



MANAGING DIGITAL PRODUCTS

CLASS: DTSL

SESSION-1&2



Topics

- *Innovation types*
- *Digital product types & properties*
- *Determinants of successful digital products*
- *Product development lifecycle*
- *Role of a product manager*



DIGITAL INNOVATIONS



Innovation

- *“The perception of an idea, material artefact or behaviour that is new to the organization adopting it.”*
 - The perception of ‘newness’ – makes innovation different from change

UNDERSTANDING INNOVATION

Innovation as...

- An outcome
 - Product or service, process, marketing, business model, supply chain and organizational innovation
- A process
 - How to organize innovation to bring outcomes to fruition?
- A mindset
 - Internalizing innovation by the members of an organization; organizational culture to enable innovation

DIGITAL INNOVATIONS – WHAT TO INNOVATE?

- *Innovating not just the technological component, but also the organizational process and structure in which the technology is embedded, or modifying the habits of users*
- IT innovations often emerge from IT experts or IT managers inside an organization. But....
 - Need the buy-in from **users & top management**
 - Important to consider IT innovations in the context of their organizational environment
- *Alternative scenario (instead of a formal top-down process) - **user-driven IT innovations***



HOW TO INNOVATE?

Two questions to ask

- How well can we define a problem?
- How well can we define the skill domain(s) needed to solve the problem?

TYPES OF INNOVATION

How well is the problem defined?	Well	Breakthrough innovation	Sustaining innovation
	Not well	Basic research	Disruptive innovation
		Not well	Well
		How well is the domain defined?	



SUMMARY

- **Sustaining innovations**

- Sell more by making good products better for the existing customers – products with incremental improvement

- **Breakthrough research**

- Exploring unconventional skill domains for well-defined but hard to solve problems



SUMMARY

- **Disruptive innovation**

- ‘Why do good firms fail?’ - Getting better at things that people no longer want!
- Innovating products alone will not suffice, business model to be innovated too

- **Basic research**

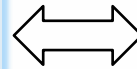
- Pursuing basic research to discover new phenomenon – which in turn would foster future innovation

DIGITAL TRANSFORMATION – THE MIND SHIFTS

- User-centricity; experimentation
- From managing projects to managing ‘products’ – an innovation mindset

The Digital mindset

- ✓ Digitization
- ✓ Utilizing Digital technologies
- ✓ Sale and access/delivery via internet



The Product mindset

- ❖ Identify ‘the’ problem worth solving
- ❖ Experimentation
- ❖ Product design and development



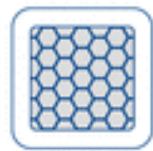
Activity trackers



Smart watches



Smart clothing



Patches/ tattoos

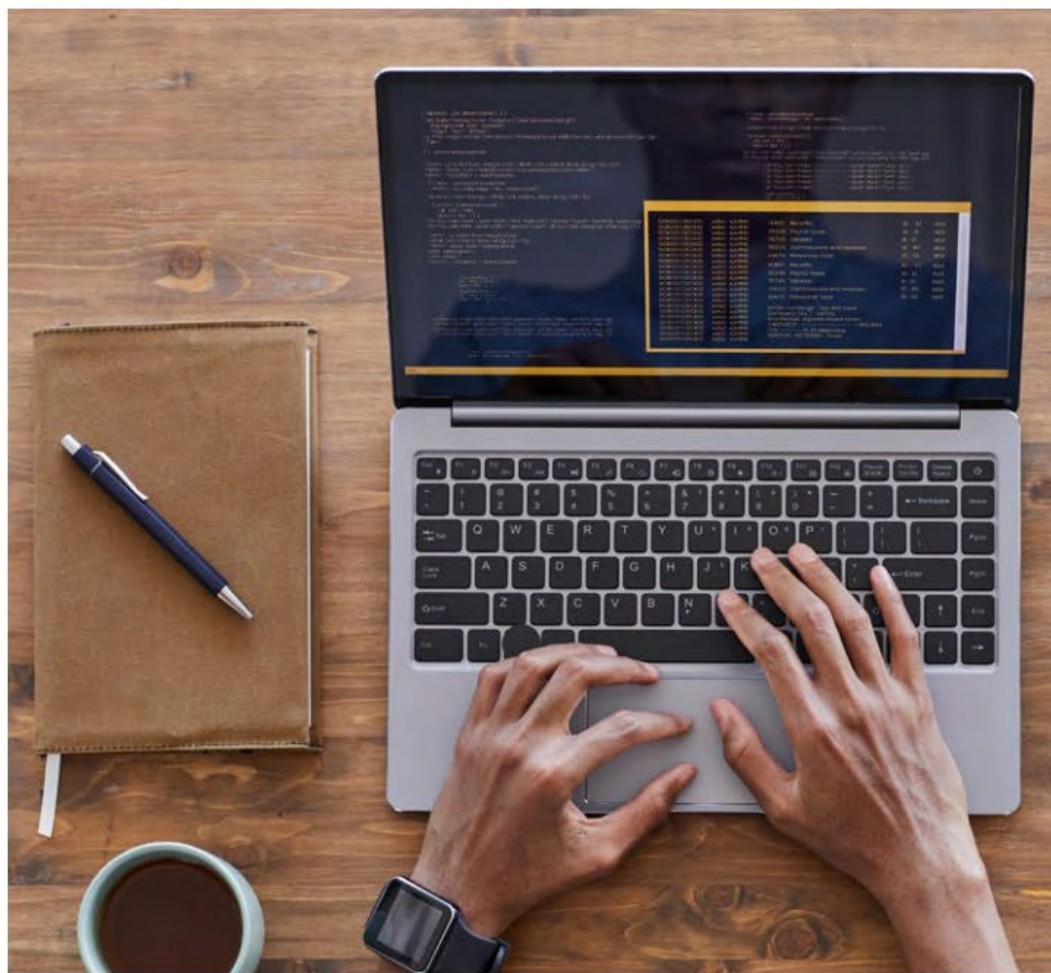


Ingestibles/ smart implants



Aarogya Setu

मे सुरक्षित | हम सुरक्षित | भारत सुरक्षित



SaaS Products to Dominate

By 2030, \$30-\$40 Bn revenue potential of B2B SaaS players



40-60%

Penetration of DeepTech in overall software products by 2030



>50%

Products to be vertical focused by 2030



Emerging Areas

Contributing to products growth eg. Low Code No Code, APIs etc.

Source: NASSCOM UneathInsight Analysis

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DIGITAL PRODUCTS/GOODS & THEIR PROPERTIES

- A **product** is an *object used as an instrument in human action to fulfil a set of values and needs of a person or an organization*
- Products may be offered in these contexts: *Business-to-customer; Business-to-business; Government-to-customer, etc ...*

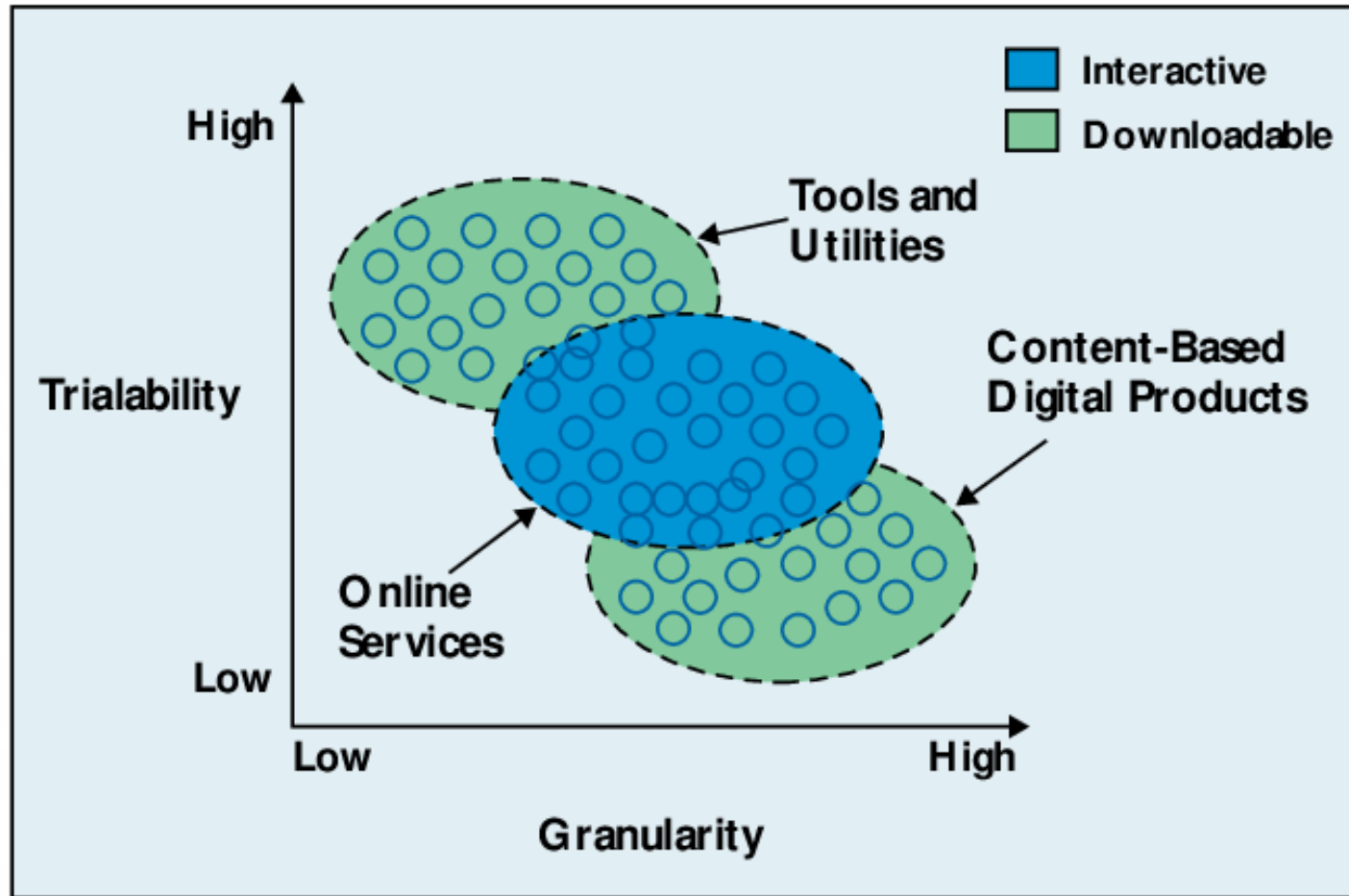
DIGITAL GOODS

- **‘Digital goods/products’** that can be distributed over **digital networks** and consumed over **digital devices**
- Information goods → expressed, stored, delivered and sold as digital goods
 - Music, movies, newspapers, magazines, books
- Digital goods can be **easily made into versions or variants**
- Most of these are **‘experience goods’** – i.e., the true value of the goods is evident only after they have been experienced

WHY UNDERSTAND PRODUCT DIMENSIONS

- Understand properties to evaluate opportunities for
 - Creating new product variants, understand differentiation, revenue & pricing, marketing strategy and product development approach, future development of features/product
 - Pay-to-use, pay-per-use, period-pricing/licensing, volume discounts, membership schemes, subscription
- **Tools & utilities** – assist users to accomplish specific tasks or goals, value delivery is clear-cut
- **Content-based digital products** – information content, value lies in the information
- **Service-based digital products** – provide access to useful resources, value delivered through interaction
- How easy for customers to ‘copy’ or replicate?

CLASSIFYING DIGITAL PRODUCTS



Source: Hui and Chau (2002)

CHARACTERISTICS OF DIGITAL PRODUCTS

- Understand properties to evaluate opportunities for creating new product variants, revenue & pricing
- **Content-based digital products** – possible to reproduce and share
- **Service-based digital products** are not shareable due to interactivity
- Helps determine pricing strategies

In the current digital age cloud enables most digital products to be delivered 'as-a-service' !!

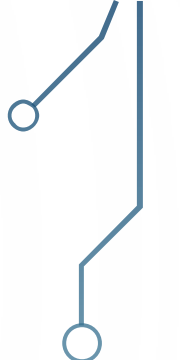
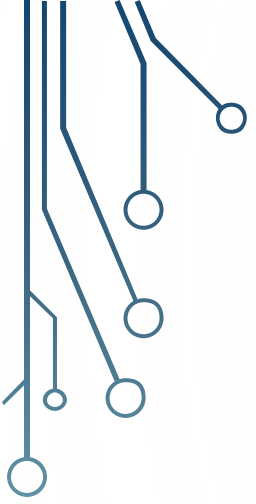
EARLY DIGITAL PRODUCTS

- Mainly made for enterprises
- Packaged software
- Customized software
- **Consumerization of IT changed this, novel digital products emerged in the consumer market and moved into enterprises !**



COMMODITIZATION OF IT

- Rapid commoditization of IT
 - High replicability of IT
 - Emergence of standards, best practices, which get built into the technology itself
 - The rise of generic IT applications
- New pricing strategies and business models



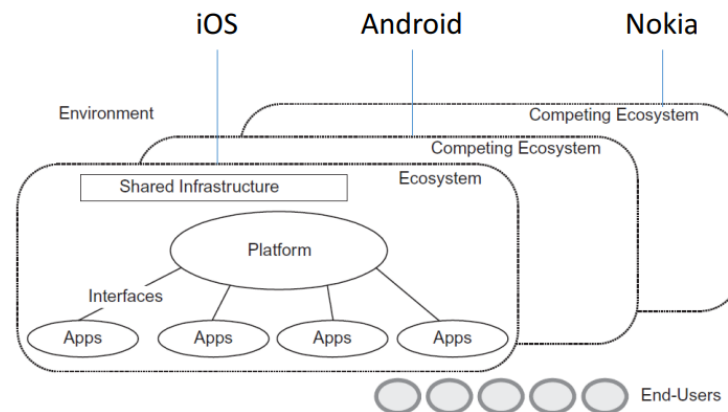
DIGITAL PRODUCTS – WHAT IS DIFFERENT NOW?

THE DIGITAL AGE



NEW AGE APPLICATIONS – THE DIGITIZATION STORY

- What's happening with these??
 - **Addressing customers real needs** – overcoming the shortcomings of traditional systems (e.g., traditional GPS vs map-based apps)
 - **Network effects**
 - **The rise of the internet** – access through multiple devices
 - **Data explosion:** product-generated; user-generated content & Machine-to-machine communication
 - **Digital platforms**

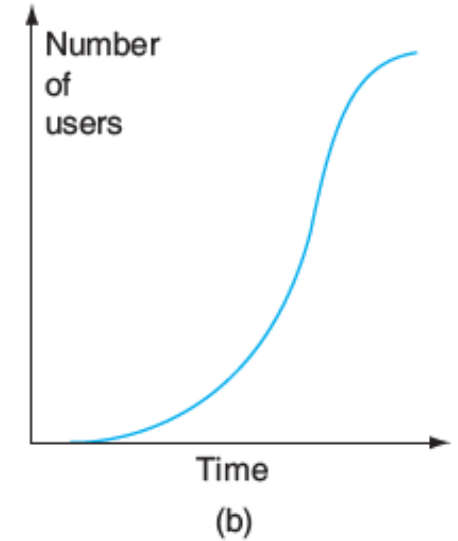


NETWORK EXTERNALITIES

- The use of same technology by a group of people benefits each of them from the common use of technology
- **Network externality** is a benefit accrued to a user when others join the network



(a) Positive feedback influencing users of Facebook.
(b) The S curve of growth of users.



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- **Products based on:**

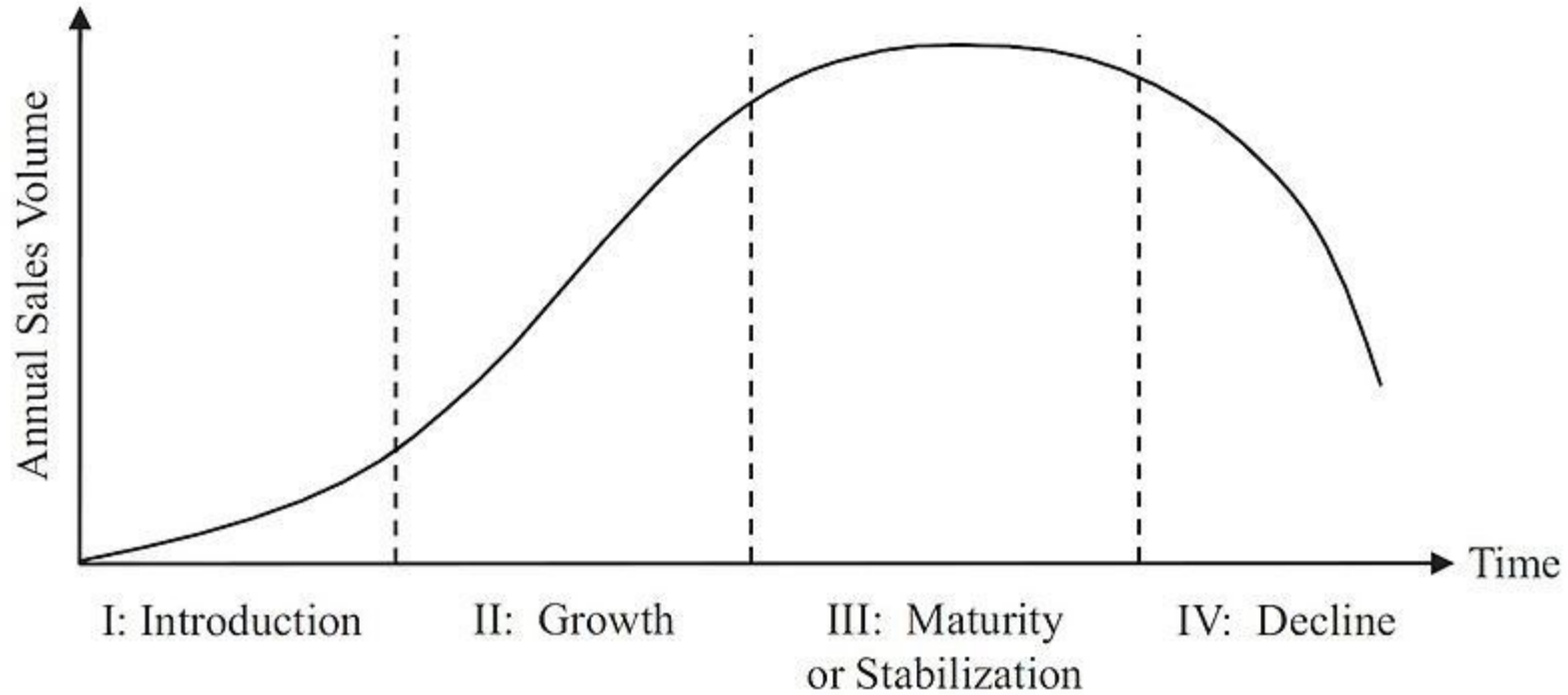
- Cloud, artificial intelligence, algorithms, internet-of-things, blockchain, augmented reality & virtual reality

- **‘Data’ as a product**

- **Application programming interfaces (APIs)**

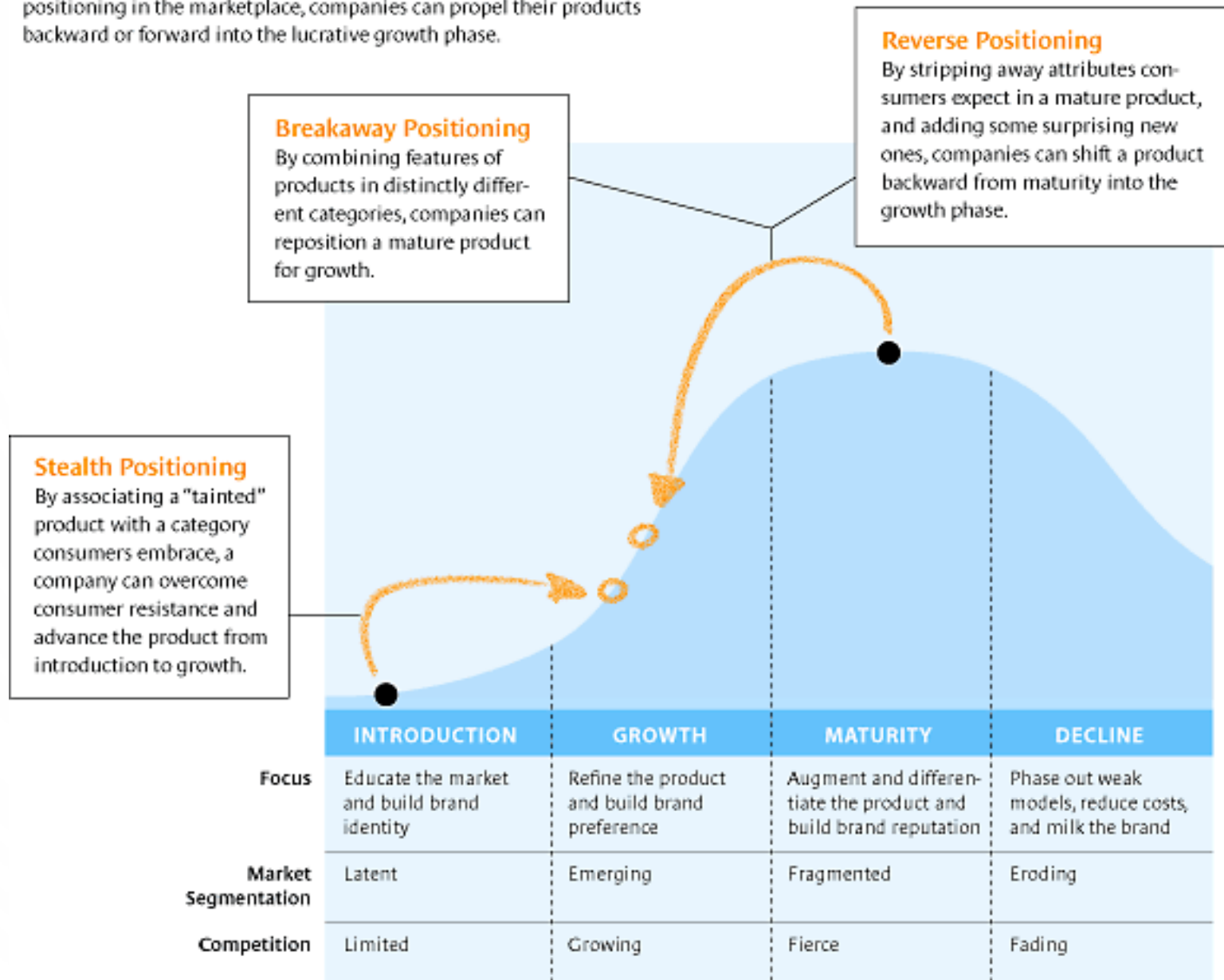
- **Digital assets and tokenization, thanks to web 3.0!**

THE TRADITIONAL PRODUCT LIFECYCLE



Repositioning for Growth

The venerable product life cycle curve describes the growth trajectory most products take from introduction to decline. But by changing products' positioning in the marketplace, companies can propel their products backward or forward into the lucrative growth phase.



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DIGITAL PRODUCTS & THEIR SUCCESS

MINICASE: FASHNEAR

- ‘Interesting’ idea of the founders – early idea rolled out as ‘Fashnear’
- Problem addressed ? For whom?
 - For neighbourhood fashion apparel stores mostly retailing unbranded apparel
 - Problem – no easy pathway for such local stores to participate in online commerce
 - For shoppers ?
- Built a fashion app to enable buying online from any neighbourhood store – FashNear
 - Connecting consumers with neighbourhood stores

MINI-CASE (CONTD.)

- **Business model:** Hyperlocal business and hyperlocal delivery model
 - Product acquired locally, from neighbourhood establishments and delivered to the customer in the same geographic area
 - Unique value proposition – delivery of products and services in a short time
 - Many categories of retail sector going hyperlocal – e.g., food, groceries, pharma, fashion
- Limited takers! Low revenues.

Why do products fail?

- Most products fail because they do ***not meet customer needs in a way that is better than other alternatives –problem-solution fit***
- When they do not get to the ***product-market fit***
- When they do not help achieve your organizational goals or do not align with your strategy –
Understand your company!

UNDERSTAND YOUR ORGANIZATION FIRST

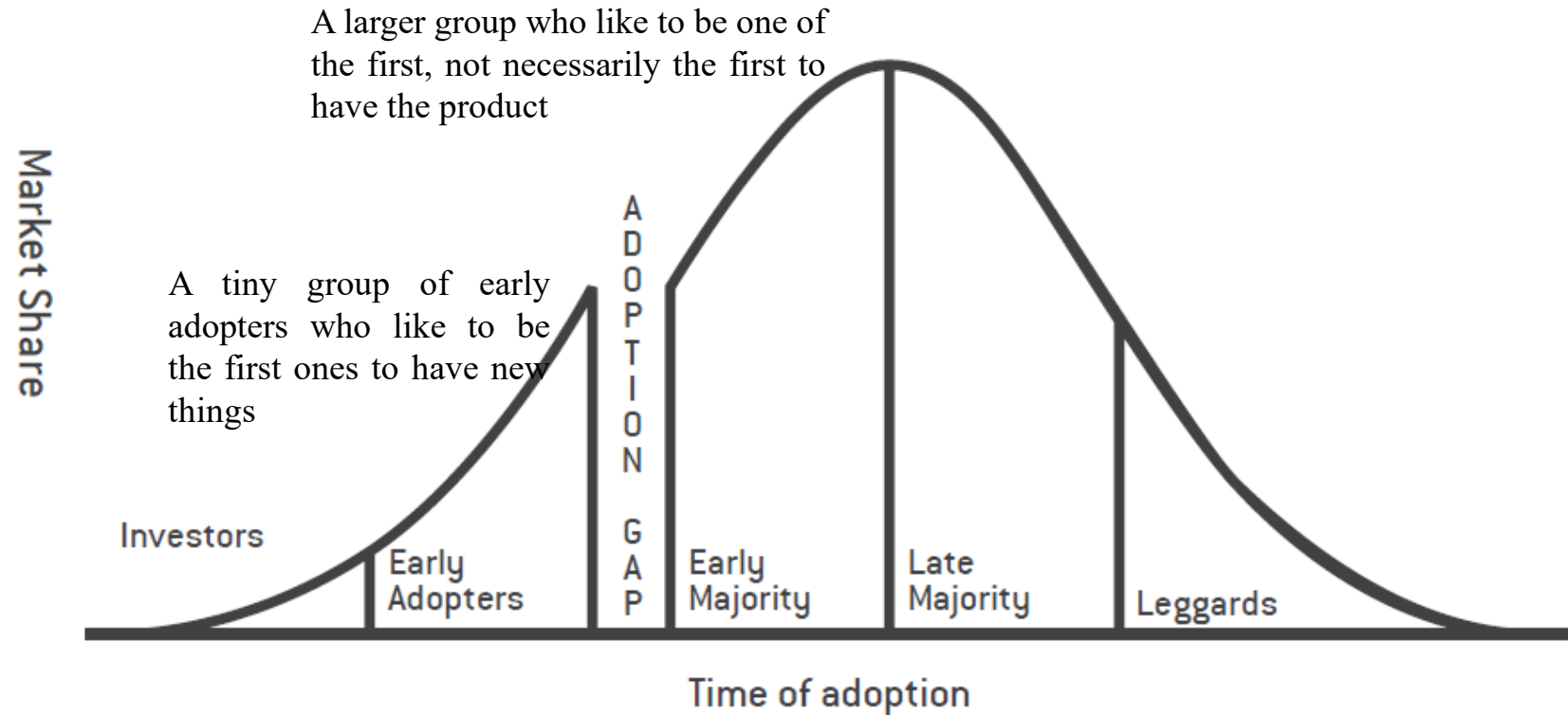
1. Why does the organization exist?
2. What digital product(s) or services does the organization deal with?
3. Whose problem(s) does the organization solve? And for whom? – **Customers & their Personas**
4. Is the organization's product or service good? **Metrics**
5. What else has been, is being, and will be built? **Product roadmap**
6. Competition & climate - 5C analysis; (company, customers, collaborators, competitors, climate)

PROBLEM-SOLUTION FIT

- The first stage of the lean startup process - validating the problem/solution fit
- Is this problem worth solving?
 - ***Problem first***, rather than creating solutions first
 - Who are the ***target customers***?
 - Do the ***customers acknowledge*** that this is a problem? – ‘interesting’ is not enough
 - Are the customers ***willing to pay*** to solve the problem?
- Problem-solution fit – needs evidence that the proposed product or service addresses important customer problem(s)/need(s)
 - Problem for a critical mass of people, not a select few!

ADOPTION OF INNOVATIONS

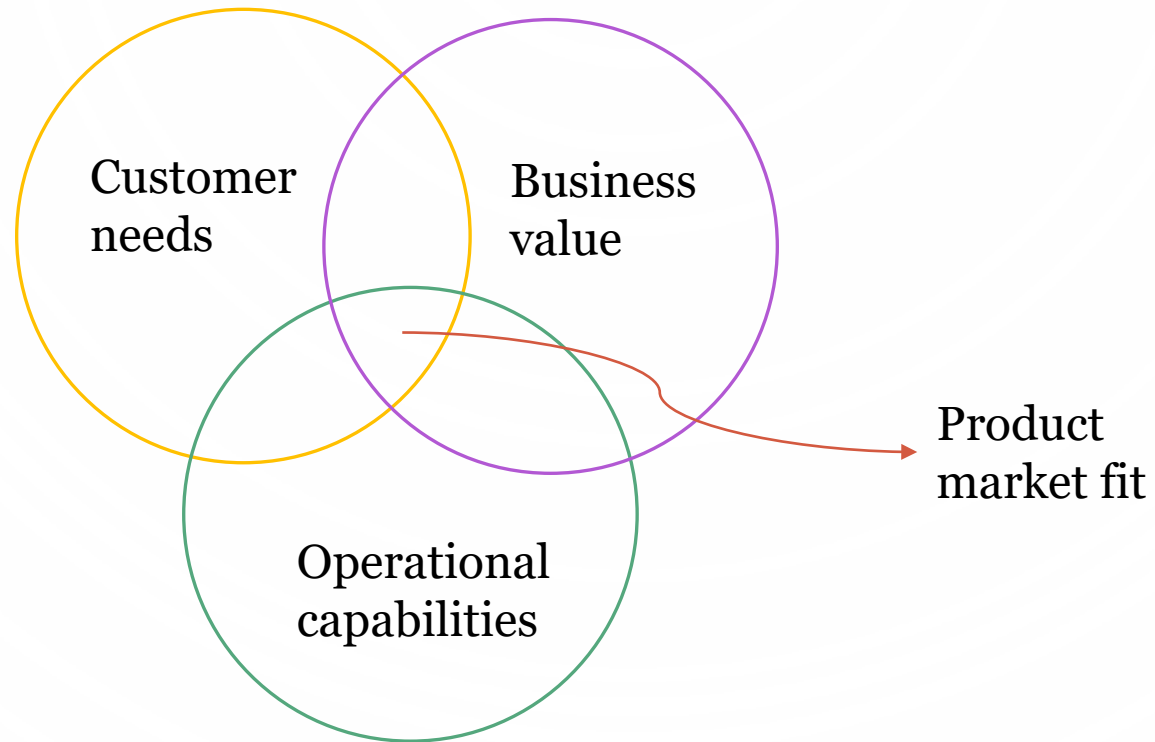
- Considering where the personas fit in the curve will help understand when they are likely to adopt the product, and help prioritize features





PRODUCT-MARKET FIT

THE PRODUCT-MARKET FIT



THE PRODUCT-MARKET FIT

- A product-fit means being in a good market with a product that can satisfy that market
- **Many interpretations**
 - you have built a product that creates significant customer value
 - you can successfully monetize your product
 - having a cost-effective customer acquisition model
- Most product companies aim for growth after achieving product-market fit

A framework to understand product-market fit ..the Product-Market pyramid

- Which of the following has P-S fit, P-M fit or both or neither?
 - Hike messenger
 - Google glass
 - Slack
 - Paytm



PRODUCT-MARKET PYRAMID



THE PRODUCT-MARKET PYRAMID

- Hierarchical components
- Each component is a testable hypothesis with a logical sequence

Product:

The real-world manifestation of software products that customers see and use

UX

A product's functionality consists of multiple features each built to meet a customer need

Feature Set

The set of needs that the product aspires to meet forms the value proposition.

Value Proposition

Product-Market Fit

Market:

Customers choose different products to meet their needs

Underserved Needs

The market consists of all existing and potential customers

Target Customer