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Entrepreneurship

Lecture 7

Chapter
11

Encouraging Concept Development

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Chapter
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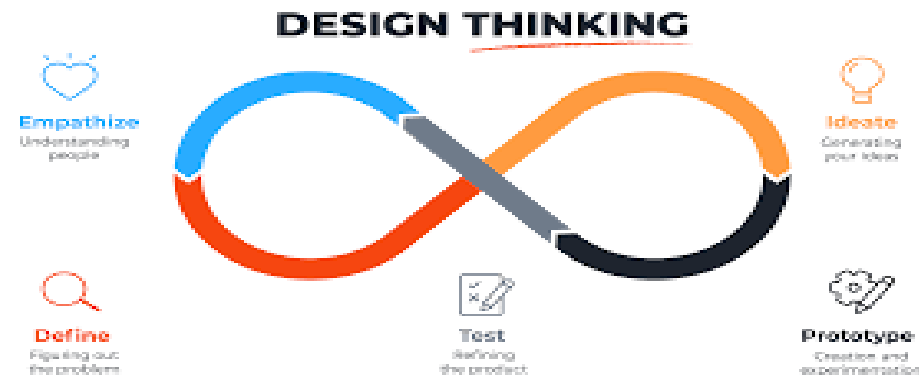
Encouraging Concept Development

LEARNING OUTCOMES

- Understand and explain the design thinking approach to new product/service development and its relationship to lean or agile start-up methodologies;
- Understand the risks facing the launch of a new product or service and how the concept of affordable loss can limit this;
- Understand how SMART performance metrics can be set and used to monitor the success of a new product or service launch;
- Critically analyze the criteria used to assess commercial viability of a new product or service at initial screening;

Design Thinking

- Coming up with a business idea or innovation is only the first step in the journey towards launching it onto a market.
- There will be many blocks and many blockers along the route - all of which have to be dealt with. Some of these will relate to how the new product /service fits into the company's existing portfolio. Some will relate to the costs of its development or whether there is a proven market for it.



- Design thinking (also called **customer-centric design**) is a different lens that is worth using to **look at a new business idea**. It is associated with agile or lean start-up methodologies, which are low-cost ways **used by entrepreneurs** to help **identify market demand and refine a product** /service so that it better meets the needs of the market. Applied to new projects being explored by entrepreneurial companies, they can **help reduce the costs and risks associated with bringing new products /services to the market**. They are particularly valuable when applied to **radical innovations**.

- Design generally is important as a way of identifying and differentiating a product and can be an important tool in both radical and incremental innovation.
- It is also an important weapon in the branding armory. **Good design** can help not only to improve the **functional performance** of a product, but also to make it **distinctive**. It can be aesthetically pleasing and conveys emotions that functionality cannot.
- However, '**design thinking**' is a term used to explain the **creative process** of finding solutions to problems from the **perspective of the user of a product**, rather than just creating distinctive objects or shapes. It is **a holistic way of thinking** rather than a clearly defined set of processes like the discovery skills

Design Thinking seven stage process:

1. **Define:** Identify the real problem to solve -not necessarily the obvious one - and define the design brief in a way that is unconstrained by existing solutions.
2. **Research:** Observe how people deal with the problem and how similar problems in different contexts are handled.
3. **Ideate:** Think 'outside the box' - look at the problem from different perspectives and come up with as many different ideas and options as possible. This may involve a multi disciplinary approach and periods of divergent and convergent thinking. Do not close down options too early. The stages so far are all concerned with finding a good idea - although not necessarily one that is commercially attractive.

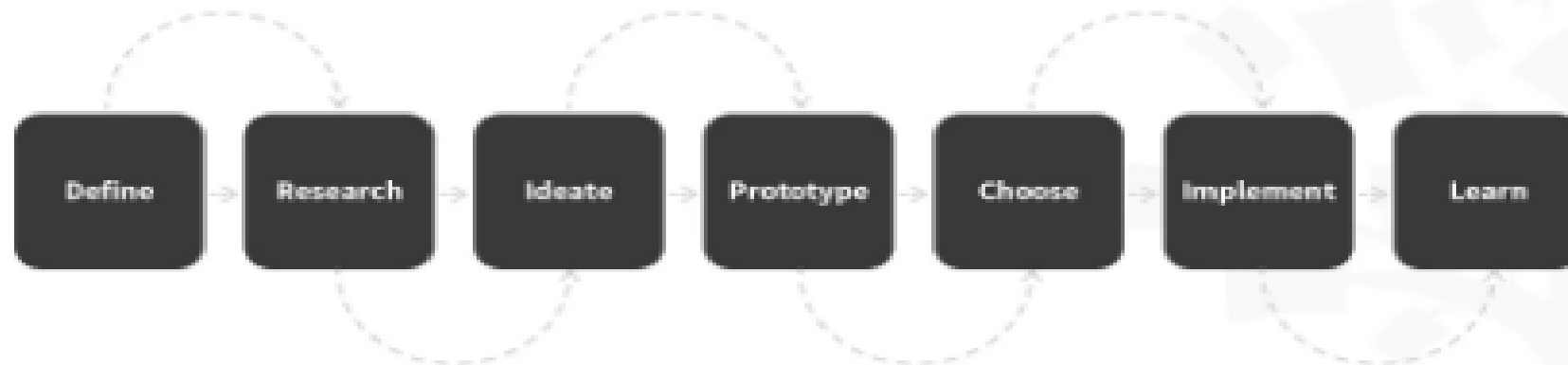
Design Thinking seven stage process:

4. **Prototype:** Experiment with prototype solutions to see which work.
5. **Choose:** This is a process of synthesis which helps select the one that works best or the ones that work best. Different solutions might be used to solve slightly different problems or meet the needs of different groups of people.
6. **Implement:** Try out the solution(s) and monitor effectiveness. Prototype solutions – both products and services -need to be tested, with iterations to develop and refine them.
7. **Learn:** Always learn from both success and failure.

Design Thinking seven stage process:

Design thinking is evident in the design of some high-tech products where software and hardware are integrated and made intuitive, simple and even pleasurable to use

Herbert Simon: 7-Stage Design Process



To achieve these ambitious objectives designers need to work in collaboration with users. This usually means that they need **to build something before they can observe how users interact with it.**

EX (Apple take as much care over the design of their packaging as they do with the product itself.)

It requires a **customer focus and a willingness** to learn from their needs and **constantly refine a product/service offering to better meet them.** The approach involves a number of principles, which are consistent with developing a coherent, integrated business model:

Empathy with users

- this goes to the core of finding a commercial business idea - understanding customer needs and finding solutions to the problems they face. These needs are both functional and emotional (heart and head). Companies like Samsung achieve this, in part, by sending designers out to see how customers use their products.

SAMSUNG

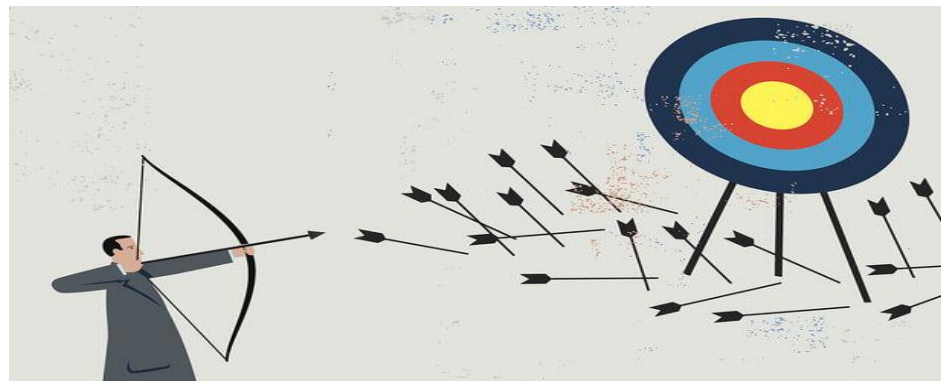
Discipline of prototyping

- this champions the use of prototypes to explore the effectiveness of potential solutions to problems. Kolka (2015) remarked that companies following this approach 'aren't shy about tinkering with ideas in a public forum and tend to iterate quickly on prototypes:



Tolerance of failure

- **innovation is risky** and, as is the case with brainstorming, generating new ideas is a numbers game. **The more ideas there are, the more likely it is that at least one of them will be a good one**, yet that involves generating many ideas that are not. **Failure is therefore to be expected in an organization that is innovating**. Indeed, if a company generates no business ideas that fail, it is probably **not generating sufficient business ideas**.



Lean Start-up Methodologies

- Implicit in the design thinking methodology is the development and testing of a prototype.
- Throughout this process, there is a **constant measurement** of success (or failure) and feedback so as to learn from this and adapt the product or service.
- However, this **process involves costs**. These must be weighed against the risk of launching an untested product or service, one that is not attractive to customers and ultimately might fail. A good business idea has a window of commercial opportunity. Too early or too late and it is unlikely to be successful, and it will only have a finite life-cycle.

Lean Start-up Methodologies

- Delay the launch and you risk losing that window of opportunity that gives a 'first-mover advantage' in the market .
- Identifying the project risks associated with launching a new product or service, revolve around identifying the **specific shortcomings** in the product or service and its business model These result in insufficient sales being generated.

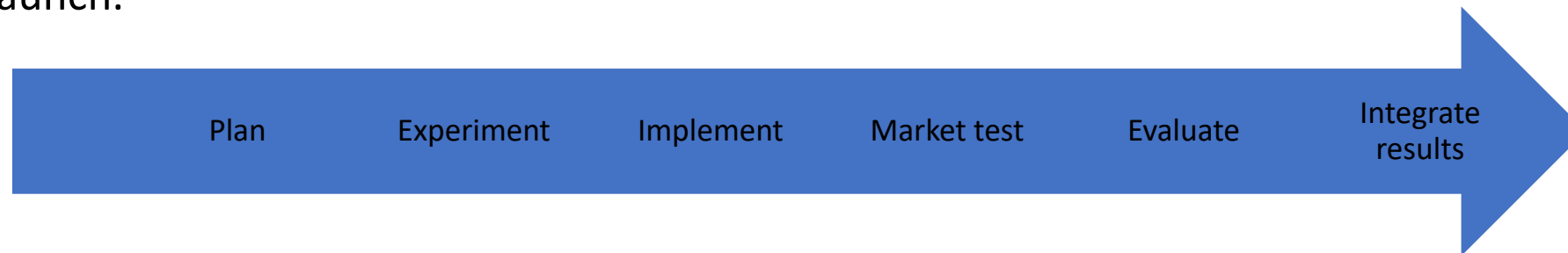
The Samsung logo is displayed in a bold, blue, sans-serif font, centered within a light gray rectangular box.

Lean Start-up Methodologies

- Market research and focus groups are likely to help with **incremental changes** to existing products/services. More radical innovations are more difficult since customers are often unable to understand how the new product or service might be used. If practical, what is needed is some form of limited market testing of the actual product or service and its business model. By collecting and analyzing this data the product /service and its business model can be evaluated and modifications made.
- **This approach gives the company that important first-mover advantage and minimizes costs whilst also, importantly, reducing market risks when the product or service finally reaches a wider market.**

Lean Start-up Methodologies

Ries (2011) developed what he called the lean start-up methodologies to address this problem. These were closely related to what has been called 'agile' methodologies, which were originally used by software designers, but have now found their way into other industries. **Rather than developing a fully-finished product /service, it is an incremental approach to development that involves a continuous process of planning , experimentation, implementation, market testing, evaluation and integration** of the results prior to proceeding to the next level of approval and development of a project - a continuous process until final launch.



Affordable Loss

The study found that whilst executives wanted to research opportunities and assess potential returns before committing resources, **the entrepreneurs were far more inclined to go to market as quickly and cheaply as possible and to assess market demand from that.**

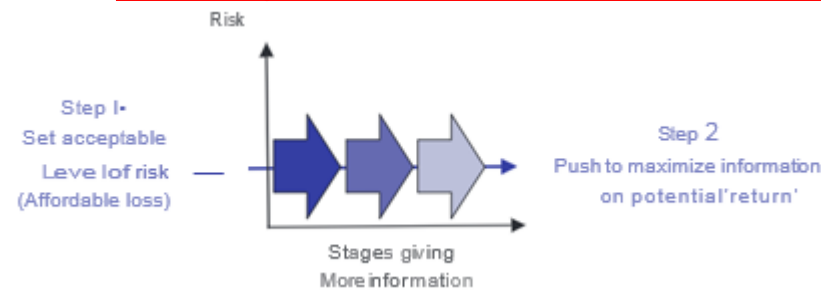
Setting an affordable loss and then running the project allows a company to evaluate the opportunities produced by this investment, rather than trying to evaluate the attractiveness of the predictable (or unpredictable) upside of the project from its very inception - the 'unknown -unknowns' The approach involves setting stages for a project, limiting the financial exposure at each stage, and **then deciding whether or not to continue based on the information gained at the end of that stage.**

- Associated with this approach is the concept of affordable loss, which entails entrepreneurs - or in our case the company - setting a loss or budget they can afford if the project proves unsuccessful and then launching the MVP to find out as much information as possible.
- The company decides on the project budget for each stage, depending on the loss they are willing to suffer, rather than trying to predict from the outset the risks and returns associated with the entire project. The company, therefore, does not have to worry about the accuracy of predictions at this point. Affordable loss can be set with certainty, depending on the situation.

Affordable Loss

a two-step process.

Firstly, set the acceptable level of risk by setting the affordable loss, then push to maximize the information gained about the returns from the innovation. This process might be repeated as more information is obtained and the MVP modified accordingly. **The final** 'return' can then be evaluated more accurately. This approach can be combined with networking and/or partnering to leverage up the affordable loss or budget, not only through money but through the other resources of the network or partners such as knowledge and skills, only finally using larger amounts of finance to develop a business model that best fits the project.



Risk And First-mover Advantage

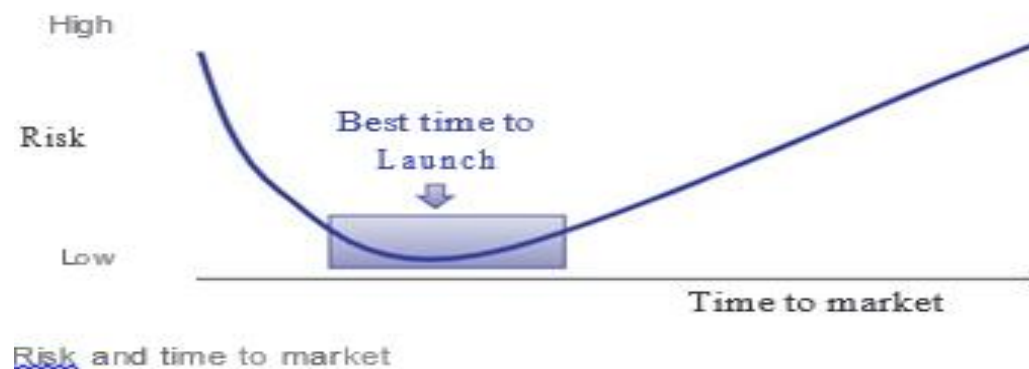
Launch timing for any product or service is critical, but this is particularly the case for something innovative.

Launch too late and first-mover advantage might be lost because there are already established competitors in the market.

Launch too early, however, and the market might not be ready for a product that is 'just before its time; meaning that customers need to be educated about it before it goes into full-scale production - leaving the education costs with the early entrant and an opportunity to launch late with a competitor.

Risk And First-mover Advantage

There is also the risk of the product or service or marketing strategy being ill-prepared or untested and turning customers against it, leaving the market wide open for competitors. Either way, **launching too early can often be even more disastrous than launching too late**. In addition, **every market is different**. It is often the case that products launched first in the USA will not find a market in other countries until years later. **Timing is crucial**, which leads us to the link between risk and the time taken to get to market

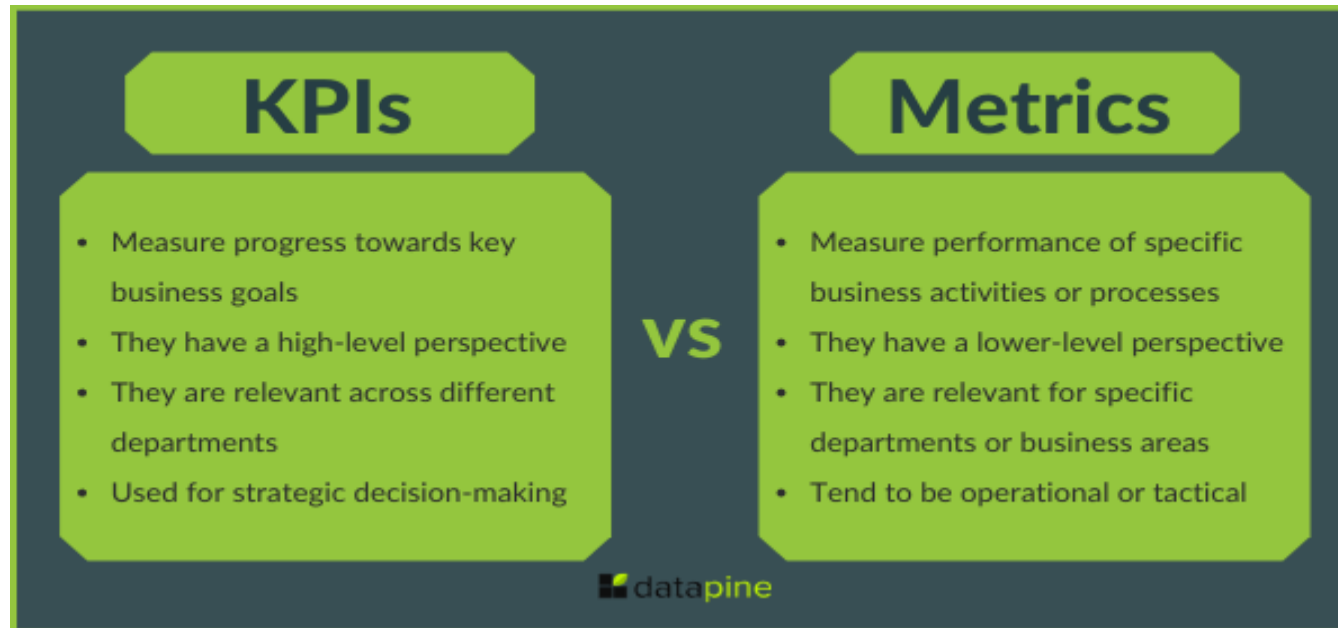


Setting Performance Metrics

- Testing an MVP means decisions have to be made about how the tests are conducted and the information required from them. It could be that success or failure is based on simple binary outcomes such as whether or not a certain key activity or objective is achieved (e.g., development of website by a certain date).
- However, it might be more useful to measure performance through degrees of achievement (e.g., number of website views over a period). These quantifiable measures of **performance are called performance metrics**. They can involve the measurement of operating or financial metrics (e.g., profit, resources, quality, etc.) by a target date or within a given time frame. They can be inward (e.g., sales) or outward (e.g., market share) focused.

Setting Performance Metrics

- Performance metrics for key activities are often called key performance indicators (**KPIs**) and can form the basis for bonuses for staff.



Setting Performance Metrics

Often **internet start-ups have focused simply on user numbers** rather than income generation and many well-known internet companies have achieved a **stock market listing without ever having made any profit.**

Like Ries (2011), Maurya was very much focused on internet start-ups and advocated the use of a metric that monitored 'traction' - 'the rate at which a business model captures monetizable value from its users' -in essence, linking the metrics to some target financial milestone(s). For example, an online magazine or newspaper could monitor webpage views as a key operational metric because they are directly linked to advertising revenue

Setting Performance Metrics

Performance metrics need to be 'SMART': **Specific for purpose; Measurable; Achievable; Relevant to the success** of the project and/or organization; **Time constrained**. Establishing a performance metric involves a three-step process:

1. Identify the process that needs to be monitored and controlled.
2. Establish the quantifiable outputs of that process.
3. Establish the targets against which to judge that performance.

Setting Performance Metrics

There may be a number of **lean/agile iterations or stages that are needed before a product or service is launched in the market**. Each stage may need its own performance metrics to judge success or failure and take it to the next stage. Each set of metrics must provide information to improve the product /service offering.

Associated with the lean start-up approach is the concept of pivoting, defined by Ries (2011) as a 'structured course correction designed to test a new fundamental hypothesis about the product, strategy, and engine of growth: This is where a company, based upon the validated learning it is obtaining from the limited launch, decides to make radical changes to its business model.

Concept Screening , Development And Testing

The screening process might also involve **screening for compatibility with the existing skills and competencies of the company as well as its existing product/market offerings** to ensure that the company has the **capability to produce and market the product /service**. Criteria used to evaluate this might include the operational relatedness and strategic importance of the project. A new product /service might be integrated into the existing company's portfolio.

This concept development cycle involves six stages, building on design thinking and incorporating lean/agile methodologies. The product /service development phase (stages 1 to 5) incorporates a screening process using market/industry research to test for commercial viability.

Concept Screening , Development And Testing

1. Initial screening: The first stage involves an initial screening of the idea.

Assuming that the idea is technically feasible initial screening should be against
two criteria:

Commercial viability	assessing commercial viability at this stage is a difficult task, especially for radical technology -based innovations New or growing market - it is always easier to launch a product/service into a new or growing rather than a declining market. Financeable - the company should have the resources needed for the project's development. Sustainability - the project must be built on solid foundations with lasting markets so that it has longevity. These might include CSR criteria.
Operational relatedness and strategic importance	'Does the organization have the skills and capabilities to undertake this project?' In asking this question it is important to define the organization in terms of its unique capabilities rather than just the industry in which it operates

Techniques For Exploring Product Inadequacies

- 2. Concept development
- If the initial screening proves the business idea is attractive the concept will have to be 'fleshed out' with more details about all aspects of the product or service - **its physical looks, how it might be delivered and marketed**. This may involve a **simple text description, a computer simulation and/or storyboarding - something that can be shown to prospective users or bosses to see how they react**. It should also involve minimal costs. Google provides a tool called Sketch up to help do this, but professional designers can help create story boards and sample videos and the work can always be outsourced. They can also use computer-aided design (CAD) systems to draw up more detailed models of a concept

3. Product/ service specification:

Once the concept has been 'fleshed out; the product /service needs to **be specified in detail**. These specifications form the basis for the MVP and should give some **indication of costs**.

The process of specifying the **product /service may result in changes to the detail of the concept design to reflect ease or cost of manufacture**, durability etc. For a service, the pro to type is likely to be, in effect, this specification.

Techniques For Exploring Product Inadequacies

- **4. MVP prototype development**
- As we have seen, developing a product prototype is a process of experimentation, where numerous iterations of an idea are created and tested to see whether or not they provide the desired result.
- The MVP prototype needs to have just enough **features to satisfy early customers**. This might be a website or a physical product with minimal functionality. It might be possible through digitally enabled simulations or through 3D printed prototypes. **At all times, practicality must be weighed against market needs and also what competitors are currently offering.**

Techniques For Exploring Product Inadequacies

5. Market testing

Underpinning the process is the constant need to check the commercial viability of the business idea or innovation. Start with key stakeholders before testing with potential customers. These checks, together with market /industry research, will influence the form of the proto type product or service.

The company will need to be assured that there is a viable market for it. Who are the customers and why will they buy the product /service? This begs the question about setting a price. The product /service may need to be modified to suit the price customers are willing to pay. Assessing commercial viability might be achieved through market research, focus groups or various forms of market testing.

Techniques For Exploring Product Inadequacies (Gap analysis)

6. Business model development

- This is the final pre-launch stage. With an MVP that potentially can be delivered at a commercially viable price, the next step is to map out the marketing strategy. This involves developing a full business model that can be market-tested, possibly through a limited launch of the MVP.
- The scenario planning technique outlined in Chapter 10 can also be used to construct possible future situations and help better understand how competitors might react to the successful launch of the product /service.

Techniques For Exploring Product Inadequacies (Gap analysis)

- **Non-metric mapping**

places products in **generic groups that customers find similar** and then tries to explain why these groupings exist. One classic example would be its application to the soft drinks market where products might be clustered and then described simply in terms of the widely-used generic groups, 'still' vs 'carbonated' and 'flavored' vs 'non-flavoured'. The key here is also finding the appropriate dimensions that create opportunities for differentiating the product. The mapping of soft drinks on the two dimensions of a perceptual map is unlikely to reveal any gaps in the market.

Estimating Market Size

- Throughout the concept development cycle the development team will be **seeking to establish the commercial viability of their new product /service**. This will depend on the costs involved and **the price they are able to charge, within the framework of the business model they decide upon**.
- However, it also depends upon the **size of the market they think they can capture**. Estimating the size of a new market created by disruptive innovation or market paradigm shift can be almost impossible. Even estimating the size of a segment of an existing market can be difficult. The market itself might be growing or declining and within it **some segments might be growing whilst others are declining**. Market research can provide only so much data.

Estimating Market Size

Inevitably, the final estimate will be based upon judgment and become a target for the company to aim for when the product /service is finally launched. For example, if you wish to introduce a new smartphone app, the fact that there are over 1billion smartphones worldwide is not entirely relevant. That market is growing rapidly. However, your app might be in English, which limits the market size, and it might be developed for only one operating system.

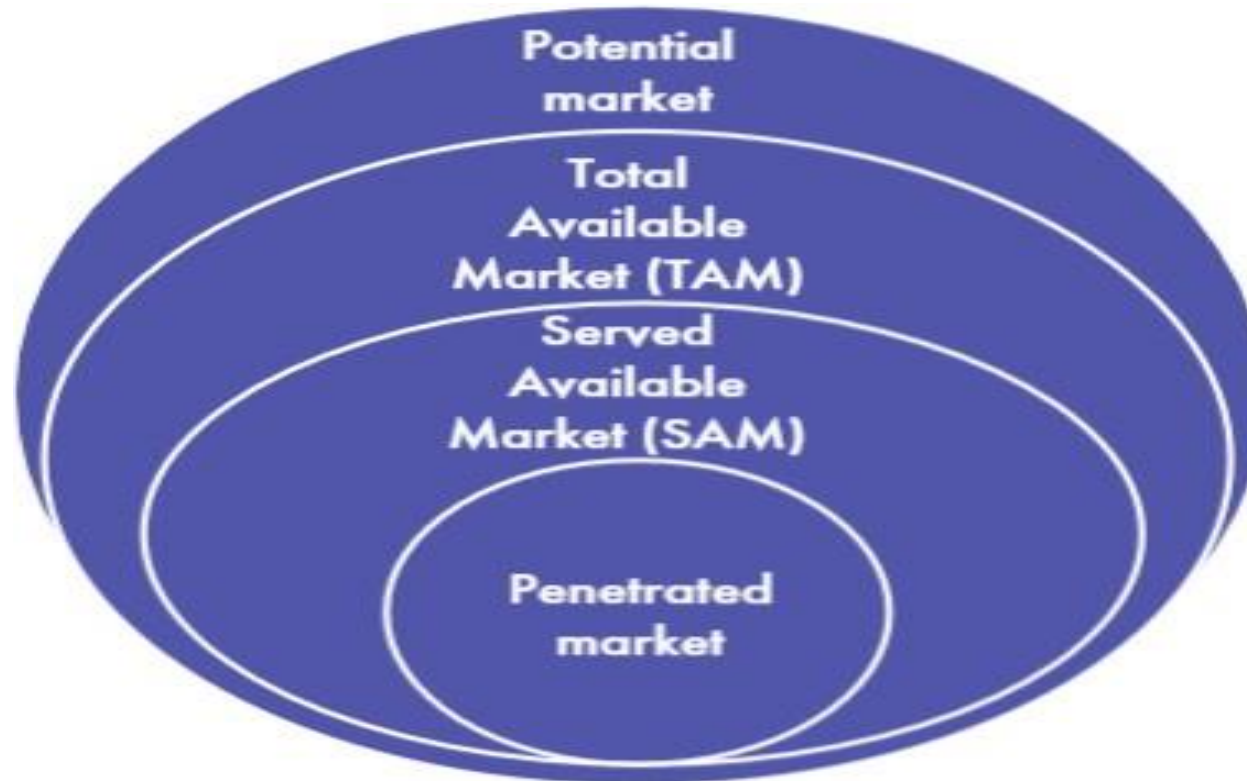
Estimating Market Size

Then there is the question of the channels through which the app will be sold. All of these factors limit the market that you are attacking - even before the question of whether you are likely to achieve your target market penetration . Market size can be estimated in either value or volume (units), but the distinction needs to be made between the different types of market

Estimating Market Size

1. **Potential market** - The size of a general market that might be interested in buying a product /service (e.g., 1billion smartphones);
2. **Total available market (TAM)** -The size of the prospective market - those customers in the potential market who might be interested in buying this particular product / service. This reflects the total sales of competing products (e.g., English apps for a particular operating system);
3. **Served available market (SAM)** -The size of the target market segment the innovationaims to capture within the TAM (e.g., particular app function);
4. **Penetrated market** - The size of the SAM actually captured at any point of time.

Estimating Market Size





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Thank You

