Technology Entrepreneurship is a vehicle that facilitates prosperity in individuals, firms, regions, and nations. A critical first step in the entrepreneurial process is "**Opportunity Identification**". An opportunity may be a chance to meet a market need (or interest or want) through a creative combination of resources to deliver superior value. From an economic perspective, opportunity is defined as perceived means of generating economic value (i.e. profit) that has not been exploited and are not currently being exploited by others. Identifying and selecting the right opportunities for new businesses are among the most important abilities of a successful entrepreneur. Major factors that influence this core process of opportunity identification and recognition are:

- Environmental trends
- Social networks
- Solving a problem
- Prior knowledge
- Personality traits
- Entrepreneurial alertness

Finally, Opportunity Feasibility Assessment (OFA) needs to be carried out by way of normalization of all influencing factors through an effective SWOT analysis, followed by process and technology readiness assessment, market and customer discovery and business case assessment to arrive at the Identified Opportunity and subsequently proceed for Opportunity Development.

Market Research

Market Research is a process of understanding a given market to explore if there is viable market for a given product created by a producer. This is a fundamental step every producer will need to do before investing on building a product. The research activity is an ongoing process as market continuously changes. It provides the data on:

- Current market performance and customer purchasing behaviour
- Future needs and changes to the product
- Data and information on economy

Method of Market Research

Primary research

- Gathering data directly from customers and market
- Methods used ranges from questionnaires, surveys and experiments
- Interviewing techniques are also important and sources can be internal or external

Secondary research

- Data is gathered through sources like internet from records like annual reports, analysts reports and third-party databases
- Other external sources include media reports, competitor reports and websites

- Cheaper compared to primary research, but accuracy is lower relatively

Information Gathering Technique

Observations: It is about observing customers closely and noting down their feelings, expressions, actions and attitude. This will help designing of a shop floor to optimize customer's journey and maximize convenience.

Surveys: It involve a questionnaire on specific subject, for example what kind of toothpaste would you prefer (fluoridated or non-fluoridated) and so on. Questions will be focused around getting customer preferences on a specific aspect of a product. There can be several surveys related to a single product and can be conducted in several mediums such as direct contact, telephonic, email and online (websites).

Sampling: It involves collection of data from specific set of customers to save time. Sampling technique plays important role in determining quality of the outcome. Some of the sampling techniques are Random sampling, stratified sampling, cluster sampling, quota sampling and snowballing sampling.

Market Segmentation: It divides the market into a meaningful divisions based on behaviour, pattern, tastes or future trends. For example, to sell non-fluoridated toothpaste, one should choose geography with high fluoride content in the local water bodies. So the segmentation should be done based on water body's fluoride content in each region. Then producer can have a better understanding of market segment that will receive the product well. Once the segmentation is done and appropriate audience/segment is identified, the marketing team will prepare unique offering (product) to the targeted customers. This attempt is called 'Market Positioning' of the product in the market. It's about target market, target customers and unique value proposition about product vis-a-vis competition.

Market Sizing: Purpose of market sizing is to understand the addressable market size which is relevant to the product we intend to sell. 'Market Forecasting' logically follows market sizing and involves various techniques that predict probable number of products/services, which can be sold in market of a given size.

Pricing is the prime consideration for most customers. A proper pricing strategy is essential to the success of a product in the market. Consumers will accept a price that convinces them the value they receive is more than what they pay. Pricing is largely driven by the purchasing power of the target market segment. Generally there are three pricing strategies:

- **Low Price Strategy:** Appeals to customer with limited budgets; Wide market; Could indicate compromises made in quality or low offerings
- **High Price Strategy:** Creates perceptions of high quality; Will need to focus on superior features and benefits; Elite Clientele
- **Differential Price Strategy:** Price based on the region, target market, size of sale (by volume), features (limited features at lower price, premium price for more/all)

Sales and Marketing plan is the most important pillar that ensures the commercial success of a product, the factor that means most to the organization & stake holders. It Guides how the product is being delivered to customers through regular review & revision based on changing market dynamics, planning and market projections.

Innovation Assessment
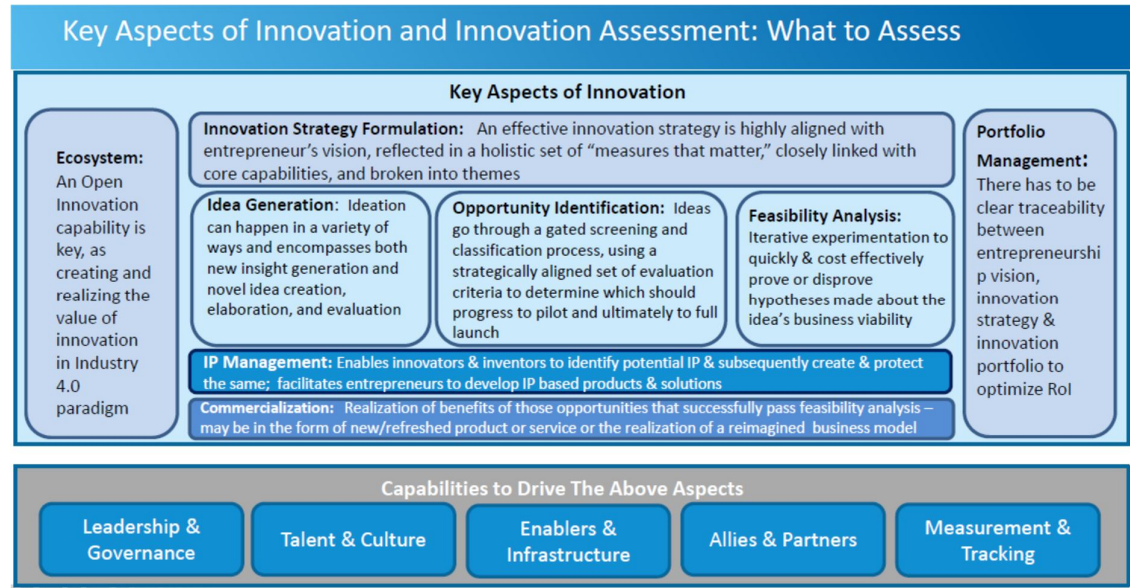
Appropriate innovation metrics enables an entrepreneur to monitor whether the effort is channelized for right kinds of activities to achieve the desired results. Measuring innovation can help the entrepreneur to:

- Mobilize right resource/s at the right time
- Hold people accountable for their actions and responsibilities
- Assess the effectiveness of innovation activities
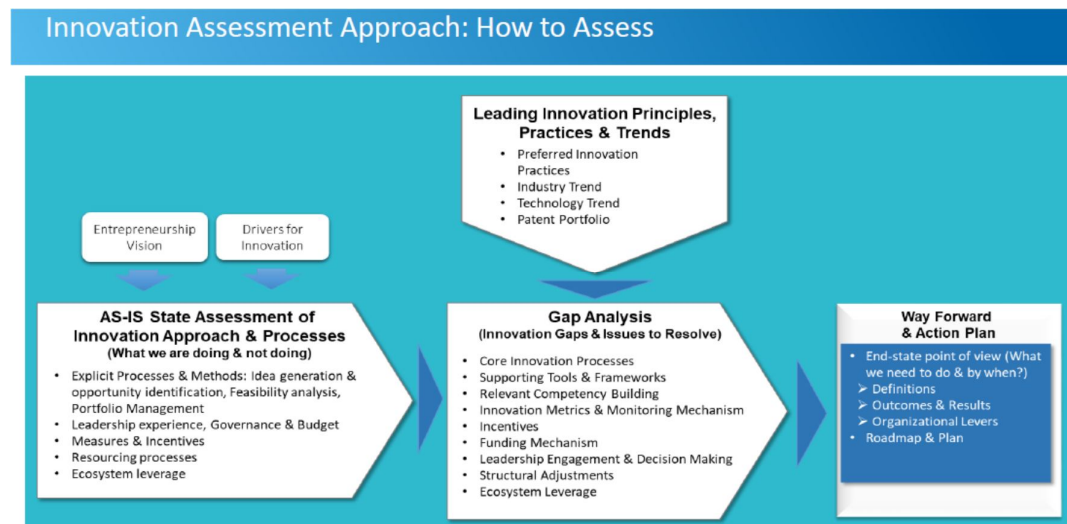
IP Asset: The value of an IP asset is proportional to its degree-of-exclusivity in a competitive market-place. This exclusivity comes through legal-rights as well as economic rights. Legal-rights provides the right-to-exclude and economic rights provides the capacity to influence the usage of the IP asset. For an IP asset to have a quantifiable value, it should:

- Generate measurable amount of economic benefit to its owner/user.
- Enhance the value of other assets with which it is associated.

IP assets do not have an absolute value. They may have different valuation results depending on how they can or will be put to commercial use and by whom. Key factors influencing the value of an IP asset:

- Valuation context
- Time
- Legal status
- External Variables
- Geographical Reach
- Financial aspects

 IP valuation is a process to determine the monetary value of an IP asset. An IP asset should pass through the following basic qualifying criteria before undergoing an IP valuation exercise:

- The asset must be distinctly identifiable and should have distinguishable description
- The asset should have legal existence, legal protection and capable of being legally transferred
- The asset is in existence for a definitive period or have emerged due to an obvious event
- The income from the asset should be distinctly noticeable as a contribution to the asset leveraged business
- The asset should be an independently selling entity in an enterprise
- The asset should have a end-of-life or a definitive period of existence

There is a problem with business plan for early stage start-ups. There is a possibility that by the time the document is ready, it might be already irrelevant or after one month in execution, the fundamental assumptions might be proven to be wrong.

Questions:

1. What does an 'opportunity' mean to an entrepreneur?
2. What is the difference between an 'idea' and an 'opportunity'?
3. List the major influencing factors for opportunity identification in technology entrepreneurship?
4. How do you finally identify an 'opportunity' in technology entrepreneurship? What is market research? Please explain some of the methods /techniques of market research.
5. What is Market segmentation? Explain with an example.
6. What is market sizing? Explain process of market sizing? Explain any one method in market sizing.

7. What are the characteristics of a High-Price and Low-Price product pricing strategy?
8. What are the characteristics of a Differential-Price product pricing strategy? Give some examples of the 'Pay As You Use' products that you can use at home?
9. Why an entrepreneur requires to assess any innovation-led venture? What are the aspects of innovation to be assessed?
10. How an innovation-venture to be measured? What should be the outcome of this assessment?
11. What are the key factors influence the value of an IP asset and why?
12. When an enterprise requires to do a valuation to its IP asset? What are the prerequisites of IP valuation exercise?
13. Explain the primary methods of IP valuation in today's industry with its pros and cons?
14. What are the contemporary challenges of IP valuation exercise?