the firm and its industry to determine the better and worse strategies that can be applied.
4. Analyze the industry structure: This involves examining the overall structure of the industry, particularly the factors that influence how profitable it is.
5. Evaluating the competitive forces: Only once you've done the above does Porter advise doing a detailed analysis of the five competitive forces, assessing their positive and negative affects, and then looking forward to any changes in these forces ahead.
6. Identify the factors you have some control over: Here, you want to pinpoint aspects of the industry structure that could be influenced by competitors, new market entrants, or your firm. In sum, what can be changed?

Limitations of Five Forces Analysis, Market Demand Analysis

Five forces analysis is useful, but it has some limitations too. The description of five forces analysis provided by its creator, Michael Porter, seems to assume that competition is a zero-sum game, meaning that the amount of profit potential in an industry is fixed. One implication is that, if a firm is to make more profit, it must take that profit from a rival, a supplier, or a buyer. In some settings, however, collaboration can create a larger pool of profit that benefits everyone involved in the collaboration. In general, collaboration is a possibility that five forces analysis tends to downplay. The relationships among the rivals in an industry, for example, are depicted as adversarial. In reality, these relationships are sometimes adversarial and sometimes collaborative. General Motors and Toyota compete fiercely all around the world, for example, but they also have worked together in joint ventures. Similarly, five forces analysis tends to portray a firm's relationships with its suppliers and buyers as adversarial, but many firms find ways to collaborate with these parties for mutual benefit. Indeed, concepts such as just-in-time inventory systems depend heavily on a firm working as a partner with its suppliers and buyers.

Market Demand: Definition, Strategies,

Market demand refers to the quantity of a product or service that all consumers in a particular market are willing and able to purchase at a given price during a specific period of time.

It represents consumers' collective desire or need for a specific product or service. Market demand is influenced by various factors such as price, consumer preferences, income levels, availability of substitutes, and overall economic conditions.

The law of demand states that all else being equal, as the price of a product decreases, the quantity demanded increases, and vice versa. This relationship between price and quantity demanded is typically represented on a demand and supply curve, which slopes downward from left to right.

Market demand is crucial for businesses as it helps them determine the potential sales and revenue for their products or services in a given market. By understanding it, businesses can set appropriate pricing strategies, identify growth opportunities, and tailor their marketing efforts to meet consumer needs and preferences.

Why is market demand important in marketing?

It is crucial in marketing for several reasons:

- Estimating sales potential

It helps businesses estimate the potential sales of their products or services in a specific market. By understanding the level of demand, companies can gauge how many units they are likely to sell and plan their production and inventory accordingly.

- Identifying market opportunities

Market demand analysis allows companies to identify attractive market opportunities with high demand. It helps them determine which markets are worth pursuing, and investing resources is based on the size of the potential customer base.

- Developing targeted marketing strategies

Knowing the demand helps businesses design targeted marketing strategies to reach the right audience. By understanding consumers' preferences, needs, and behavior, companies can effectively tailor their marketing messages and promotions to resonate with potential customers.

- Product development and differentiation

Market demand data aids in product development and differentiation. Businesses can identify gaps in the market and develop products or services that fulfill unmet needs or offer unique features, setting themselves apart from competitors.

- Pricing strategy

It is a critical factor in determining the pricing strategy. Companies can use demand elasticity (the responsiveness of demand to changes in price) to set optimal prices that maximize revenue and profit.

Difference between individual and market demand

Individual demand refers to the quantity of a product that a single consumer can buy based on their preferences and income. Market demand, on the other hand, represents the overall quantity of the product that all consumers in a market are willing and able to buy.

Individual demand is specific to one consumer, while the demand combines the demands of all consumers in the market. The same factors as individual demand influence market demand, but it also considers the number of consumers in the market.

Market demand is important for businesses to understand customer preferences and make strategic decisions.

Strategies for assessing market demand and staying relevant

Here are some effective strategies to help you understand market demand and maintain your competitive edge:

- Choose the target audience

Although it can be tempting to throw a wide canvas and try to capture as many consumers as possible, target marketing techniques are much more effective. Online marketing and advertising campaigns may eventually appeal to a wider audience, but the prospecting phase must be focused on the most likely potential investors and consumers.

Inventors, entrepreneurs, and marketers must ask themselves a series of questions relative to their focus audience and the service they are proposing. Discovering the most appropriate end users and their overall ability to pay for the service determines if the product will be affordable for the target audience to purchase. Desirability and willingness to purchase must also be assessed in the intended audience.

This marketing technique is one that must be routinely practiced and carefully reviewed. Changing demographics and intended use of a particular service or product can be a surprise for online marketers. The most successful businesses are the ones that have the ability to adapt to change and reinvent themselves according to the end users.

Because the intended audience is likely to grow and expand in response to a viable product or service, advertising campaigns, and methods may also need to change in response to the updated market demand research results. The importance of constantly collecting and reviewing data from various sources cannot be overstated.

- Assess the data

Selecting the focus audience allows researchers to obtain relevant customer preferences and behavior data. Those data points must be swiftly and accurately assessed to determine if the results indicate enough motivation in the marketplace to continue introducing a new service.

Data can be somewhat fickle in an ever-changing market where technology makes new products and services available almost daily. Strong evidence that a target market is both receptive and willing to pay the going rate for service must be present before the research and development phases commence.

If these proactive measures are not taken before the product is available on the market, one of two unpleasant results will be required. The product will either have to be sold for a lower price or offered in combination with another product or service.

Either of these options will end up costing the producer more than they intended and may not even produce the intended results. When a service, rather than a product, is at stake, the results have a similar, but less impacting, effect. Services typically require less initial investment for producers and more room for profit after production is complete.

The personal services industry requires a little more start-up than talent, a business card, and a business plan. Marketing personal services is easy because consumers can match a face to a company name or a particular service industry.

Marketing internet services is more complex because the items for sale are less tangible, and consumers may be inundated with other offers. Viable businesses and service providers must be able to effectively compare their products and services to those already in the marketplace.

- Face the competition

Taking an honest look at the closest competition is not an easy process, but a new business or service provider must anticipate their position in the market. Analyzing the marketing approaches of a competitor is just as important as reviewing their actual products or services.

Newcomers to the market can determine what worked for the competition and learn from their mistakes as well. Service providers have a challenging time influencing customers away from other business entities that have already established brand loyalty or consumer relations. Successfully breaking into this niche requires additional market research.

This time, however, service providers will be evaluating their competition rather than potential consumers.

Effective customer relationship management must be a genuine effort backed by the service provider's full support. Effective communication in today's technologically advanced marketplace requires a strong online presence.

Drawing from the consumer market research efforts for gauging customer interest, service providers and online marketers can utilize the strengths of social networking to attract and retain new customers. This marketing platform can be astoundingly effective and continuously profitable when it is properly maintained.

- Stay relevant

Testing the market before introducing a new service provides a solid foundation for a manufacturer or service provider to build an empire. Since new businesses are emerging nearly every day, online marketers and market researchers caution their clients about the dangers of becoming complacent.

Every industry is subject to an uprising of unexpected competition and the possibility of becoming irrelevant in the current marketplace. To avoid the likelihood of extinction, online marketers should constantly conduct market analysis and suggest changes based on the current climate.

Social media accounts should always be closely monitored so that customer questions, concerns, and blog comments are promptly acknowledged and addressed.

Another aspect of remaining relevant in the fast-paced world of technology and telecommuting is the ability to stay ahead of the pack. Scouring the internet for popular themes, user feedback, and customer comments allows any business or service provider to retain a competitive market.

Innovative technologies and solutions help struggling business reach their full potential and help to excel businesses the chance to remain at the forefront of their specific industry. These proactive measures require consistent efforts to ensure the pulse of the market is still receptive to the existing product.

When changes are necessary, they can be quickly implemented according to consumer feedback so the products and services always remain in high demand.

How to conduct a product demand analysis in 5 steps

Product demand analysis shouldn't be wild guessing: it's building a solid foundation of knowledge and structuring your research on top of that- and it's a fundamental part of market research for new product development. Here are the steps:

1. Define your market
2. Assess the maturity of the market business cycle
3. Identify your market niche
4. Calculate market growth potential

5. Evaluate the competition

Define your market
Who could you be selling to, how much do those people have to spend, and who are they currently giving their money to? Those are crucial questions to ask when defining your market.

Defining your market shouldn’t just be done in words, by explaining personas or target audiences – the numbers are crucial to this.

Depending on the goal of your product demand analysis, you could also look at secondary markets for this part of your research. There might be some ground you could cover in markets where your product would be used by people who are not in your primary target audience.

Assess the maturity of the market and business cycle
Some products seem to have an endless life cycle. The oldest beer brewery has been around since 1040, and we’re still drinking it – even though many other alternatives have entered the market. But there are also breweries that have gone bankrupt. What’s up with that?

The market and business life cycle are two important things to analyse. First of all, you want to get an idea of how steady the market is. Will you be entering a market that is in the growth phase, is it mature and stable, or is it heading towards decline?

The same should be done for your business: how mature is it? It’s important to make this a part of your product demand analysis. If your market is growing but you can’t keep up, how will you deliver enough products to actually be profitable?

Identify your market niche
Your market niche is the sweet spot of where there’s potential to enter and where you would be able to deliver. Not only in terms of physical products or practical services, it should also be a match when it comes to values and USPs. Consumers aren’t just looking for products, they are looking for brands they connect with.

When doing a product market analysis, it’s important that you are specific and don’t paint a better picture by looking at the entire market, or too large a part of it. Eventually, you will have to choose a targeted message that will not speak to everyone in the market: keep this in mind when defining the real size of your market.

Calculate market growth potential
Now you have the data on the current situation: time to look into the future. To do that, we’ll start by going to the past.

How has the market share been divided among your competitors ever since the market came to exist? What events and products affected these changes in the division? What was happening in related or similar markets in the same time period?

Based on this information you can try to pinpoint patterns and find opportunities for growth in the future. Also keep societal factors in mind, like wages and costs of other possibly related products, and changes in tax.

Evaluate the competition

Chances are, your competitors are also performing some kind of product demand analysis while you are too. Maybe they also have a new product in mind that they want to launch, or they're trying to increase their market share another way.

Look at how they went about their previous product launches and how this was received by your target market. How were the sales numbers? What could you learn from them?

You can keep an eye on what's being said by and about your competitors using smart competitor tracking tools.

Unit 12: Evaluating Industry Trend, Market Demand, and Business Needs

A technology leader, or tech leader, is responsible for creating the vision that drives the development process forward. In addition, they're the ones who guide the other team members throughout the process.

As you can imagine, the tech leader has to play many roles to help the team achieve success. They might end up acting as software engineers, architects, or team leaders. As such, strong interpersonal skills and the ability to multitask are high on the list of qualifications.

Technology steward overview

Technology stewardship is a leadership role that almost any practitioner can assume. In this role, a technology steward is someone who works with a community of practice (COP) to encourage the adoption and use of digital technologies for communications, training, and knowledge transfer. Technology Stewards need to know how to engage their community members to identify opportunities and challenges; they need to be able to acquire and configure appropriate digital information and communication technologies (ICT) platforms to support innovative practices; and they need to be able to evaluate and report the outcome of their efforts back to the community and to organizational sponsors. Technology stewardship is not the same as 'IT support'. It is a leadership role intended to help members of a community of practice to better understand and make informed choices when incorporating ICT for communication and knowledge sharing.

Technical Leadership Skills

A technical leader's skillset has two components. One pertains to technical skills, and the other pertains to management skills. Most technology experts develop varied technical skills, but only a few develop a taste for management.

Technical Skills

Possessing technical skills means you have in-depth practical and theoretical knowledge of your technology stack. Technical leaders are often responsible for mentoring or coaching developers on technical matters, including reviewing code and design.

Technical Guidance: You'll likely participate in high-level and architecture discussions and then translate that vision to your team members. You'll educate the team on the reasons for the technical decisions. And also ensure the team effectively implements the solutions.

Technical Decisions: It's important to ensure everyone in the team has a voice in technical decisions. However, during a conflict, a technical lead should make the final decision to progress the team forward.

Coding: Many tech leaders struggle to find a balance between their coding and non-coding responsibilities. Either they continue to code full time or stop coding at all. As a technical leader, it's important that you don't neglect technical activities.

Code Reviews: You shouldn't review every change to the codebase, but a technical leader might want to do code reviews for junior developers or new hires to mentor them. It's important that you take a coaching approach and explain everything clearly, such as why a certain approach is good and why you're doing something in a particular manner.

Operational Excellence: The technical leader is responsible for the performance of the team. This could include measuring the investment of time and resources on certain projects or managing cycle time and pull request size. This means you'll want to have tools like LinearB that provide observability, alerting mechanisms, and performance metrics to help you improve your dev team's productivity.

Management Skills

Other crucial skills of being a tech leader are management-related skills. Some developers have no interest in exploring management responsibilities. Others will naturally begin to demonstrate the following skills necessary for promotion to a technical leader.

Project management: A leader has to take responsilibity for the planning and execution of work and managing their team's time. Technical leaders are often looking at work from a long-term, high-level perspective.

Crisis management: Every leader has good days and bad days. The more successful leaders are calm under pressure, and appear to always be in control and able to steady the ship, even in the most stressful situations.

Problem-solving: Rather than just identifying problems, technical leaders need to actively contributing to implementing solutions.

Have a likable personality: Building meaningful relationships is a key responsibility of a leader. Tech leaders and team managers must establish trust with both company leaders and the team members they'll work with on a daily basis to achieve team and company goals.

Technology Assessment:

Definition: The systematic evaluation of the characteristics, performance, and potential impacts of existing or emerging technologies.

Process:

Assess current technological capabilities and limitations.

Evaluate the relevance of technology to organizational goals.

Analyze the environmental, social, and economic implications.

Consider risks, benefits, and ethical considerations.

Purpose:

Informed decision-making on technology adoption or modification.

Identify areas for improvement and innovation.

Understand potential impacts on stakeholders.

Technology Forecasting:

Definition: The process of predicting the future development and adoption of technologies based on current trends, data analysis, and expert opinions.

Methods:

Trend Analysis: Examining historical data to identify patterns and extrapolate future trends.

Expert Opinion: Consulting industry experts and professionals for insights.

Scenario Planning: Creating multiple future scenarios and assessing their likelihood.

Simulation Models: Using mathematical models to project technological developments.

Purpose:

Anticipate technological advancements for strategic planning.

Mitigate risks by preparing for potential disruptions.

Identify emerging opportunities for innovation.

Challenges:

Rapid technological change makes accurate forecasting difficult.

External factors like regulatory changes and societal shifts can impact predictions.

Balancing short-term needs with long-term strategic goals.

What does technology assessment mean?

A technology assessment provides foresight into futuristic technologies, thereby helping organizations decide whether to implement them or not. Technology assessments are carried out to understand the potential of new technology by evaluating its effect on the firm and the environment in which it operates. Besides revealing its wide-reaching implications, with all its opportunities, possibilities, challenges, and threats, it acts as a starting point for formulating R&D roadmaps.

The data sources that a technology assessment leverages:

- Proof of concept and prototype specifications
- Inventor, assignee or founding team members and composition
- Patent publications
- Company announcements
- Scientific research papers
- Market incidence, growth, and penetration data
- Market opportunity and outlook estimates
- Customer segmentation, profiling, and journeys
- Customer wants, needs, and demand-mapping
- Touchpoints, pain points, and gain-points

Steps to conduct a technology assessment

1. Technology discovery

This step evaluates the technical merits of the technology. It moves beyond the novelty to determine its ability to provide a competitive advantage or meet a need.

2. Compare with alternative technologies

This step addresses the question of whether the technology does the job better, cheaper, or faster than alternative technologies. This step is crucial, as it not only offers competitive insight but also reveals a technology's disruptive capabilities and ability to displace existing solutions.

In most cases, where innovations are category-defining and lacking precedent, a more thorough analysis of the prospects, suspects, and willingness to pay among potential customers should be conducted. Moreover, it highlights whitespaces that could eventually lead to red-ocean or blue-ocean strategies to realize the commercial opportunity linked to the novel invention and/or solution developed.

3. Technology adoption trends

This step concentrates on exploring the utility of the technology for a specific purpose, allowing firms to identify technology potential areas, technical progress, and innovative activity.

Which industries are primed to benefit from the technology the most? What value, benefits, complexities, and peculiarities are known to be experienced by its adoption? These are some of the questions that this step of a technology assessment addresses.

Besides helping the firm in gain an outside-in perspective of the technological developments within an industry, this step also reveals the strategic directions being taken based on patent analysis and qualitative and quantitative research.

4. Future application forecasting

What is the future of this technology? How is it likely to develop? These are some of the broader questions that this step addresses.

There is a vast amount of information on vertical integration, related diversification, unrelated diversification, and moves towards digitization or international forays that can be unearthed just by tracking the technology.

5. Market analysis

This step helps gauge the market conditions for a certain technology. For example, organizations can determine how likely the market is to accept the technology by considering its efficacy and the problems that can be ameliorated by its application.

In addition to determining the market readiness for a technology, a market analysis also uncovers market saturation, potential adoption, penetration, and the expected top-line growth and the bottom-line impact that is usually not evident. These details also reveal the product and technology life cycles and the obstacles linked to market entry.

As a result, companies can take measures to overcome potential barriers and develop better go-to-market strategies for both innovative as well as established products, technologies, and solutions.

6. Organizational fit

This step answers how a particular technology integrates with the organization. What steps will the firm need to take to utilize the technology best? How will it impact employees and existing offerings?

Analysts evaluate the fitness of the technology in terms of the value it can create, the uniqueness of its value proposition, and the impact of the technology when combined with existing resources and the readiness of the organization, to create a lucid roadmap for its implementation.

Adopting Project management methodologies from different industries

There are a variety of **project management** methodologies you can implement, but no obvious favorite across industries. To help you choose, we’ve outlined 10 project management techniques that have had proven success, and the types of situations for which they work best. It’s up to you to decide which one can provide the strongest framework for your organization.

1. Waterfall

Waterfall is one of the simpler strategies to implement and is ideal for short, uncomplicated projects. This strategy is linear and sequential—simply list tasks sequentially and check them off as you go. A task cannot be initiated until the previous one is complete, and you cannot return to a previous task. (Done is done.) For the Waterfall project management methodology to be successful, tasks must include every step that needs be accomplished and arranged in a logical, chronological order.

2. Agile

Agile is a common project management methodology based on fast, continuous improvement. Originally popularized by software developers, this strategy has been adopted by all types of teams and industries. Agile uses sprints, which are short project cycles, to continually release enhancements to products or services. The flexibility of sprints allows for last-minute changes and can result in a higher quality deliverable. Agile is best suited for project teams that need flexibility and speed (in comparison to Waterfall, which is ideal for teams that need a clear, fixed plan).

3. Scrum

While Agile is more of a set of guiding principles, Scrum works within the Agile framework to provide a specific set of rules for project management. This includes processes for identifying tasks, resources, completion dates, etc. Scrum is designed for fast delivery, with rapid feedback cycles and responsive change. Close collaboration is a primary element of this approach—teams work on sprints together and have short, daily standup meetings to report on progress. Each sprint must produce a usable product. Scrum is an iterative methodology largely used in the software industry for product development, but can also be applied to smaller projects that involve a high level of productivity and require intensive refining.

4. Critical Path

If you need a methodology that helps you understand the interdependency of resources, Critical Path Method (CPM) is a useful **project management strategy.** This approach involves gathering all the required activities needed to complete a project and sorting them by duration and dependencies. For example, a project to publish a software update would include an activity to write the technical documentation, which should take 6 hours and is dependent on finalizing testing. Using CPM makes it easier to see critical and non-critical relationships (paths) between tasks and set timeframes for completion. Originally created in the 1950s for missile defense construction projects, CPM is best suited for big initiatives that depend on a variety of resources interacting in complex ways.

5. Critical Chain

While CPM is built upon task order and resources, Critical Chain Method (CCM) extends this project management strategy to factor in resource *availability*. CCM develops a hierarchy of activities and work streams based on access to resources. A primary tactic of this strategy is to add buffers to the "task chain" to account for resource scarcity and protect the project schedule. While CPM is ideal for project teams who want a straightforward sequence of tasks and estimated duration of activities, CCM is better for teams who need to prioritize tasks by resource renewability and the minimal time needed for completion (with a buffer added).

6. PRiSM

An acronym for "PRojects integrating Sustainable Methods," PRiSM is a project management methodology that focuses on socially responsible development. Casually speaking, it's also called eco-friendly or green project management. While a typical project management tool focuses on due dates and budgets, PRiSM also considers long-term sustainability with a goal of reducing any negative environmental, economic, and social effects caused by the project. The PRiSM method is primarily used for large real estate development, construction, or infrastructure projects.

7. PRINCE2

PRINCE2 (PRojects IN Controlled Environments) is the standard methodology of the U.K. government, but has been implemented by other industries and companies as well. PRINCE2 is based on consistent processes, controlled stages (beginning, middle, end), properly allocated resources, regular progress reviews, and alignment with business justifications. A board oversees the project while a project team executes the plan (essentially separating the decision makers from the doers). This tactic is best suited for larger organizations, where extensive documentation and process management is required. For example, a recent case study showcases how Vocalink used PRINCE2 to develop a real-time money transfer system between banks in the UK.

8. Kanban

Invented by Toyota in 1953, Kanban is a project management methodology that moves tasks along stages of a defined workflow in assembly-line fashion. This methodology is a subset of Agile, but is more flexible, with efficiency being the primary goal. Kanban uses a “board” view to map and visualize team progress on tasks. There is a continuous flow of work, with backlogs being tackled by order of importance. Kanban is ideal for teams that need constant output on a project and want to maximize efficiency (for example, you can leave tasks undone if others take priority). The strategy is popular with product development teams as well as automakers.

9. Lean

Aptly named, Lean is another form of Agile project management that targets how to do more with less. Both Agile and Lean divide projects into smaller tasks for individual execution. From there, Lean adds streamlined workflows to each part of the project in an effort to remove any excess efforts. There’s an emphasis on standardized processes to help drive continuous improvement and maximize efficiency. This project management technique is ideal for small teams who have tight budgets or other constraints, yet still need to deliver significant value.

10. PMBOK

Not technically a methodology, Project Management Body of Knowledge (PMBOK) is the Project Management Institute’s entire collection of processes, best practices, terminologies, and guidelines. PMBOK is the ultimate guide to project management standards for any industry and outlines five major process steps: initiate, plan, execute, control, and close.

Build in time to experiment and fail,

Building in time to experiment and fail is a deliberate and strategic approach that organizations can adopt to encourage innovation and learning. Here are practical steps to implement this concept:

Designate "Innovation Time":

Allocate a specific portion of employees' work hours or a set period during the week or month dedicated solely to experimentation and creative exploration.

Create a Safe Environment:

Cultivate a culture where failure is viewed as a learning opportunity rather than a negative outcome.

Ensure that employees feel safe to share their experiments and failures without fear of retribution.

Set Clear Objectives:

Establish clear goals for the experimentation period to guide employees in their creative pursuits.

Clearly communicate that the primary focus is on exploration and learning, not immediate success.

Provide Resources:

Allocate necessary resources, such as time, budget, and tools, to support experimentation.

Ensure that teams have the means to explore ideas without unnecessary constraints.

Encourage Cross-Functional Collaboration:

Foster collaboration between different departments and teams to bring diverse perspectives to the experimentation process.

Cross-functional collaboration can lead to innovative solutions that might not arise within individual silos.

Document and Share Insights:

Encourage employees to document their experiments, including successes and failures.

Share these insights across teams to promote knowledge sharing and prevent repeated mistakes.

Celebrate Learning Moments:

Recognize and celebrate the learning moments that arise from both successful experiments and failures.

Highlight the positive aspects of the experimentation process, emphasizing growth and development.

Provide Training and Development Opportunities:

Offer training programs or workshops to enhance employees' skills and knowledge.

Link these programs to the lessons learned from experimentation, promoting continuous improvement.

Leadership Support:

Leadership should actively endorse and participate in the experimentation process.

Leaders can set an example by sharing their own experiences and lessons learned from failures.

Iterate and Refine:

Use the insights gained from experimentation to iterate and refine both processes and products.

Emphasize the importance of incorporating feedback into future initiatives.

Feedback Mechanisms:

Establish feedback loops to gather input from participants and stakeholders.

Use feedback to adjust the approach to experimentation and improve the overall process.

Taking the management out of project management

Use case.

Unit V completed.