PMDE PROGRAM

MODULE 3: THE PRODUCT MANAGEMENT ORGANIZATION

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CLASS: PMDE BATCH , **MODULE 3**

SESSION-1 & 2

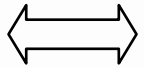
FOCUS

- Digital & product mindsets
- Unique economic properties of information & digital goods
- Digitization, and characteristics of digital products
- What is different about new-age digital products

THIS COURSE

The Digital mindset

- ✓ Digitization and digital transformation
- ✓ Utilizing Digital technologies
  - Data, algorithms and AI
- ✓ Sale and access/delivery via internet
- ✓ *User experience*



The Product mindset

- ❖ Design thinking –identify the problem worth solving
- ❖ Lean - experimentation
- ❖ Agile – product design and development


Kisan


Simple and easy to
Registration/Login Process
UMANG
Login
Login with OTP
Forgot MPIN?


MAPPLS
MapmyIndia


DigiLocker
Your documents anytime, anywhere


AADHAAR
mAadhaar App

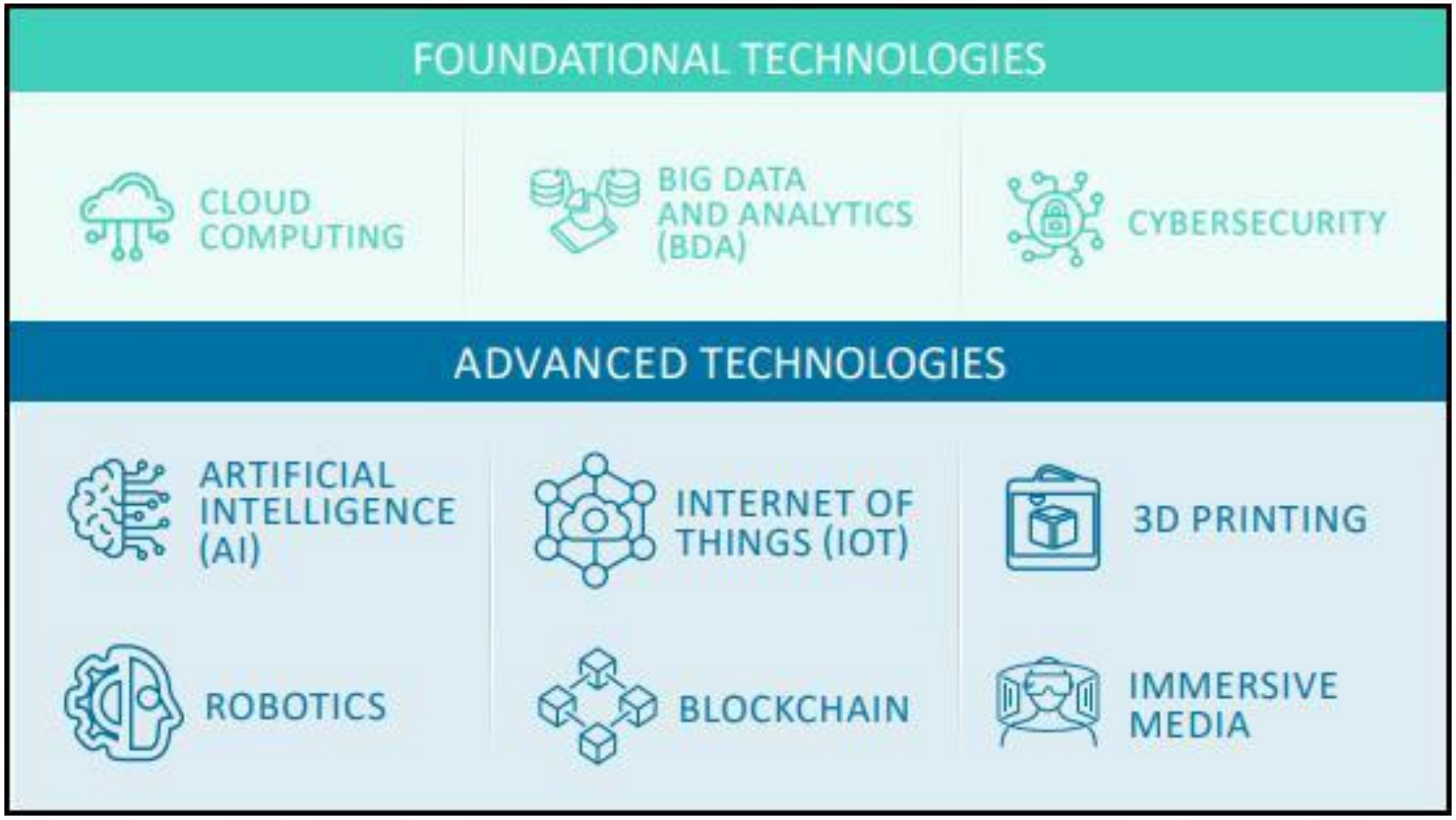

YouTube
Facebook
Messenger
Snapchat
Telegram
Instagram
WhatsApp


Aarogya Setu
मैं सुरक्षित | हम सुरक्षित | भारत सुरक्षित

- Digital products based on target consumers:
  - Business-to-business/government/consumers (B2B, B2G, B2C)
  - Government-to-citizens (G2C)
- ‘Phygital’ (physical + digital) products

ALL PRODUCTS ARE BECOMING SOFTWARE PRODUCTS

THE TECHADE AND THE 'DIGITAL FIRST' ENTERPRISE



Source: NASSCOM 2020

DIGITAL GOODS & THEIR PROPERTIES

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
  - information, entertainment, education, or training
- 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

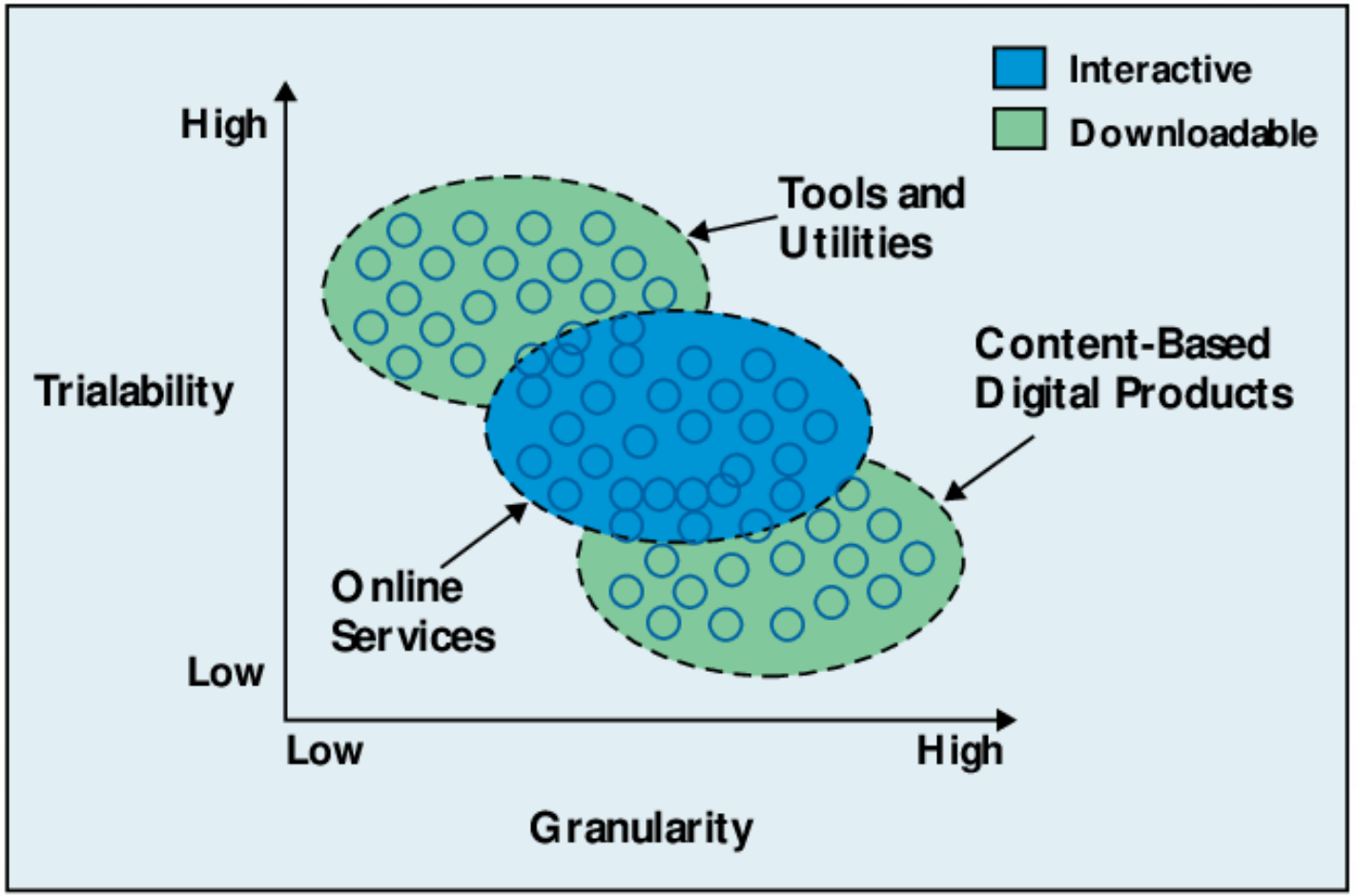
- **Unique Economic Properties Of Digital Information**
  - **Non-rival** – digital information does not get used up, unlike rival goods that can only be consumed only by one person

    e.g., all information goods
  - **Zero marginal cost of reproduction** – making additional copies of information has zero cost; cheaper to copy information even if producing it is costly

    e.g., software applications using statistical pattern matching (google translate)

Compare books and ebooks

CLASSIFYING DIGITAL PRODUCTS



Source: Hui and Chau (2002)

CHARACTERISTICS OF DIGITAL PRODUCTS

- Understand properties to evaluate opportunities for creating new product variants, revenue & pricing
  - Pay-to-use, pay-per-use, period-pricing/licensing, volume discounts, membership schemes, subscription
- **Tools & utilities**

Category/ characteristic	Tools and utilities	Content-based digital products	Online services
Delivery mode	By download	By download	Interactive
Granularity	Low	High	Medium
Trialability	High	Low	Medium
Pricing	?	?	?

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 !**

DIGITAL PRODUCTS – WHAT IS DIFFERENT NOW?

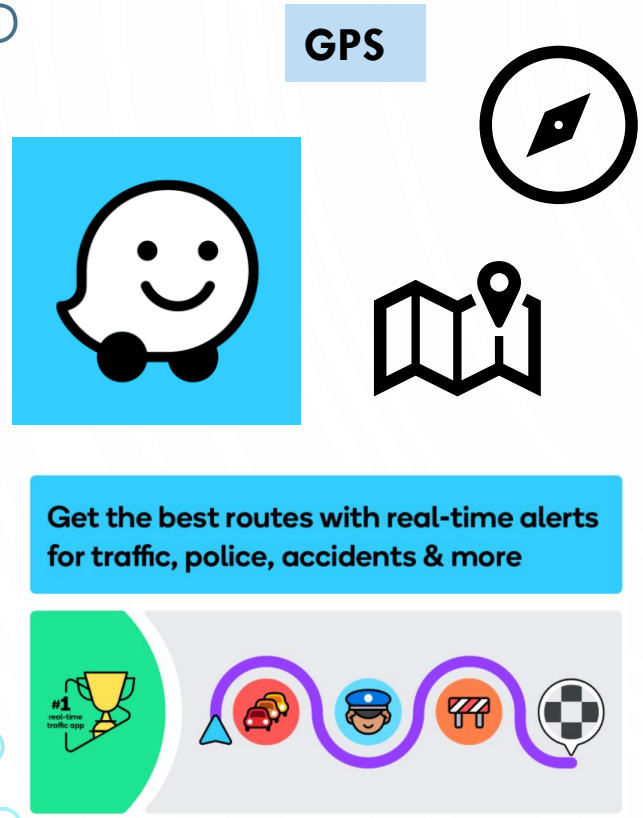
THE DIGITAL AGE

Waze video

Waze video 2- Get to Know Waze - YouTube

Waze specializes in ‘personalized and community-based’ transit – an oxymoron?

- How does Waze exploit the properties of digital information?



Source: Waze 2021

- A Mobile App
- Uses a variety of data from multiple smartphones– location, accidents and congestion information, speed limits…
- Processes information received from multiple smartphones to give the ‘current’ best route
- Uses smartphones as sensors; when more phones run the app, a more complete sense of traffic flow is developed by the app
- Utilizes high processing power & sophisticated algorithm

UNPRECEDENTED LEVELS OF DIGITIZATION

Digitization : encoding information as a stream of bits

- Explosion in **volume**, **velocity** and **variety of information**
  - Information : text, sound/audio, video, data from instruments and sensors, smartphones and other devices
- Widespread usage of digital goods due to the availability of computers, networks, mobile phones & internet
- Consequences: new ways of acquiring knowledge and higher rates of innovation

USER GENERATED CONTENT (UGC)

UGC the primary content for the top content sites in the world

- Started with Wikipedia, Blogger, Facebook….and Siri & IBM Watson run on large UGC collections/databases

Information is no longer costly to produce, information is free

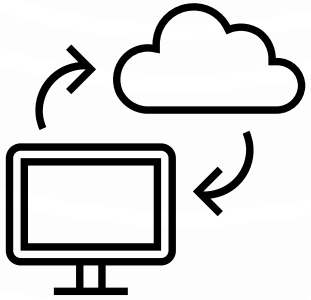
- Information is voluntarily created and made available free of charge (creators don't expect direct monetary reward)

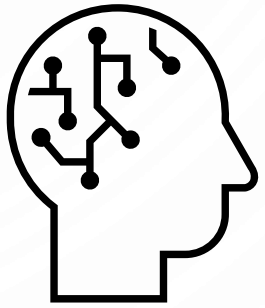
  e.g., blogs, reviews, posts, pictures, videos, etc

- Data explosion with increased UGC and Machine2Machine (M2M) communication – basis for further innovation

NEW AGE APPLICATIONS – THE DIGITIZATION STORY

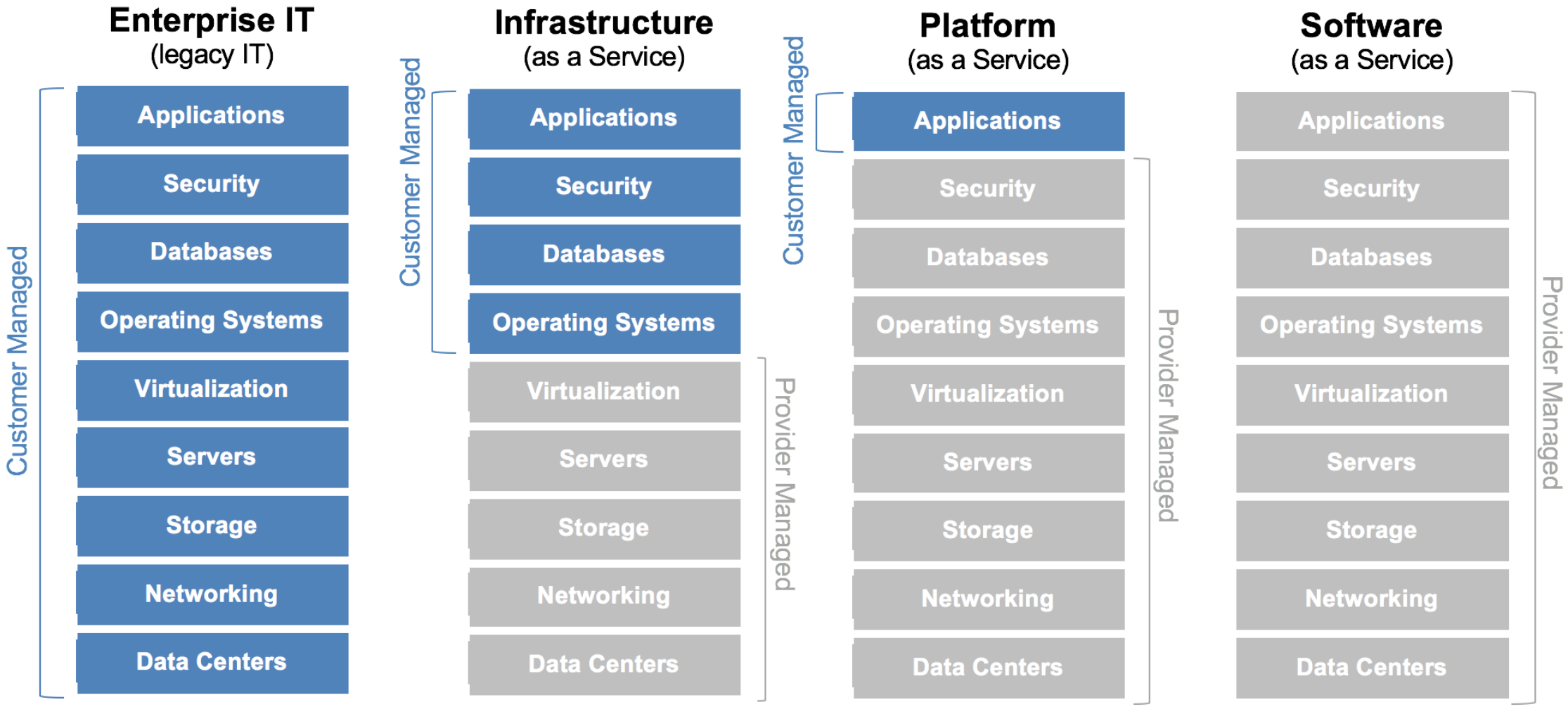
- What's happening with these??
  - **Addressing customers' real needs** – overcoming the shortcomings of traditional systems (e.g., GPS navigation)
  - **Network effects**
  - **The rise of the internet – access through multiple devices**





DIGITAL PRODUCTS FOR THE ENTERPRISES

FROM ON-PREMISE TO CLOUD-DRIVEN IT



- **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!**

PAUSE AND ASSIMILATE……

What we have learnt so far….

- Characteristics of digital products
- What is different about new-age digital products

WHAT IS DIFFERENT WITH MANAGING DIGITAL PRODUCTS?

- Digital products are novel products embodied in or enabled by digital technologies
- Digital product **innovation in a greater state of flux** relative to non-digital products
- Unprecedented levels of ***uncertainty and dynamism***
  - Different actors can readily extend the features, program sequences, scope and value of digital products after they have been launched

- Physical –digital mashup –software is part of even physical products
- Solving the right problems is of essence
- Focus on user experience (UX) - the digital customer experience
- Business model changes

MOBILE STRATEGY FOR ORGANIZATIONS

DIGITAL PRODUCTS - MOBILE APPS & WEBSITES

- Websites are usually for a good ‘search’ experience
- **Mobile utility**: Mobile users also look for ‘curation’, ease of navigation in the limited mobile screen space (mobile real estate)
- Mobile strategy must ensure that the customers’ fundamental mobile utility expectations is served – i.e., address the **‘mobile mind shift’**

WHAT IS YOUR MOBILE STRATEGY?

- When companies attempt to deliver on mobile apps, their strategies vary based on the following:
  - The Quality of (customer) experiences
  - The frequency of (customer) experiences
- Mobiles strategies to get your customers think favorably about the products/and company.
  - Move towards using mobile apps to generate more frequent quality experience to the customers

THE MOBILE STRATEGY OPTIONS

Quality of experiences
(measures : net promoter score, customer experience index

Companies that deliver great experiences but less frequently

- Strategy – use (free) mobile apps to generate more frequent experience

e.g., Nike Plus running app – aimed at generating more frequent interactions between Nike and runners (customers)

Companies that deliver frequent, high quality experiences

- At this point, customers remain loyal

e.g., Tesco stores – enables smartphone users to take pictures of items displayed on subway walls and get them delivered

Frequency of experiences
(the frequency of interactions of the customers with the company/product)

Companies that deliver bad experiences and disappoint customers

- Mobile app will not solve customer problems; partnering with a digital disruptor is an option

e.g., Health insurers teaming up with mobile meditation apps

Companies that deliver frequent experiences but disappoint customers

- Strategy – fixing customer problems can be slow, so create good mobile experiences to counteract this

e.g., Verizon delivering TV channels via an app; what about ***airtel***?

DO ALL DIGITAL PRODUCTS SUCCEED?

- DIGITAL MINDSET & PRODUCT MINDSET

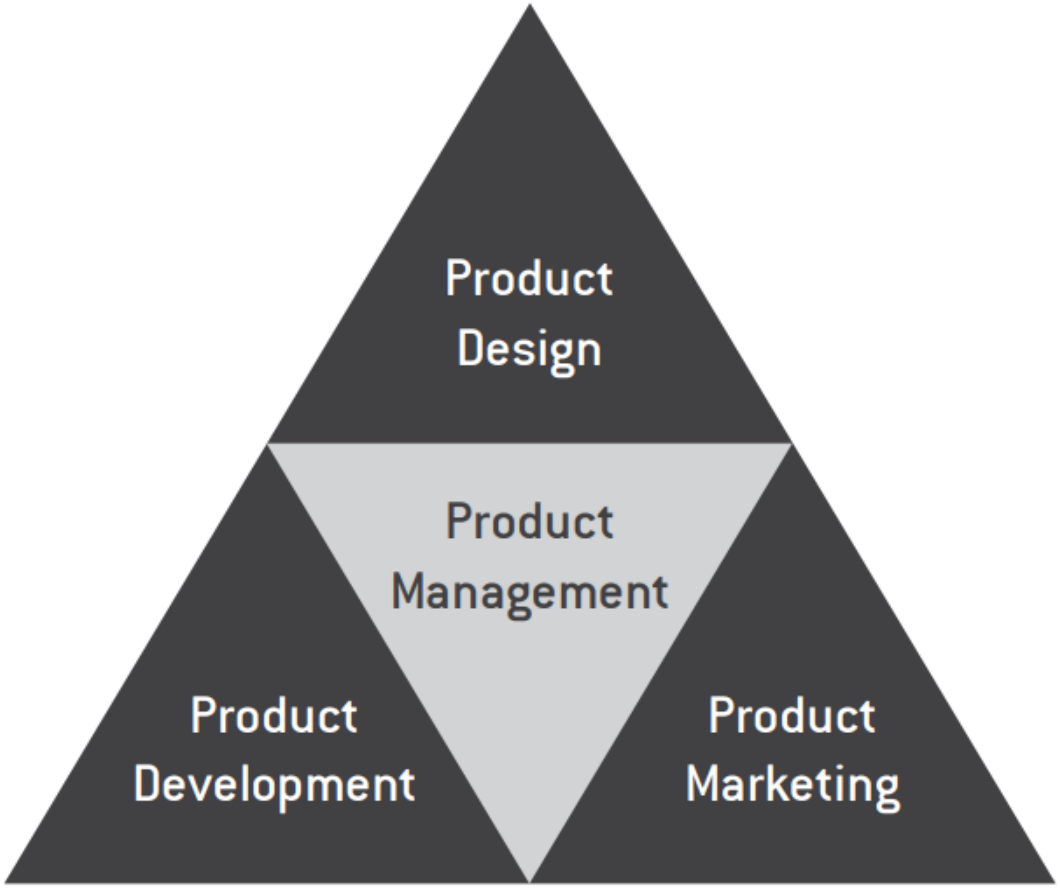
- IT products appear in the market rapidly and some disappear rapidly
- Marketing hype on any new technology! Commercial viability of technologies??
- Key challenges for managers– understand the technology trends before adopting IT innovations
  - Technology has the potential to solve business problems?
  - Make an early move to reap rewards of early adoption? Risky-investment? …..Or wait till maturation of technology?

THE NEED FOR A PRODUCT MANAGER?

PRODUCT PLANNING ASPECTS…

- Various product planning events
  - Product vision -
  - Product plan – high-level plan with a longer time horizon
  - Product roadmap – map the periodic progress (e.g., quarterly) and evolution for the product
  - Wave planning – planning for the iterations - each wave corresponds to an iteration of product; features planned for each iteration
  - Scrum meetings -

THE PRODUCT TRIANGLE



TYPICAL PROBLEMS FOR PRODUCT COMPANIES?

- The tension between (engineering & design) and (sales & marketing)
  - The standardization Vs customization problem
- Product roadmap in flux !
- Commitment to too many customer requests (idiosyncratic) for features; exceeded the overall product management capacity
- Product-engineering –sales tensions!


Our app was on schedule for release next month. But last week, Sales signed a new customer promising them 3 additional features in this release.
So, our release will be delayed by 2-3 months at least. We're all pulling 12 hour days.
PRODUCT MANAGER
We have to find a way to hit the release date, while implementing as many additional features as we can.
CEO
VP of Sales
Would this be a bad time to add these 5 other features to this release? My guys tell me our competitors already have it.
?!
CEO
VP of Sales
A Day in the Life of a Product Manager
Episode 4
"Can We Add a Few Features?"
A cartoon by the Team @ Accompa, Inc.
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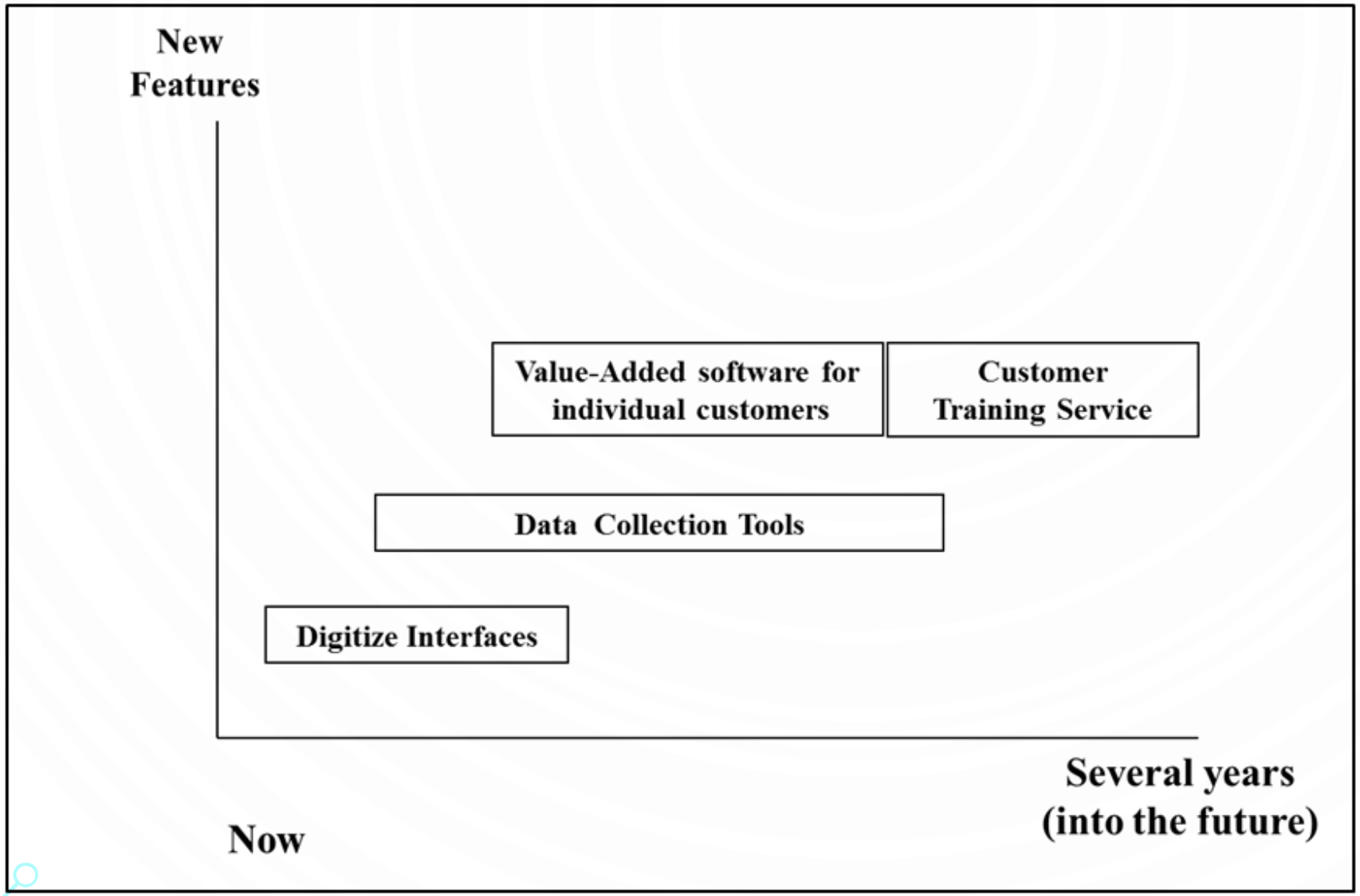
PRODUCT MANAGER ROLE & RESPONSIBILITIES

- What do you understand about a PM's role from the reading?
- Coming up with and owning product roadmaps
- **Need for a product roadmap?**
  - Helps align different departments to a unified view about the product
- What other product roles did you find..how are they different?

SAMPLE PRODUCT ROADMAP



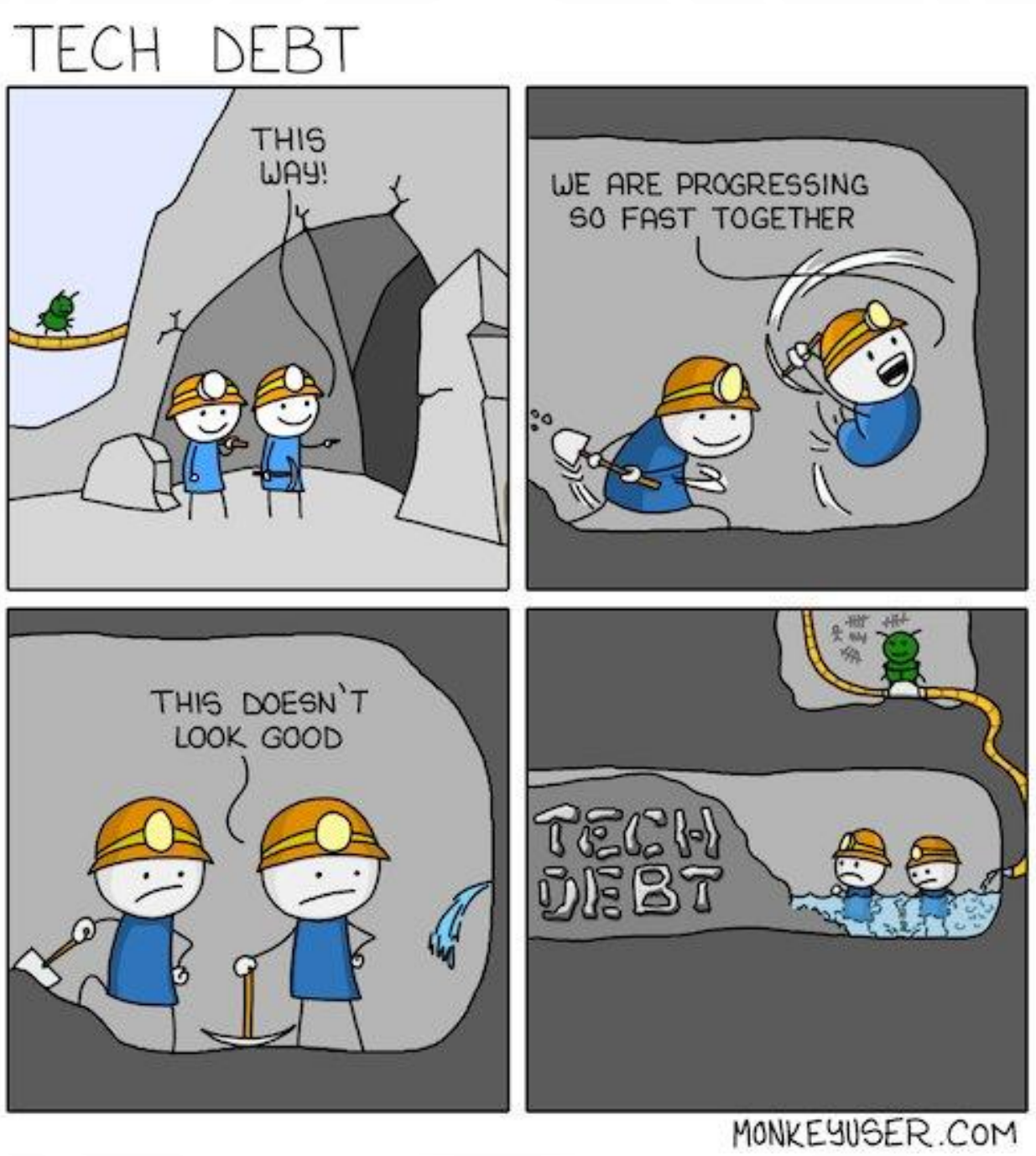
In a B2B context, roadmaps also can be used as signs of commitment between the product company and their customers

DEALING WITH TECHNICAL DEBT

- Technical debt is incurred when quality is sacrificed over speedy delivery

> *"When taking short cuts and delivering code that is not quite right for the programming task of the moment, a development team incurs Technical Debt. This debt decreases productivity. This loss of productivity is the interest of the Technical Debt."* – Ward Cunningham, who coined the metaphor of technical debt

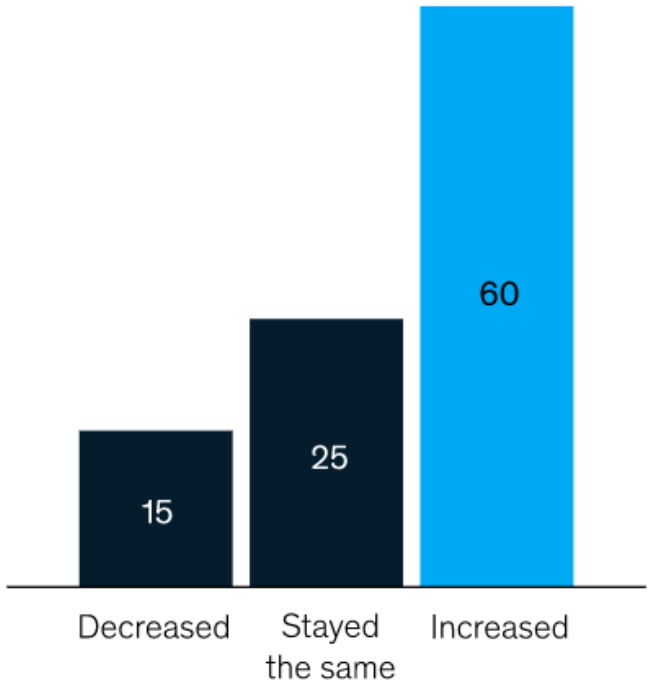
The notion of "build now and fix later"


TECH DEBT
THIS WAY!
WE ARE PROGRESSING SO FAST TOGETHER
THIS DOESN'T LOOK GOOD
TECH DEBT
MONKEYUSER.COM

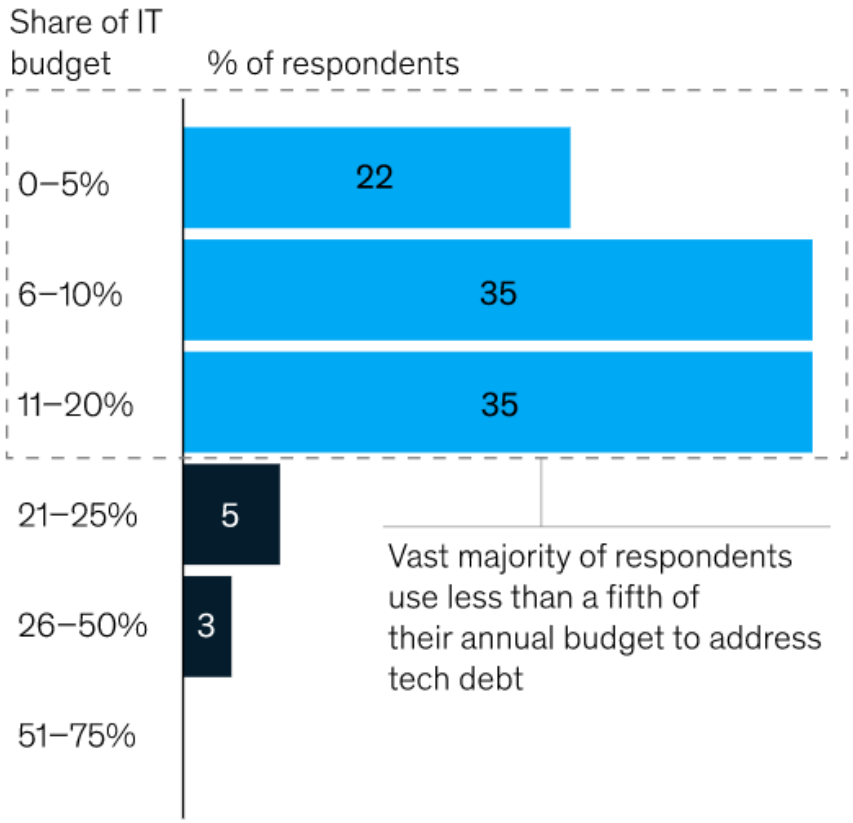
Technical debt could run into a few millions for large companies!

CIO estimates of spend on tech debt

Perceived change in tech debt over past 3 years
% of respondents (n = 45)



Share of tech budget allocated to paying down tech debt



Source: McKinsey survey of tech debt among 50 CIOs, July 2020

- ***Product managers have the responsibility to look for trade-offs with technical debt***
  - Accept short-term technical debt to deliver customer value?
  - Product complexity?
  - Product backlog?
- ***They must address the problem of technical debt too***
  - How to pay off the technical debt?

- ***A more pertinent issue for growing product companies, scaling in the B2B space…***
  - Finding the ‘golden mean’ of customization
  - Difficulty in clearing the ‘yellow’ requests/ necessary customizations on the product roadmap


I ADDED ALL OF THE PRODUCT FEATURES THAT EACH OF YOU DEMANDED.
PRODUCT
Dilbert.com DilbertCartoonist@gmail.com
NOW OUR PRODUCT IS A WORTHLESS HODGEPODGE OF COMPLEXITY.
2-25-13 ©2013 Scott Adams, Inc./Dist. by Universal Uclick
I APPRECIATE YOUR INPUT. I COULDN'T HAVE FAILED WITHOUT YOU.
TEAM-WORK!

PRODUCT MANAGER ARCHETYPES

Technologist

Profile: Deeply technical

Focus: Technology solutions

Product: Back-end platforms or highly complex B2B products

May take technological risks on "cool ideas" that aren't tied to a metric

Generalist

Profile: Technical depth and business savvy

Focus: User delight

Product: B2C products or front end for B2B products

Measured by ability to drive end-user metrics

Business-oriented

Profile: Business background

Focus: Maximizing specific business metrics

Product: B2C products that have another source for creative inputs

VMware **Amazon Web Services**

Facebook **LinkedIn** **Airbnb**

Salesforce **Zynga** **Chase**

Amazon ←——→

Alphabet ←——→

Source: McKinsey & Co (2017)

SUMMARIZE…

What does a product manager do?

- Communicate with all departments as necessary for getting the product out to the market
- Establish a product roadmap
- Balancing the customer interests & product roadmap
  - Assess whether product addresses a dominant market need, and a significant customer segment
- Prevent, identify and resolve technical debts
- Oversee the product's journey through the product-development life cycle - asking the right questions!