



UNIVERSITI  
TEKNOLOGI  
MARA

# WEBINAR JABATAN INFOSTRUKTUR

## UNIVERSITY DIGITAL TRANSFORMATION

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JABATAN INFOSTRUKTUR, PPII, UiTM SHAH ALAM  
18 NOVEMBER 2020



# CONTENT



1. AN OVERVIEW
2. THE DRIVE TO CHANGE
3. MAKING THE RIGHT MOVE
4. UITM DIGITAL CAMPUS
5. CONCLUSION

# 1. AN OVERVIEW



# THE LANDSCAPE OF THE DIGITAL WORLD TODAY



**28.7 million internet users in Malaysia (Internet Users Survey 2018, MCM)**



**4.5 billion internet users in the World**

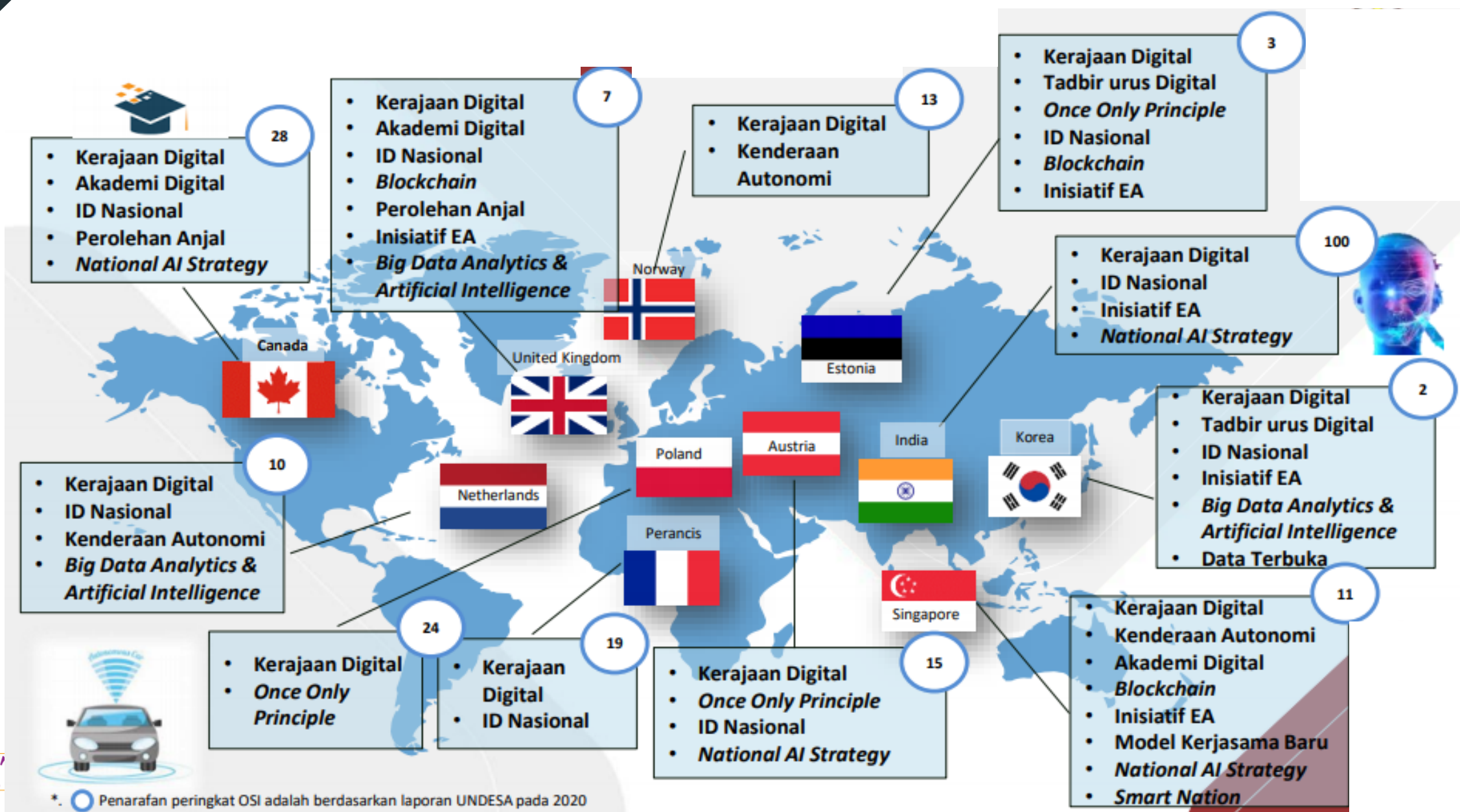



**2.3 billion internet users in the Asia**

**6 Billion internet users in 2022 and 7.5 Billion internet users in 2030**  
References : Cybersecurity Ventures

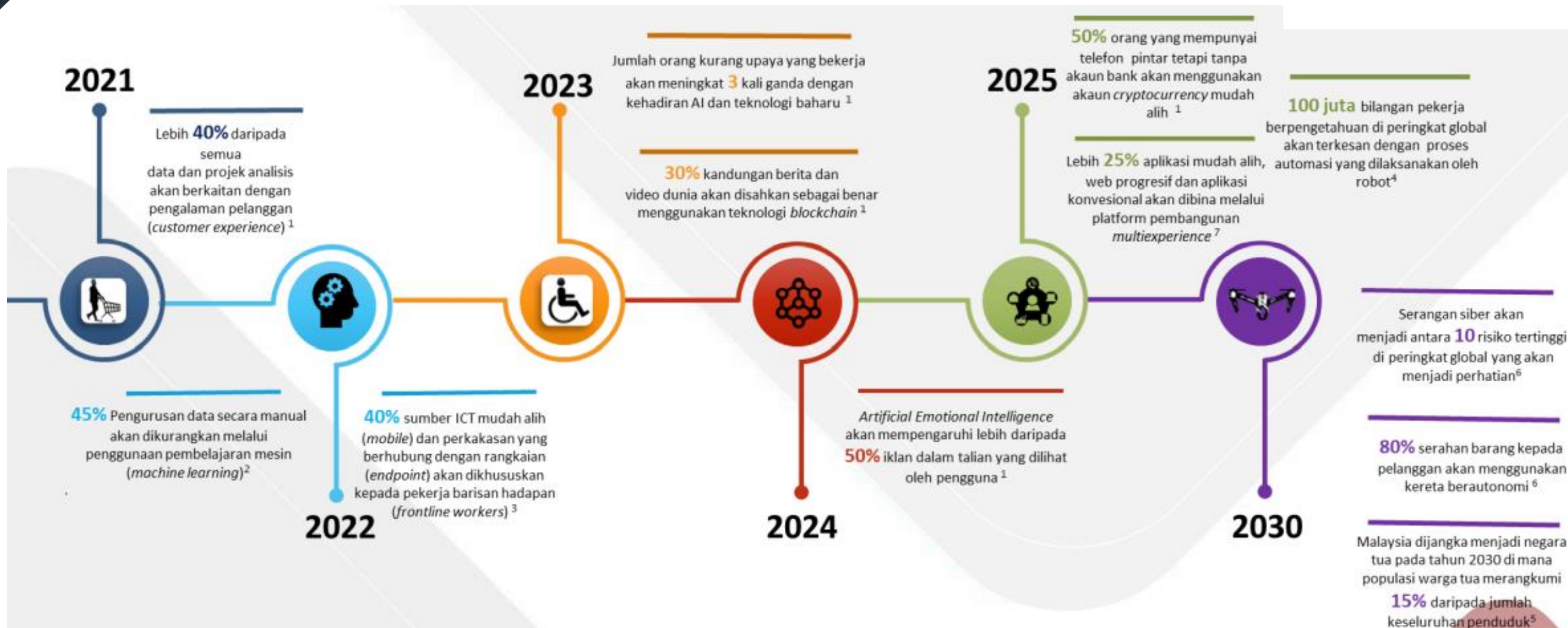
**THE WORLD IS GETTING CONNECTED**

# GLOBAL DIGITILIZATION BENCHMARK



\*.  Penarafan peringkat OSI adalah berdasarkan laporan UNDESA pada 2020

# GLOBAL DIGITALIZATION TECHNOLOGY DIRECTION



**Sumber:**

- <sup>1</sup> Gartner (2019) | <https://www.gartner.com/smarterwithgartner/gartner-top-strategic-predictions-for-2020-and-beyond/>
- <sup>2</sup> Gartner IT Symposium (2019) | Xpo 03 –07 November 2019 Barcelona, Spain | Top 10 Data and Analytics Technology Trends That Will Change Your Business
- <sup>3</sup> Gartner IT Symposium (2019) | Xpo 03 –07 November 2019 Barcelona, Spain | The Future of Frontline Workers
- <sup>4</sup> KPMG (2020) | <https://home.kpmg/my/en/home/services/advisory/management-consulting/it-enabled-transformation/rpa1.html>
- <sup>5</sup> Malaysia's Ageing Population Trends (2016) | [https://www.researchgate.net/publication/305727022\\_Malaysia's\\_Ageing\\_Population\\_Trends](https://www.researchgate.net/publication/305727022_Malaysia's_Ageing_Population_Trends)
- <sup>6</sup> Frost & Sullivan (2019) | ICT Trends 2021 -2025
- <sup>7</sup> Gartner (2020) | <https://www.gartner.com/en/information-technology/glossary/multiexperience-development-platforms-mxdp>



# DIGITAL TRANSFORMATION (DT): A DEFINITION

DT is the **cultural, organizational and operational** change of an organization, industry or ecosystem through a smart integration of **digital technologies, processes and competencies** across all levels and functions in a **staged and strategic** way.

DT is not just about disruption or technology. It's about **value, people, optimization** and the **capability** to rapidly adapt when such is needed through an intelligent use of **technologies and information**.





# WHAT IS IR4.0?

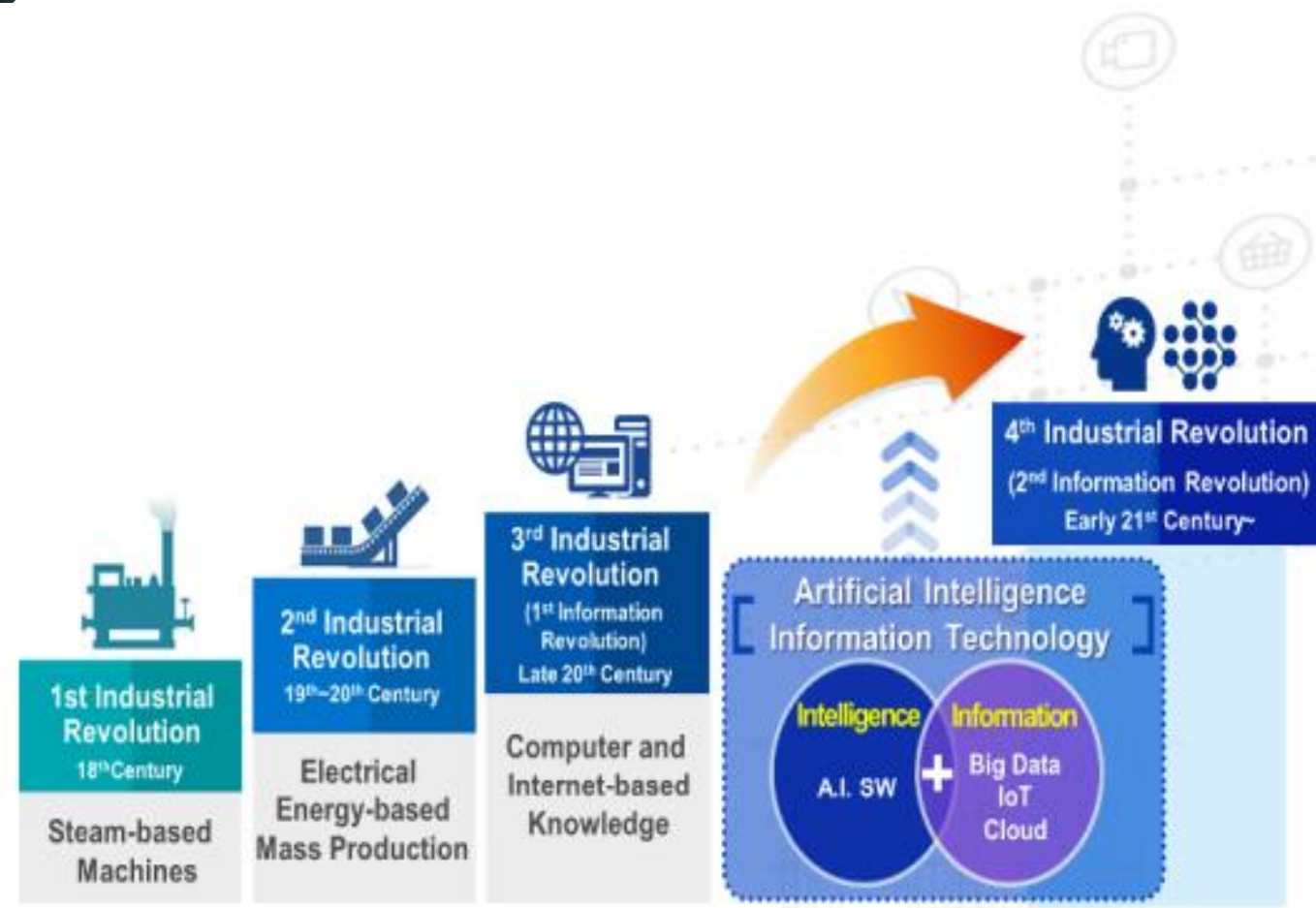


**A stage in the development of knowledge in which the lines between the physical, digital and biological spheres are being blurred. The backbone include 1) Artificial Intelligence 2) Cloud Computing 3) Big Data Analytics 4) Internet of Things.**

Schwab, K. (2016)



# INDUSTRIAL REVOLUTION 4.0



Source: [https://blogs.worldbank.org/ic4d/files/ic4d/korea\\_ai\\_blog\\_1.png](https://blogs.worldbank.org/ic4d/files/ic4d/korea_ai_blog_1.png)

**The First 1st INDUSTRIAL REVOLUTION**

for the development of hot engines

for the generation of electricity

Kick-starting the replacement of manual Labour with machinery and shifting the population towards urbanisation

**The Second 2nd INDUSTRIALISATION** known as the **Technological Revolution.**

the emergence of new sources of energy such as:

Transportation a MAJOR breakthrough connecting cities & communities through the railroads

**The Third 3rd INDUSTRIALISATION REVOLUTION**

the rise of electronics and use of information to automate production

High Level automation in production

**Automation & Robots**

**The Fourth 4th Industry 4.0** is optimised by the exponential expansion of emerging technologies

cyber-physical systems (CPS)

as well as dynamic data processing that blurs the lines between the

**PHYSICAL DIGITAL BIOLOGICAL REALMS**



# BENEFITS OF MOVING ON TO DIGITAL TRANSFORMATION

## Productivity

- Solutions to eliminate errors and wastage
- Produce more products
- Shortened cycle times

## Flexibility

- Personalised products
- Efficient production
- Large variability in production control

## Competitiveness

- Low manufacturing costs
- Use of innovative solutions
- Flexible response to fluctuations of demand

## Profitability

- The advantages of mass production
- Optimized processes
- Low stock inventories
- Production efficiencies

## Safety

- Software prevents defects
- Sensors are protecting worker safety
- Immediate reaction

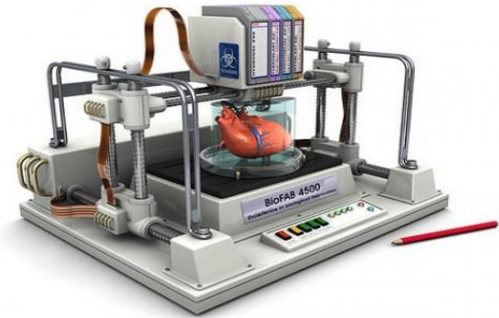
## Ecology

- Switching off unused objects
- Use of green solutions
- Renewable energy

# EMERGING TECHNOLOGY BREAKTHROUGHS



Sophia the social Robot



3 D Printing



Virtual Reality

# McKinsey & Company

## McKinsey Global Institute

# 12 Disruptive Technologies

### Renewable energy

- 21,000 TWh annual global electricity consumption
- 13 billion tons in annual carbon dioxide emission from electricity generation
- \$3.5 trillion value of global electricity consumption
- 85% lower price for solar photovoltaic cell per watt since 2000

### Advanced oil & gas exploration & recovery

- 3x increase in efficiency of US gas wells between 2007 & 2011. 2x increase for oil wells over the same period
- 30 billion barrels of crude oil produced globally
- \$3.4 trillion revenue from global sales of crude oil
- \$1000 vs \$50: Price difference of 1 gram of nanotube over a decade

### Advanced materials

- 115x strength-to-weight ratio of carbon nanotubes vs steel
- \$4 billion revenue from global carbon fibre sales

### 3D printing

- 90% decrease in price of home 3D printers compared to 2009
- \$11 trillion worth in global manufacturing GDP
- 8 billion pieces of toys manufactured globally a year

### Energy storage

- 40% price decline in Lithium-ion battery pack in an electric vehicle since 2009
- 1.2 billion people without access to electricity
- \$100 billion estimated value of electricity for households currently without access

### Next-generation genomics

- 10x increase in acreage of genetically modified crops between 1996 to 2012; 2.5 billion people employed in agriculture
- \$4.5 trillion global health-care costs

### Mobile Internet

- Fastest supercomputer in 1975 costs \$5m, with equal performance as an iPhone 4, which costs \$400
- 4.3 billion people yet to be connect to the Internet today
- \$1.7 trillion worth of GDP related to the Internet

### Automation of knowledge work

- 100x increase in computing power from IBM's Deep Blue (1997) to Watson (2011)
- 1.1 billion smartphone users, with potential to use automated digital assistance apps
- \$9+ trillion global costs of employing knowledge workers, which is 27% of global employment costs

### Internet of Things

- 300% increase in connected machine-to-machine devices since 2008
- 1 trillion things that could be connected to the Internet across different industries (mining, health-care, manufacturing)
- \$36 trillion operating costs of key affected industries

### Cloud technology

- 18 months to double server performance per dollar
- 2.7 billion Internet users served by 50 million servers worldwide
- \$3 trillion spending by enterprises on information technology

### Advanced robotics

- 170% growth in sales of industrial robots between 2009 and 2011
- 320 million manufacturing workers may be potentially affected
- \$6 trillion in global manufacturing employment costs, which is 19% of global workforce

### Autonomous and near-autonomous vehicles

- 300,000+ miles driven by Google's autonomous cars with only 1 accident (which was human-caused)
- \$4 trillion automobile industry revenues
- 1 billion cars & trucks, 450,000 civilian, military & general aviation aircrafts globally

Created by:  
Daniel Tay  
May 2013 Singapore  
boingx5@gmail.com  
www.tayxiangsheng.com  
@tayxiangsheng



# DISRUPTIONS NEED PLATFORM

Digital disruption has already happened.  
None of these companies existed twenty years ago.

**facebook**

Popular media owners create no content  
(Facebook)

**UBER**

The world's largest taxi company owns no taxis (Uber)

**Instagram**

The most valuable photo company sells no cameras  
(Instagram)

**airbnb**

The largest accommodation provider owns no real estate (airbnb)

**NETFLIX**

The largest movie house owns no cinemas  
(Netflix)

The fastest growing banks have no actual money  
(SocietyOne)

Large phone companies own no teleco infra (Skype, WeChat)

**Alibaba.com**

The most valuable retailer no inventory  
(Alibaba)

Largest software vendors don't write the apps  
(Apple/Google)



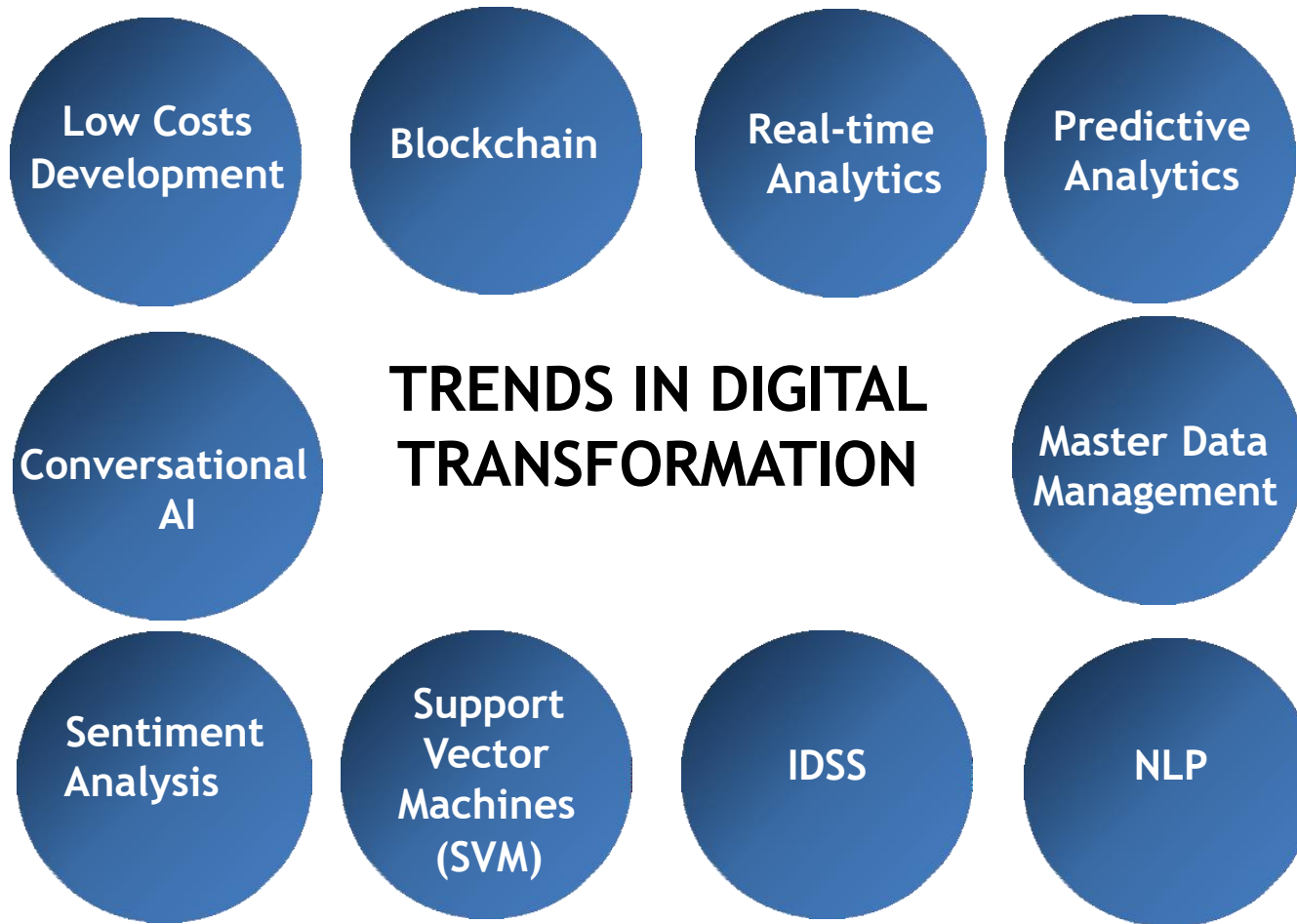
... a new digital order has been created through these platforms which may alter social, economic and political landscapes

# DISRUPTIVE TECHNOLOGIES AROUND US





# TOP 10 DIGITAL TRANSFORMATION TRENDS FOR 2020



COMIDOR

# 30 TECHNOLOGIES OF THE NEXT DECADE

 <p><b>#1 Artificial Intelligence</b> AI /Machine Learning / Deep Learning</p>	 <p><b>#2 Internet of Things</b> IOT , IIOT, Sensors &amp; Wearables</p>	 <p><b>#3 Mobile/Social Internet</b> Advancements - Search/Social/ Messaging/Livestreams</p>	 <p><b>#4 Blockchain</b> Distributed Ledger Systems, Cryptocurrencies &amp; DApps</p>	 <p><b>#5 Big Data</b> Apps, Infrastructure, Technologies + Predictive Analytics</p>
 <p><b>#6 Automation</b> Information, Task, Process, Machine, Decision &amp; Action</p>	 <p><b>#7 Robots</b> Cons./Comm./Indus., Robots, Drones &amp; Autonomous Vehicles</p>	 <p><b>#8 Immersive Media</b> - #VR/ #AR/ #MR/ 360°/ Video?Gaming</p>	 <p><b>#9 Mobile Technologies</b> Infrastructure, networks, standards, services &amp; devices</p>	 <p><b>#10 Cloud Computing,</b> SaaS, IaaS, PaaS &amp; MESH Apps</p>
 <p><b>#11 3D Printing</b> Additive Manufacturing &amp; Rapid Prototyping</p>	 <p><b>#12 CX</b> Customer Journey, Experience Commerce &amp; Personalization</p>	 <p><b>#13 EnergyTech</b> Efficiency, Energy Storage &amp; Decentralized Grid</p>	 <p><b>#14 Cybersecurity</b> Security, Intelligence Detection, Remediation &amp; Adaptation</p>	 <p><b>#15 Voice Assistants</b> Interfaces, Chatbots &amp; Natural Language Processing</p>
 <p><b>#11 Nanotechnology</b> Computing, Medicine, Machines + Smart Dust</p>	 <p><b>#17 Collaborative Tech.</b> Crowd, Sharing, Workplace &amp; Open Source Platforms &amp; Tools</p>	 <p><b>#18 Health Tech.</b> Advanced Genomics, Bionics &amp; Health Care Tech.</p>	 <p><b>#19 Human-Computer Interaction</b> Facial/Gesture Recognition, Biometrics, Gaze Tracking</p>	 <p><b>#20 Geo-spatial Tech.</b> GIS, GPS, Mapping &amp; Remote Sensing, Scanning, Navigation</p>
 <p><b>#21 Advanced Materials</b> Composites, Alloys, Polymers, Biomimicry, Nanomanufacturing</p>	 <p><b>#22 New Touch Interfaces</b> Touch Screens, Haptics, 3D Touch, Paper, Feedback &amp; Exoskeletons</p>	 <p><b>#23 Wireless Power</b></p>	 <p><b>#24 Clean Tech.</b> Bio-/Enviro-Materials + Solutions, Sustainability, Treatment &amp; Efficiency</p>	 <p><b>#25 Quantum Computing</b> + Exascale Computing</p>
 <p><b>#26 Smart Cities</b> + Infrastructure &amp; Transport</p>	 <p><b>#27 Edge/Computing</b> + Fog Computing</p>	 <p><b>#28 Faster, Better Internet</b> Broadband incl. Fiber, 5G, Li-Fi , LPN and LoRa</p>	 <p><b>#29 Proximity Tech</b> Beacons, .RFID, Wi-Fi, Near-Field Communications &amp; Geofencing</p>	 <p><b>#30 New Screens</b> TVs, Digital Signage, OOH, MicroLEDS &amp; Projections</p>

## THE 30 TECHNOLOGIES OF THE NEXT DECADE



## 2. THE DRIVE TO CHANGE





# CHALLENGES COVID-19 : MCO

MCO is here. It has change the landscape of how enterprise do business. What are their concerns and challenges?

"We want to **reduce physical contact** when dealing with our customers."

"We want to **minimize physical documents dependencies.**"

"I want documents can be **legally signed via online platform.**"

"We want seamless **document management** solution that is **accessible from anywhere.**"

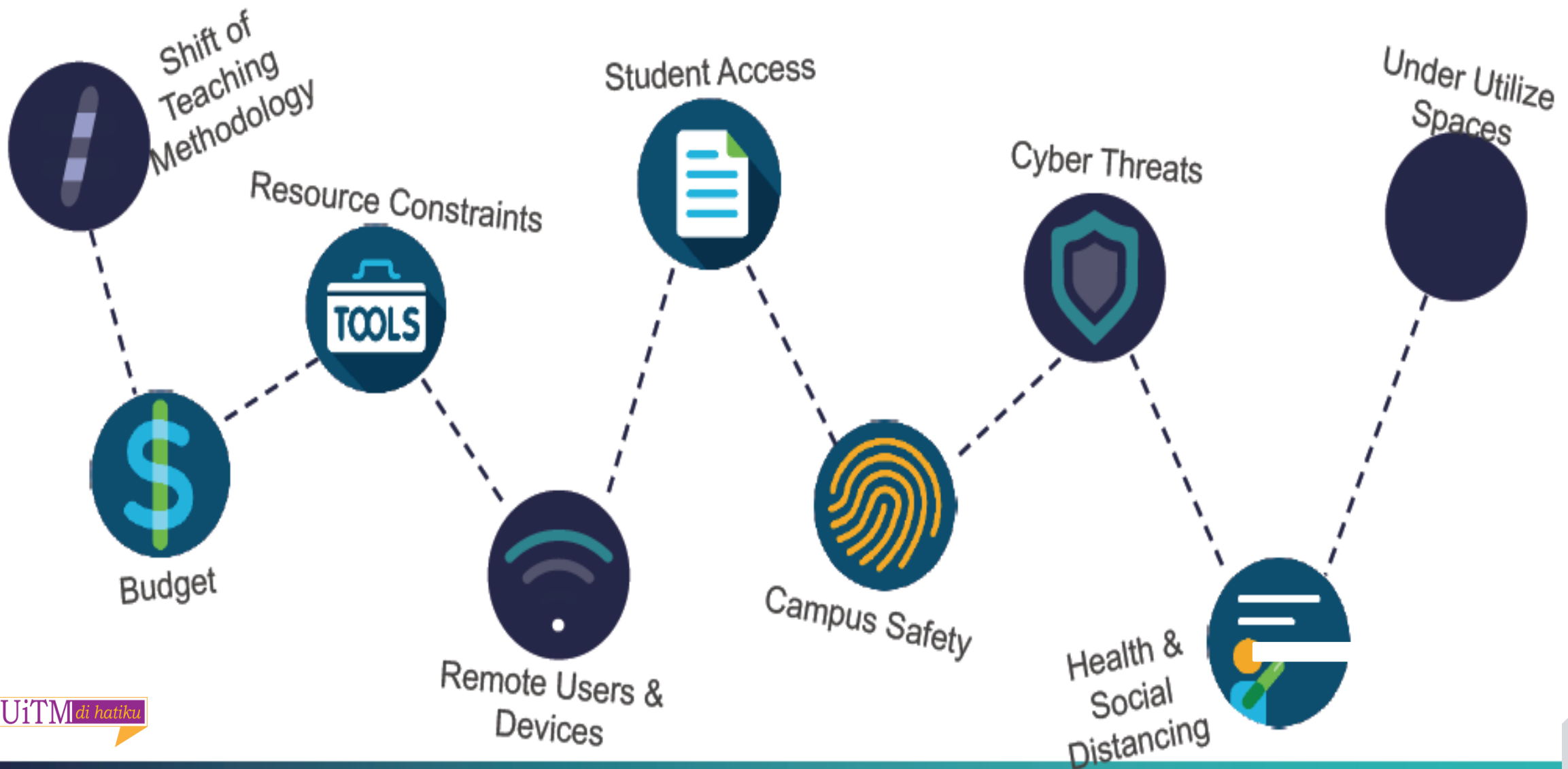
"Since we mostly do things online, we want to ensure all **of our transactions are secured.**"

"I want to make our **B2C customers' life easier**"





# CHALLENGES COVID-19: STAND IN THE WAY OF STUDENT/UNIVERSITY SUCCESS





# EDUCATION REACTS TO COVID-19

Current

## Response

Focus for remainder of fiscal year



- Education Offers
- Information, resources, training
- SME customer training, coaching
- Messaging, content, seller enablement
- Social and digital

Reflect to

## Reimagine

Proactively plan for change



- Plan for future
- Continuity of learning
- How can Industry help with transition?

Rebound to

## Recovery

Evolve to new normal



- What is the new normal short term and long term?



# CHALLENGES IN HIGHER EDUCATION TODAY

Financial pressure is growing

Security and privacy are critical

A massive increase in remote users and devices

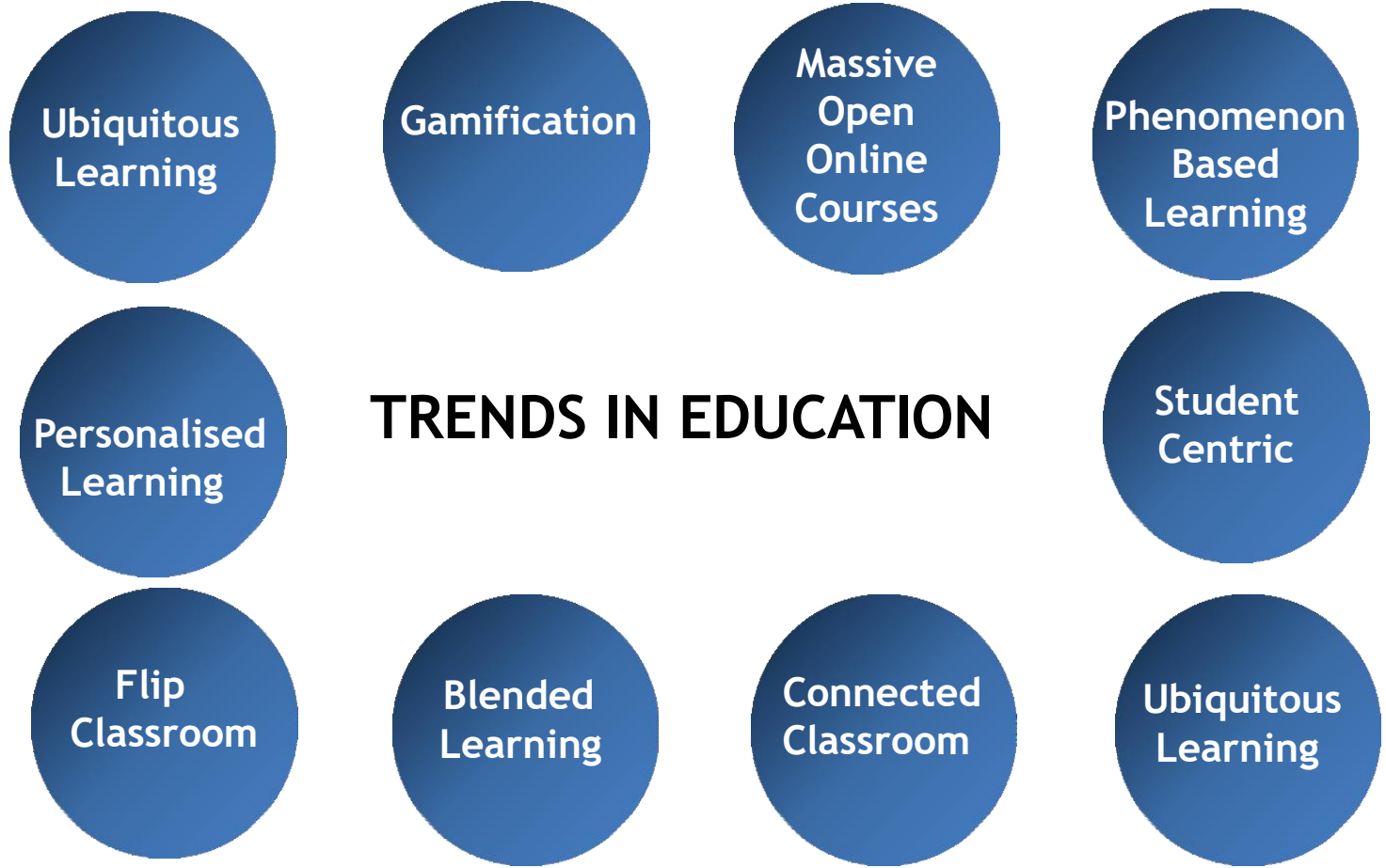
The need for faculty to rapidly shift teaching methodologies

Ensure student health and well-being

Determine what learning spaces will look like in the future



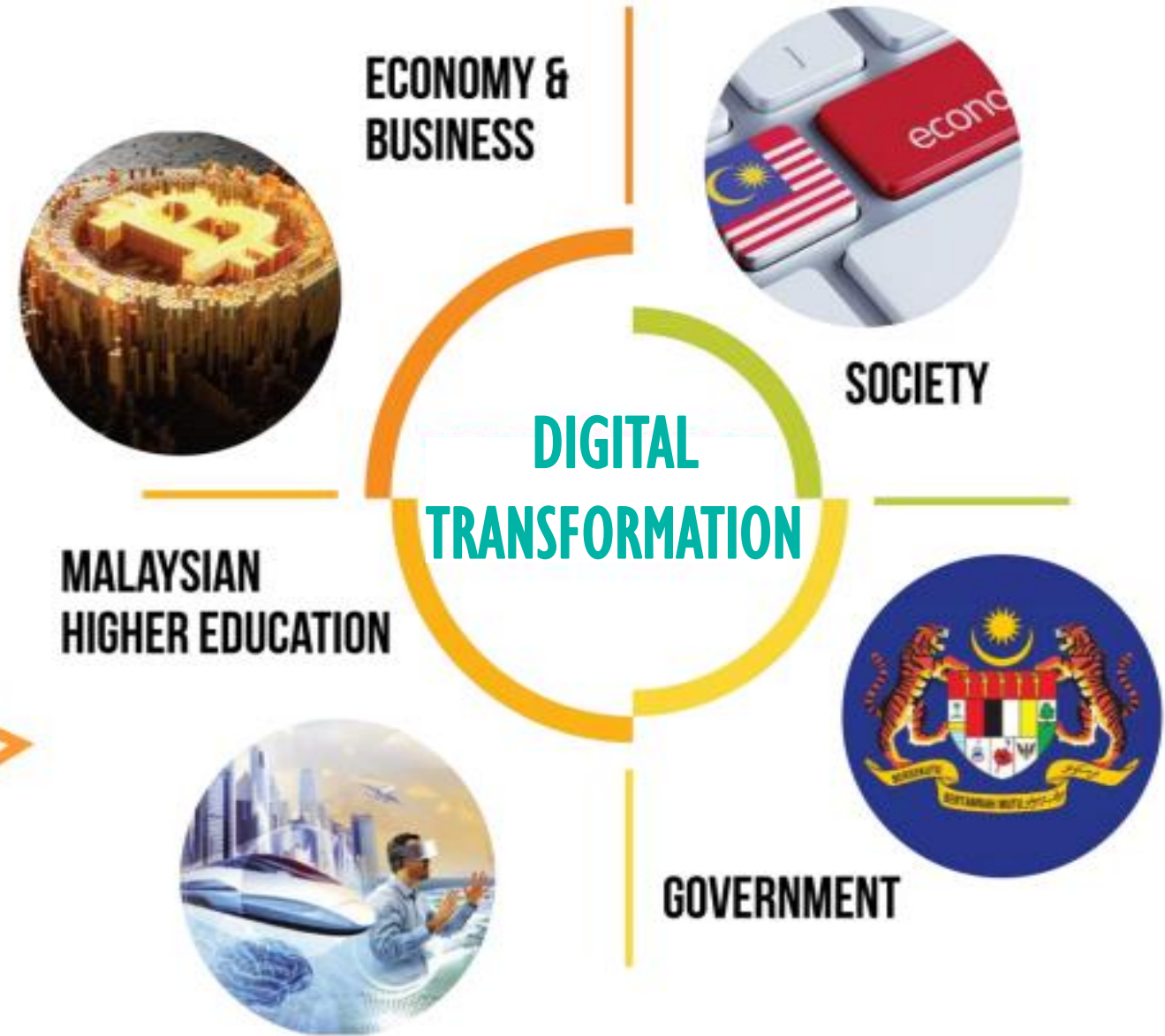
# DISRUPTION IN EDUCATION





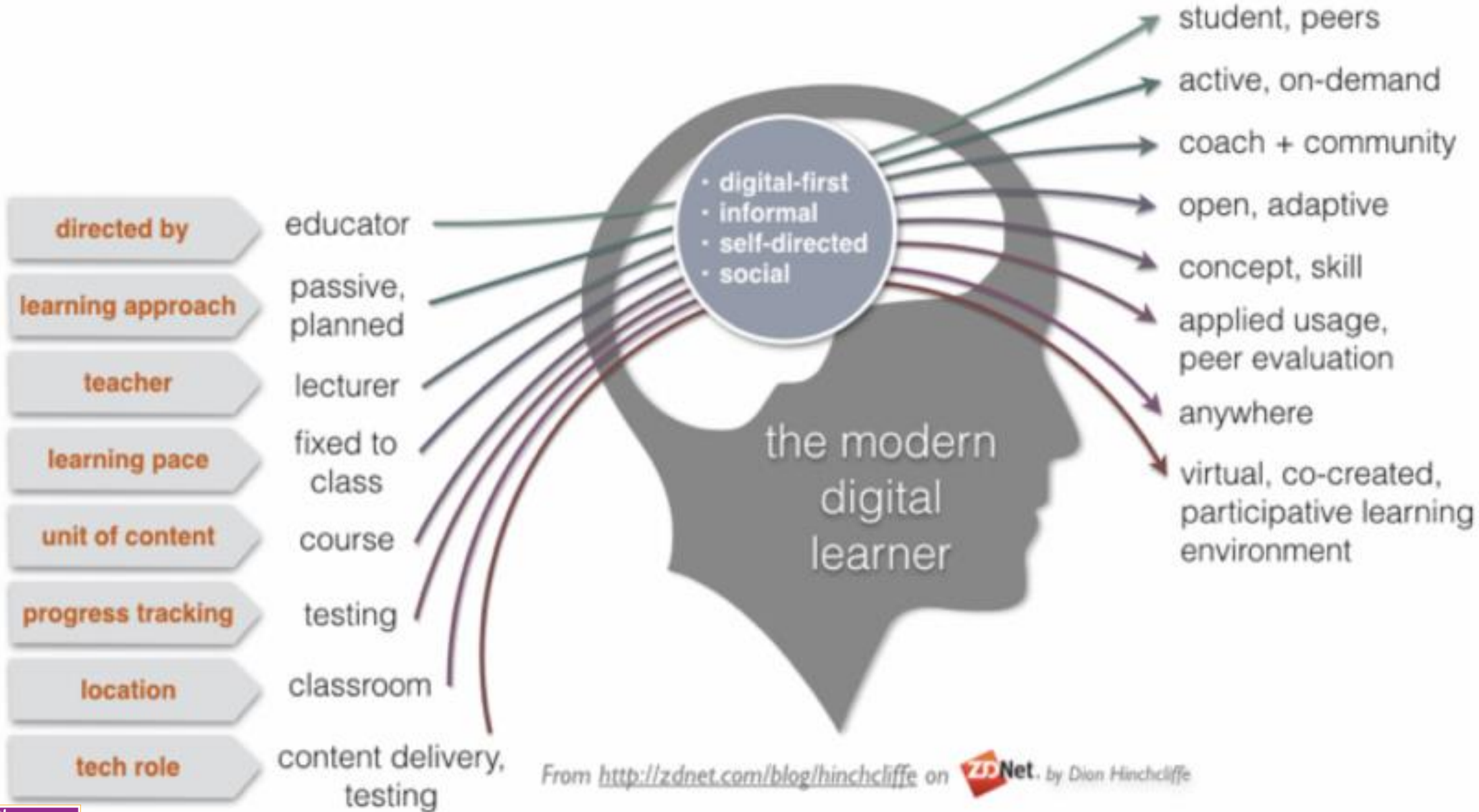
# IMPACTS OF DIGITAL TRANSFORMATION TO EDUCATION

- ✓ How will the lecturers teach? (method)
- ✓ How will the students learn?
- ✓ What will the lecturers teach (content)?
- ✓ How will the learning space look like?
- ✓ What are the roles of the lecturers?
- ✓ What are the roles of the students?
- ✓ What are the roles of support officers/staff
- ✓ What are the attributes of the students/lecturers/support?





# DIGITAL TRANSFORMATION OF LEARNING



From <http://zdnet.com/blog/hinchcliffe> on by Dion Hinchcliffe



# DELIVERY OF HIGHER EDUCATION



**JPT**  
KEMENTERIAN PENDIDIKAN TINGGI  
**SOARING UPWARDS**  
MALAYSIAN HIGHER EDUCATION

**MyHE 1.0**  
Teachers - centred

Receiving

Receiving

Receiving

Receiving



Social Networking

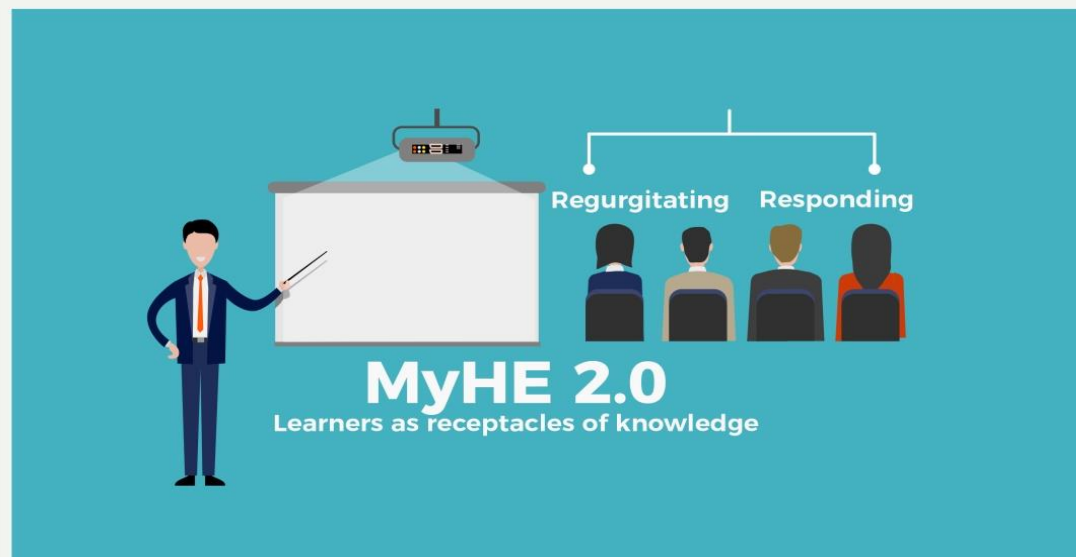
Collaboration

Teacher as Facilitator  
**MyHE 3.0**

Accessing Global Expertise

**PBL**  
Project and Inquiry Based Learning

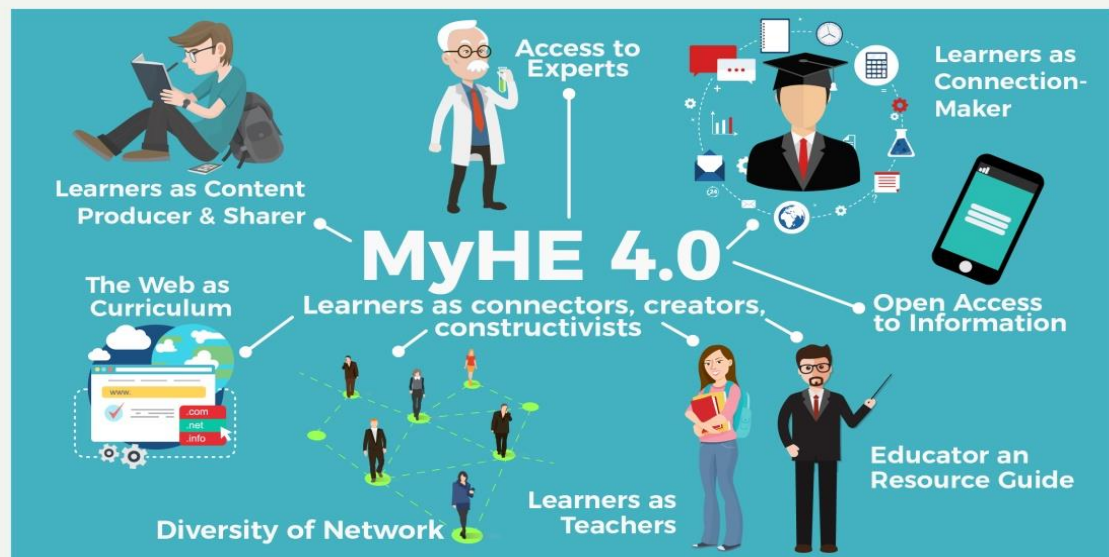
Collaborative, Interactive Web Tools : Wikis, Blogs, Google Docs, Edmodo



Regurgitating

Responding

**MyHE 2.0**  
Learners as receptacles of knowledge



Access to Experts

Learners as Content Producer & Sharer

Learners as Connection-Maker

**MyHE 4.0**  
Learners as connectors, creators, constructivists

The Web as Curriculum

Open Access to Information

Educator as Resource Guide

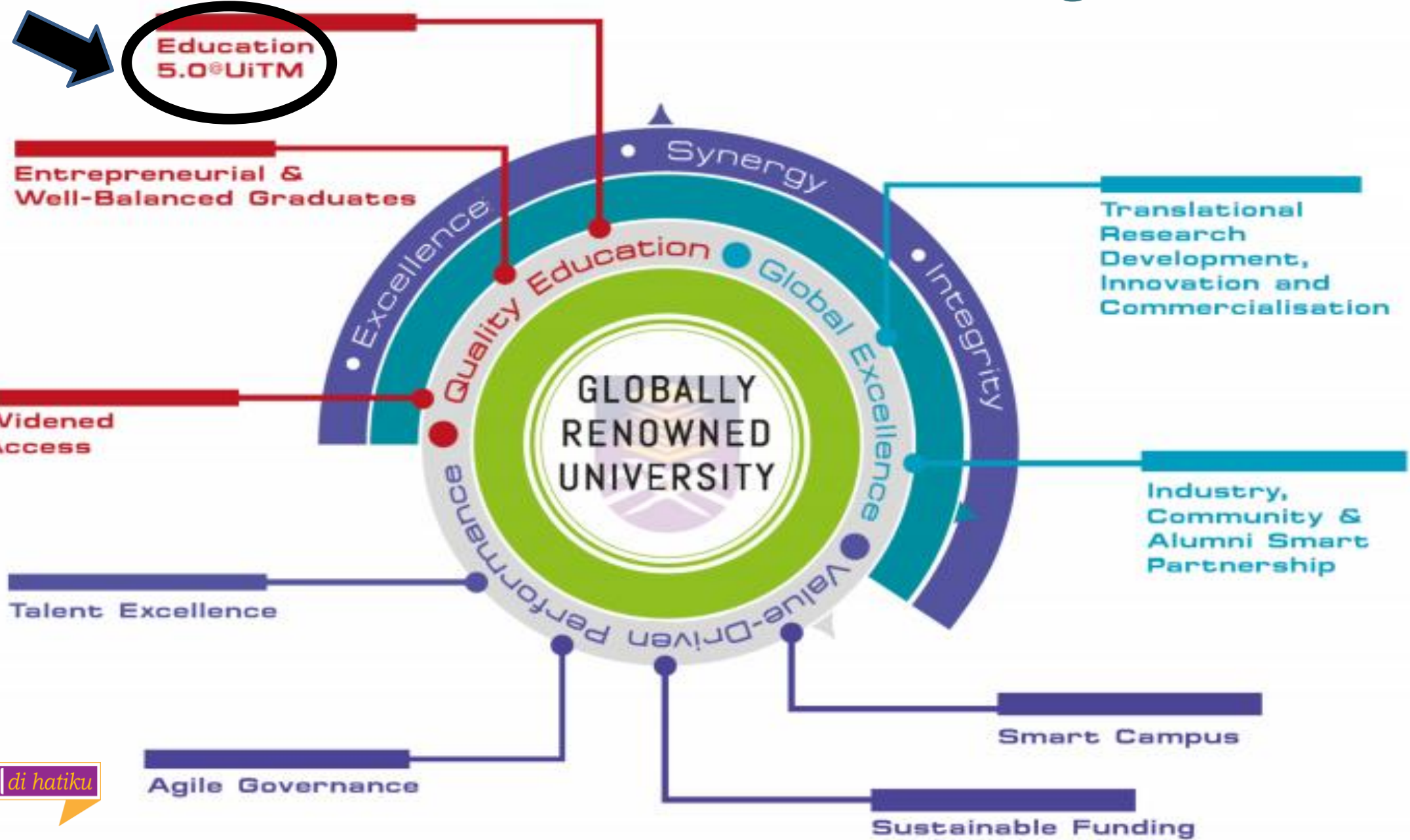
Learners as Teachers

Diversity of Network

(adapted from Jackie Gerstein, 2014)



# UiTM2025 STRATEGIC PLAN: EDUCATION 5.0@UiTM





## What is Education 5.0@UiTM?



Defining Education 5.0@UiTM

A learning - centric ecosystem that is sustainable, balanced and principled, driven by values, powered by intellect and afforded by new, ubiquitous technologies



Education 5.0@UiTM is not about smart technology and the machine's capability to do what humans do; rather it is about what humans can do well rendered by smart technology and machines



## Framing Education 5.0@UiTM

The elements of Education 5.0@UiTM : the foundation, the pillars , and the goal

**Progressive Thinking Learners**

**Inspired Learning**

**Personalization**

*Pillars*

Coherent and Relevant  
Curriculum

Innovative Delivery and  
Assessment

Meaningful Learning  
Experience

Transformative Learning  
Environment

Inspiring Educators

Emerging Technologies

Clarity of Purpose

People-centred principles

Engaging Ecosystem

Positive Culture

*Foundation*



# Inspired Learning

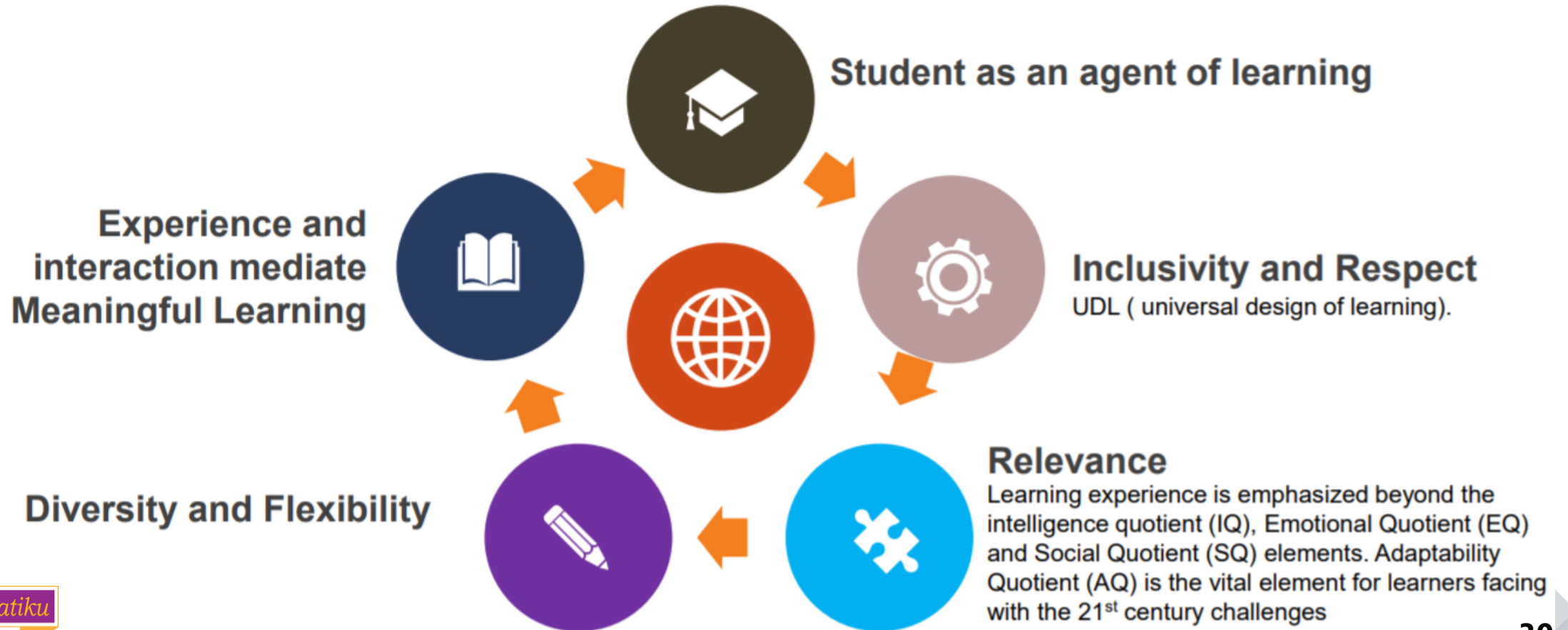
I hear, I forget  
I see, I remember  
I do, I understand  
I think, I discover  
I feel, I value  
I share, I gain





# Meaningful Learning Experience

A meaningful learning experience is the sum of a holistic set of dimensions – agency, diversity, flexibility, inclusivity, respect and relevance





# EDUCATION 5.0@UiTM

## Flexibility

### – Omni Learning

## Week Without Walls @UiTM

Students may study online, go global, go for field experience, be involved in service learning, assist community activities, learn from industry experts or any subject matter experts from other universities, learn from peers, and much more without being confined to the four walls of the classroom.

A week free from the normal classroom on campus

#### Learning online

Resource based learning, MOOCs, Blended Learning



#### Learning from the experts

Industry Experts  
Experts from other universities  
Experts from relevant organizations



#### Learning with and from peers

Peer tutoring/assessment,  
Learning Communities  
Intercampus network



No lectures in class!



**Commencing March 2018..**  
Faculties and campuses plan for a **Week Without Walls** for all or some courses; students take responsibility and complete their learning tasks.

Instructors design the learning activities based on stipulated learning outcomes, monitor and facilitate learning...and assess the achievement of the outcomes



#### Learning at a global platform

Global learning  
Virtual mobility & exchange



#### Learning in the community

Field experience, Service learning, community based learning, museum learning



#### Learning at the workplace

Work study, practicum, work based learning

Please contact the UiTM Academic Affairs Division @55442009 for



## Portfolios and Self Assessments

### Assessment as learning

Outcome : Lifelong Learning

Students are able to learn about themselves as learners

- become aware of how they learn
- become aware /have knowledge of one's own thought processes.

Students reflect on their work on a regular basis, usually through self and peer assessment





## An exciting journey indeed



**Fluid, dynamic and organic curriculum**  
 Industry and Community Relevant, Future proof content, Shared and Distributed Content, Multi disciplinary electives, Expert faculties

**A student is not a statistic**  
 Immersive, Brain based, active learning, Efficient, effective flexible, ubiquitous technology  
 Multiple Means of Representations

**Student as an agent of learning**  
 Experience and interaction mediate Learning, Relevant, inclusive, diverse, flexible

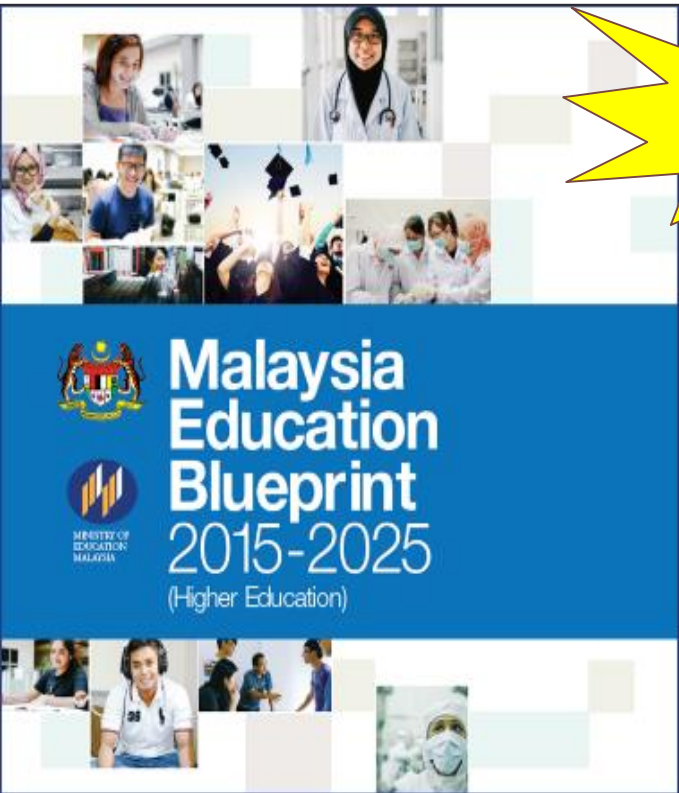
**Immersive Technology and Learning spaces**  
 Expansion of unique and creative learning through adaptive immersive technology and space;  
**ARIF, data labs, makerspace**

**Inspiring educators;**  
 with great qualities, proactive in learning and enhancing abilities. All gained knowledge, skills and abilities from academic and research work brought in and shared together in class.

# 3. MAKING THE RIGHT MOVE



# MALAYSIA EDUCATION BLUEPRINT (MEB) 2015-2025



Launched in April 2015



The 10<sup>th</sup> Shift

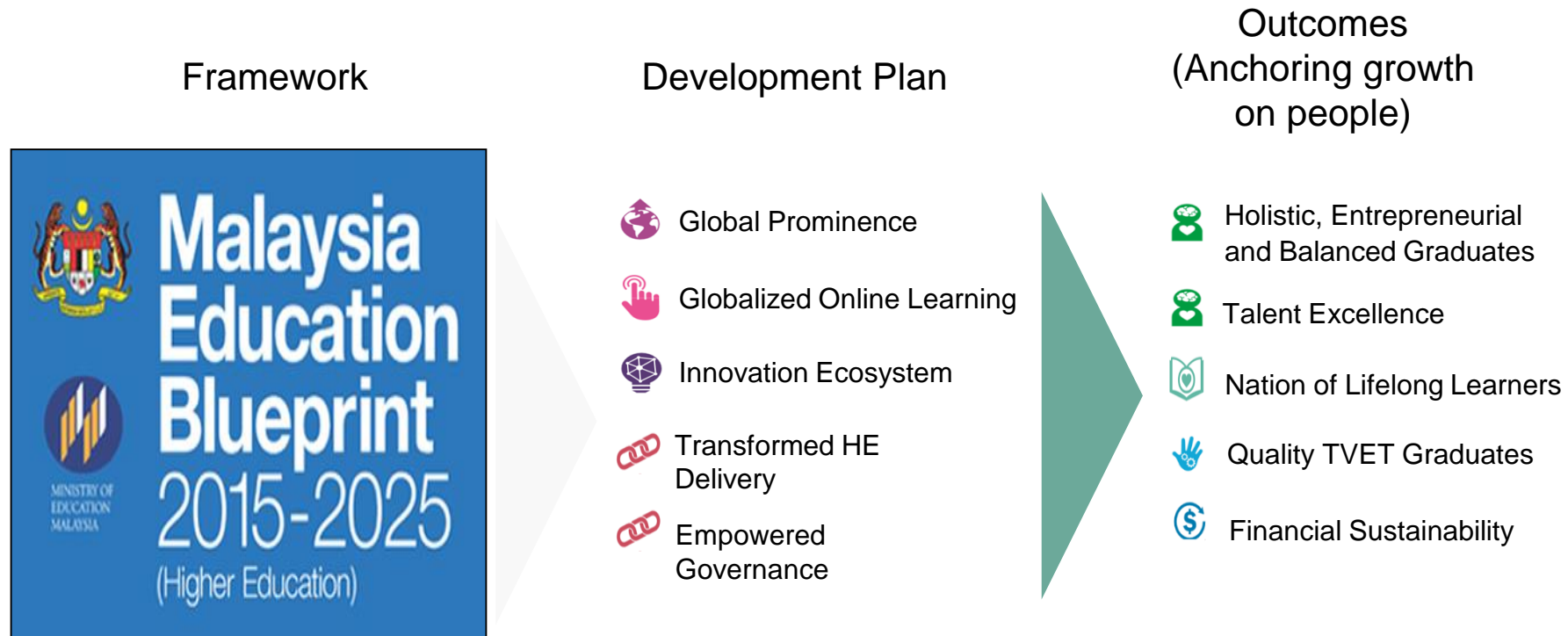
Started in 2016





# MEB 2015 – 2025 ROADMAP

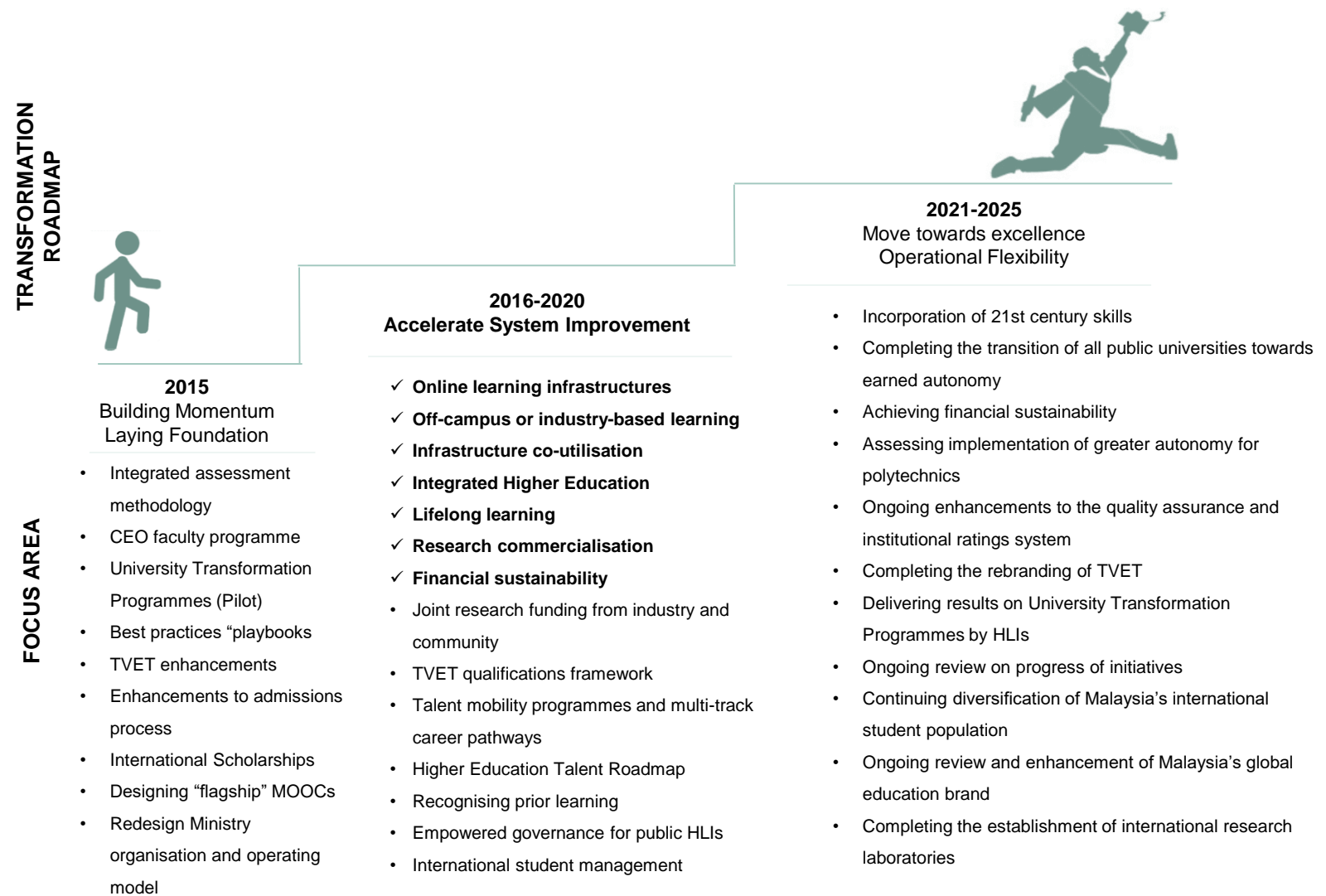
Malaysia Education Blueprint 2015-2020: Transformation Roadmap  
Key stakeholders are the Ministry, HLIs, students and industry





# MEB 2015 – 2025 ROADMAP

Malaysia Education Blueprint 2015-2020: Transformation Roadmap  
Key stakeholders are the Ministry, HLIs, students and industry





# MEB 2015 – 2025 FOCUS AREA

Higher Learning Institutions (HLIs) focus areas

Core business of teaching and learning, support business of operation and administration

Teaching & Learning	Operation & Administration
Content Management	ICT & Network Infrastructure



# ACCELERATE DT IN HIGHER EDUCATION

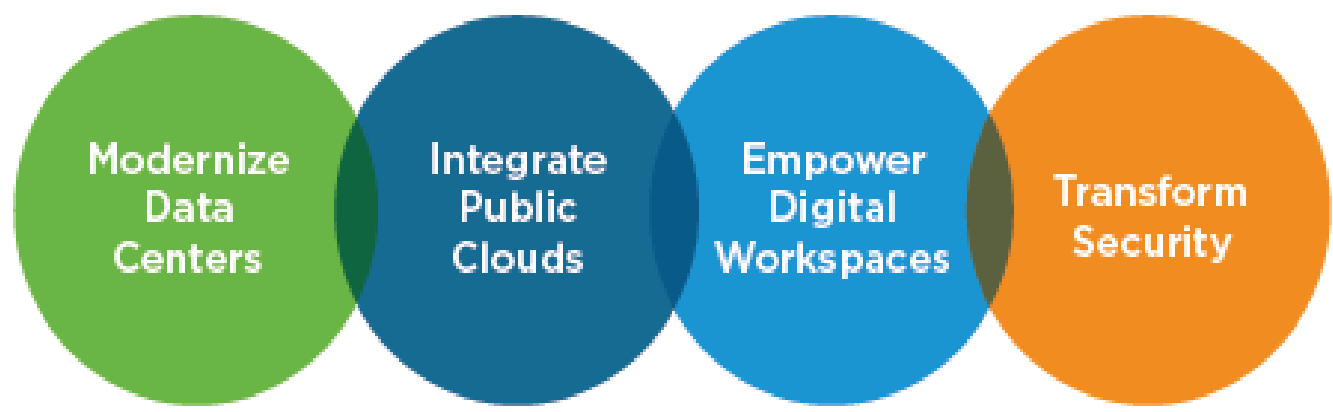
Grow Revenue, Drive Operational Efficiencies, and Reduce Costs



Mobilize Learning and Retain Students



Improve Data Security and Protect PII and IP





# DIGITAL INSTITUTIONS

## Digital Learning



Enhance quality and innovation of **TEACHING** and **LEARNING**



Accelerate productivity and collaboration in **RESEARCH** and **DEVELOPMENT**

## Digital Campus



Improve operational efficiency of campus **ADMINISTRATION** and **MANAGEMENT** services



Transform and secure campus environment for better **STAKEHOLDERS EXPERIENCE**

### Digital Capabilities for Education

#### Connected Learning

*BYOD & Mobility infrastructure to transform learning anytime, anywhere with any device securely*

+

#### Learning Spaces

*Blended spaces for collaborative & effective engagement, enhance learning experiences*

+

#### Digital Platform

*Engaging learning & media resource repository, delivery & collaborative platform*

+

#### Smart Workspaces

*Transformative work spaces to entrench collaboration & drive productivity gains*

+

#### Smart Services

*Innovative business & campus service offerings, transform stakeholder experiences*

+

#### Smart Facilities

*Smart lighting, parking, building & environment control, security for end-to-end campus experience*

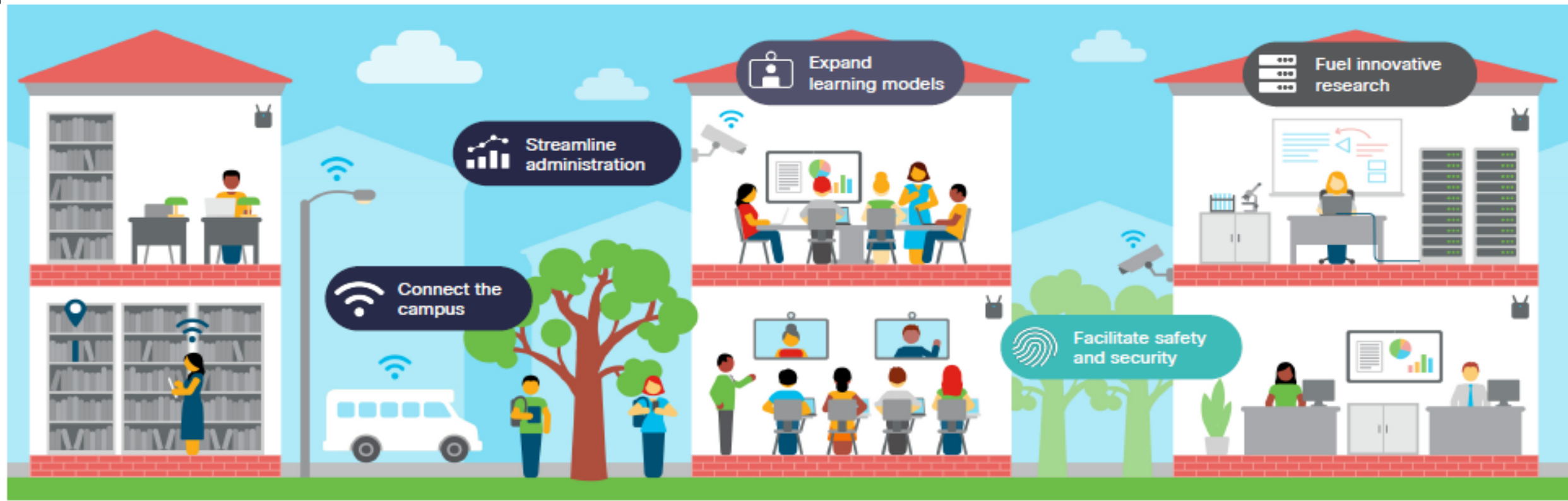
## End-to-End IT Platform for Digital Institutions

Network | Security (Cyber) | Data Center (Cloud) | Mobility





# HIGHER EDUCATIONAL INSTITUTIONS TODAY



**Connect the campus**

- Campus wireless and connectivity
- Mobile experiences and location services
- Smart campus and automation

**Streamline administration**

- Data-informed operations
- Administrative collaboration
- Student engagement and retention services

**Expand learning models**

- Active learning spaces
- Distance learning**
- Faculty professional development

**Facilitate safety and security**

- Network, endpoint, and web security**
- Identity and access control
- Video surveillance and physical security

**Fuel innovative research**

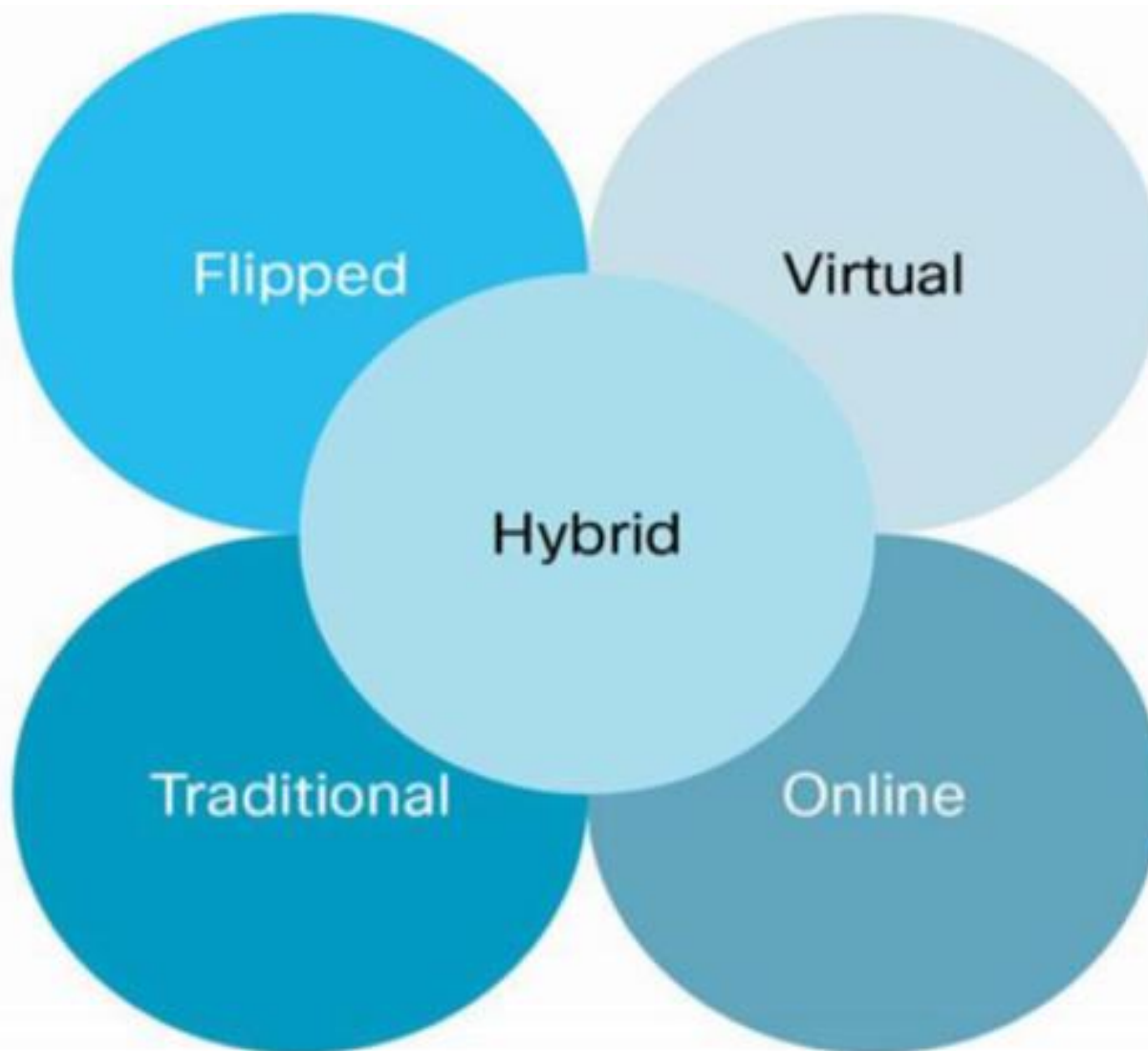
- Research collaboration
- High-performance computing
- Research cloud security



# BLENDED LEARNING STRATEGIES FOR EDUCATION

- **Flipped** - students review lecture content prior to class; class time focuses on discussion and application of lecture

- **Traditional** - in-person, typically lecture-based courses

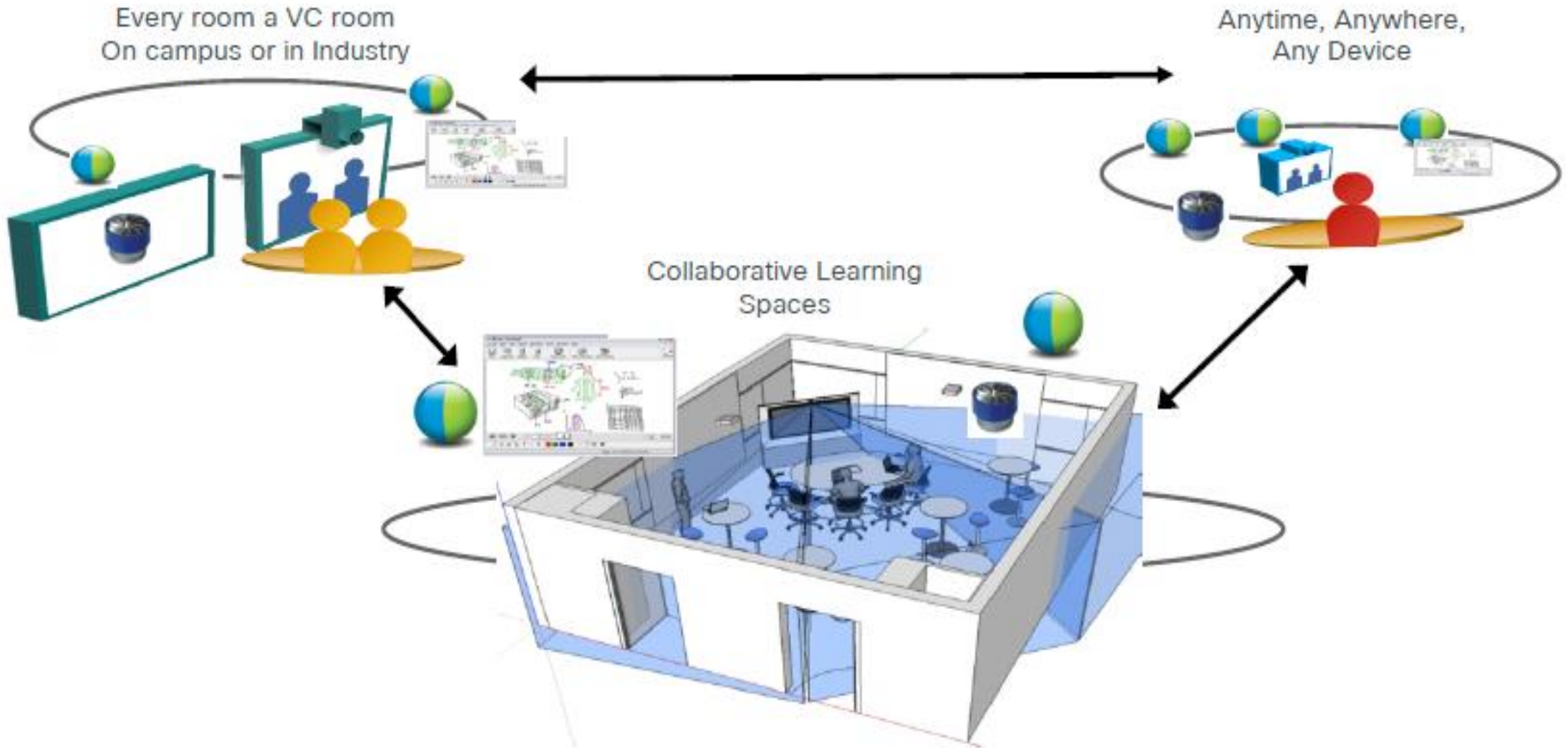


- **Virtual** - face-to-face classroom experience is replaced with virtual classroom

- **Hybrid** - integration of multiple teaching methods into the course pedagogy

- **Online** - content delivered online; student self-study oriented approach with minimal teacher interaction (e.g., MOOC)

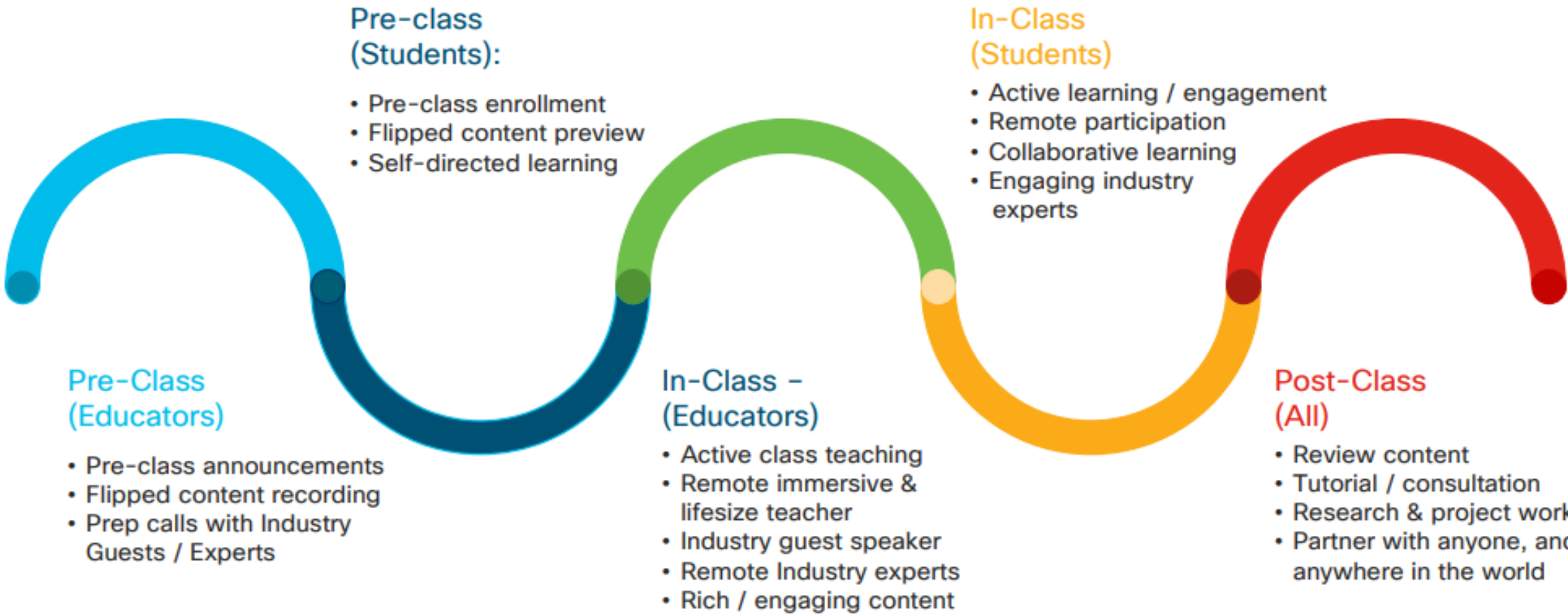
# BLENDED LEARNING SPACES



**Seamless experience across platform**



# Day-in-a-life of: Teacher, Student, Industry Partners



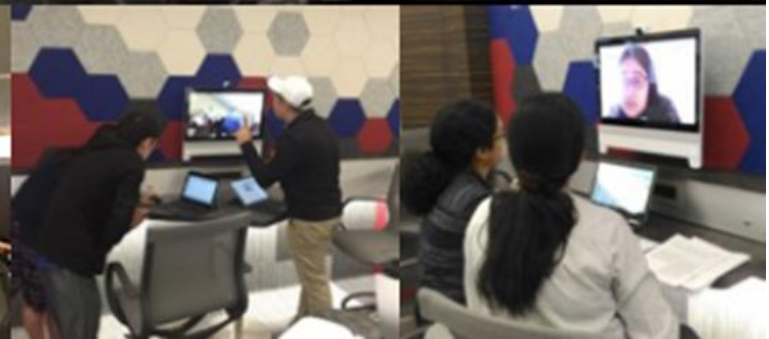
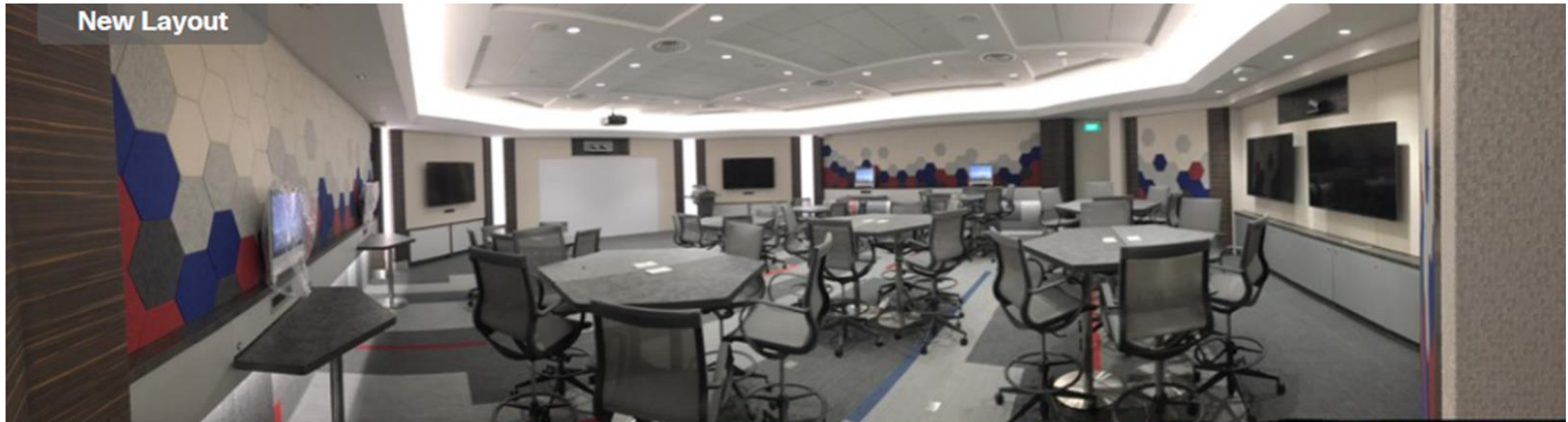
# LEARNING STATION @ COMMON SPACES, LIBRARY AND HOSTELS



- Purpose-built video/audio conferencing for huddle spaces for small group of students
- Attend Classes in a group
- Project group work
- Group discussion
- Special needs students



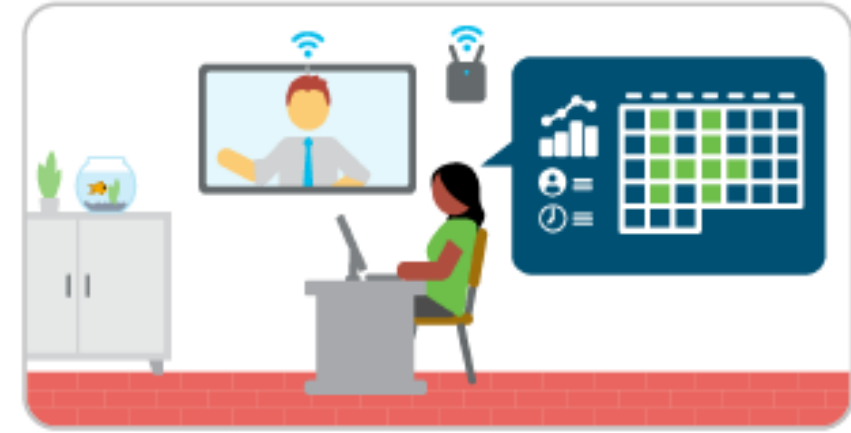
# LEARNING SPACES DESIGN: ACTIVE COLLABORATION ROOM





# ADMINISTRATIVE COLLABORATION

**Boost administrators' productivity with collaborative, digital workspaces.**



## Business needs

- Make meetings more efficient and valuable, less time-consuming
- Improve attendance and engagement at meetings
- Reduce wasted time spent traveling to meetings
- Reduce meetings on same topic
- Improve cross-departmental collaboration
- Improve compliance metrics through better tracking

## Capabilities

- Conduct live video calls with any number of participants from any device
- Record meetings for review and missed participants
- Continue discussion after meeting in secure, private messaging space
- Conduct large-scale video broadcasts (including global)
- Broadcast messages across customized digital signage

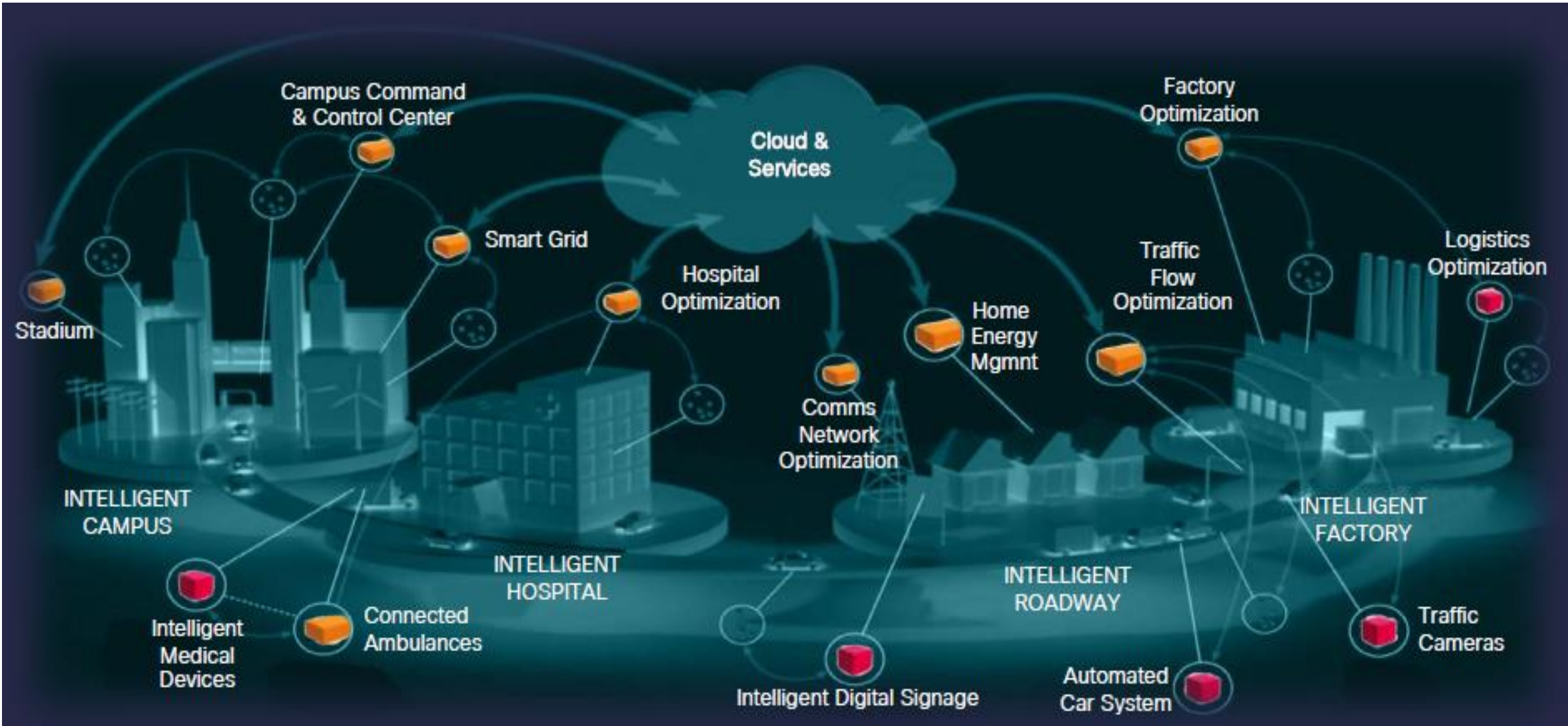
## Business outcomes

- Better administrative decision making across teams
- Streamlined staff training
- Improved meeting attendance
- Elimination of travel time to meetings
- Validated compliance metrics

## Stakeholders

- Chancellor
- Vice Chancellor
- Deans
- CFO
- CIO

# A CAMPUS WITH A DIGITAL OVERLAY



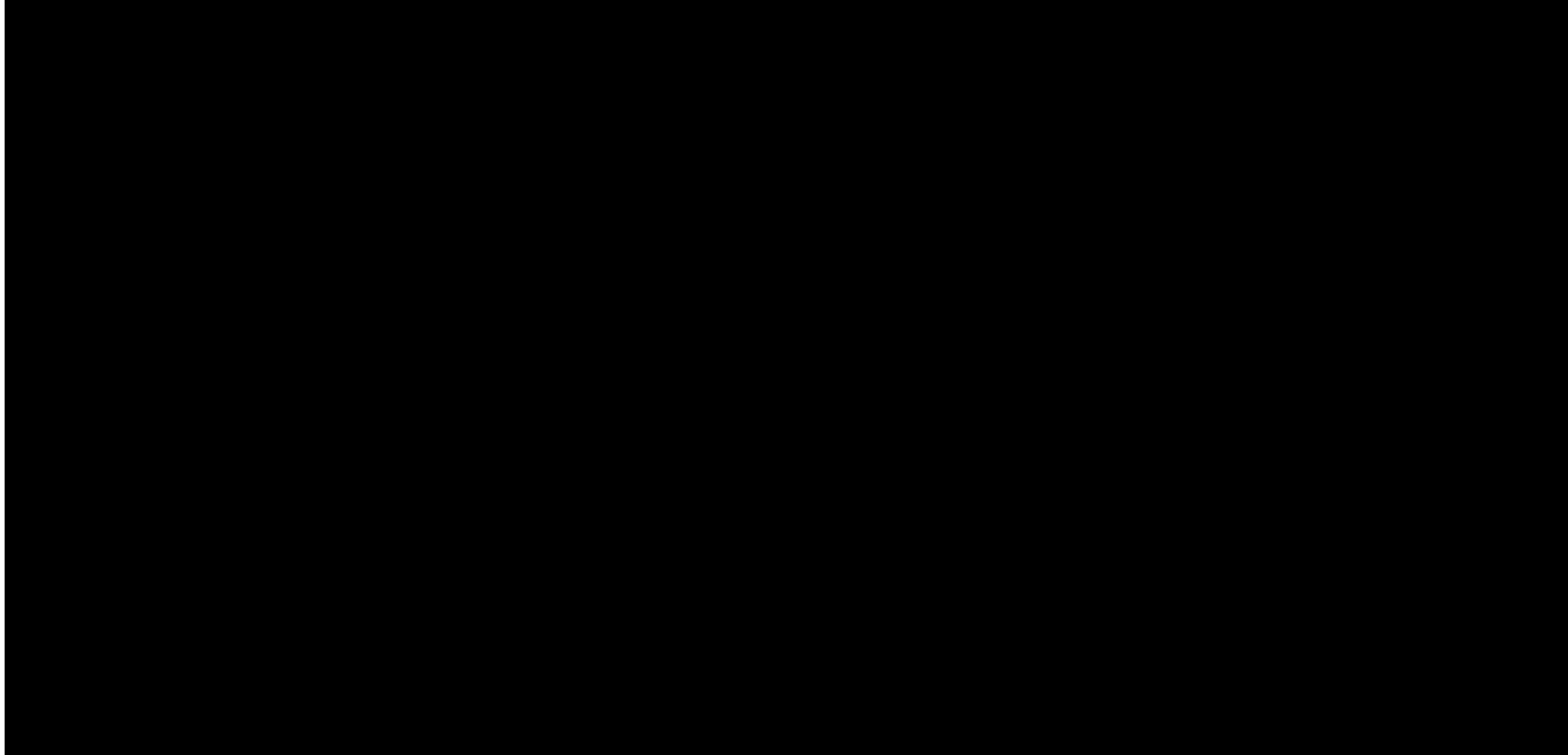


# 3. UiTM DIGITAL CAMPUS



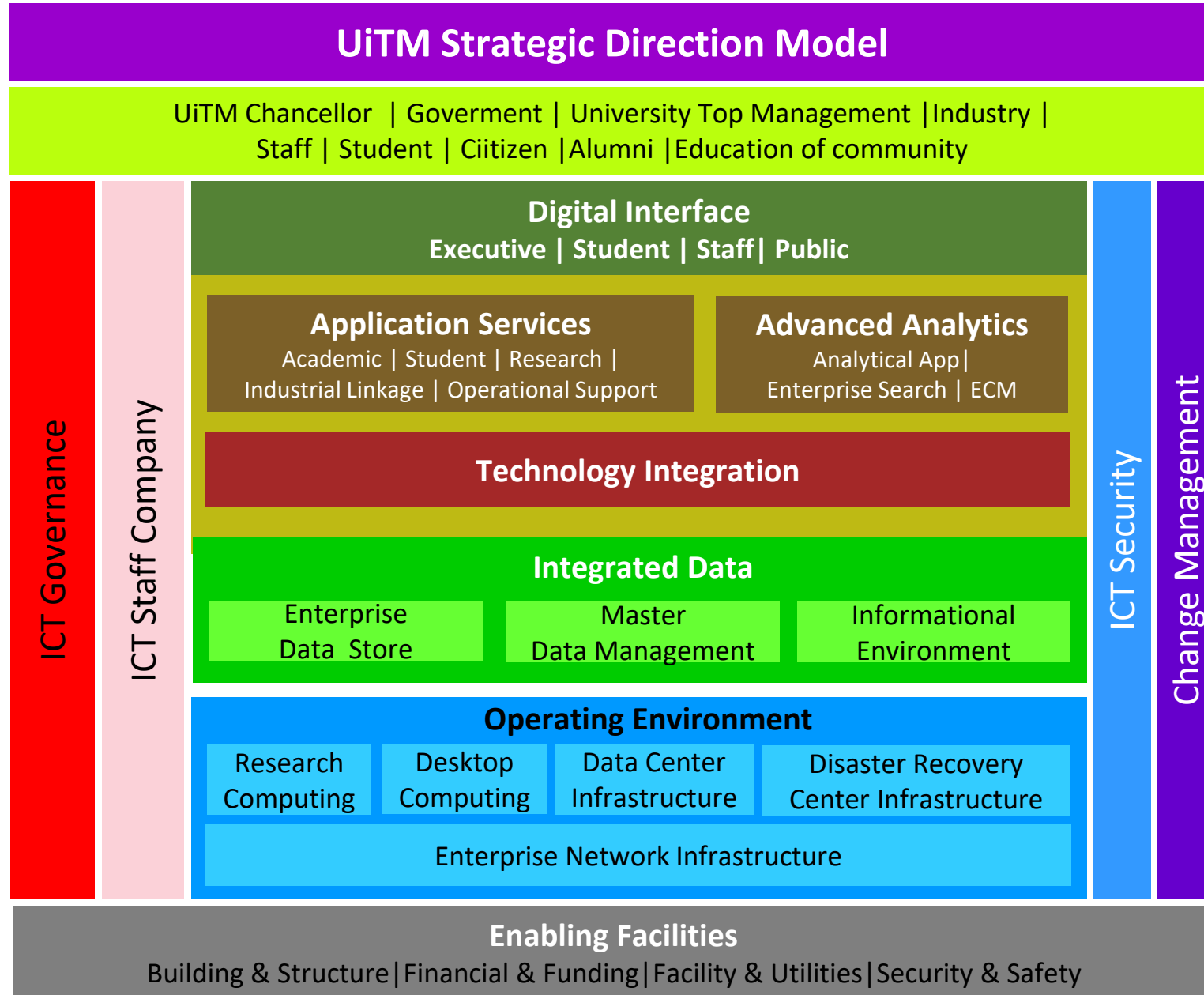


# DIGITAL CAMPUS LIFE STYLE





# UiTM ENTERPRISE ARCHITECTURE



Business Architecture

ICT Architecture

Physical Architecture

- Stakeholder
- Communication Channel
- Application Architecture
- Information Architecture
- Technology Architecture

# UiTM2025 STRATEGIC PLAN



3 Strategic Thrust	9 Strategic Theme	24 Key Strategy
144 Key Initiatives	21 Key Performance Indicator	121 Performance Indicator





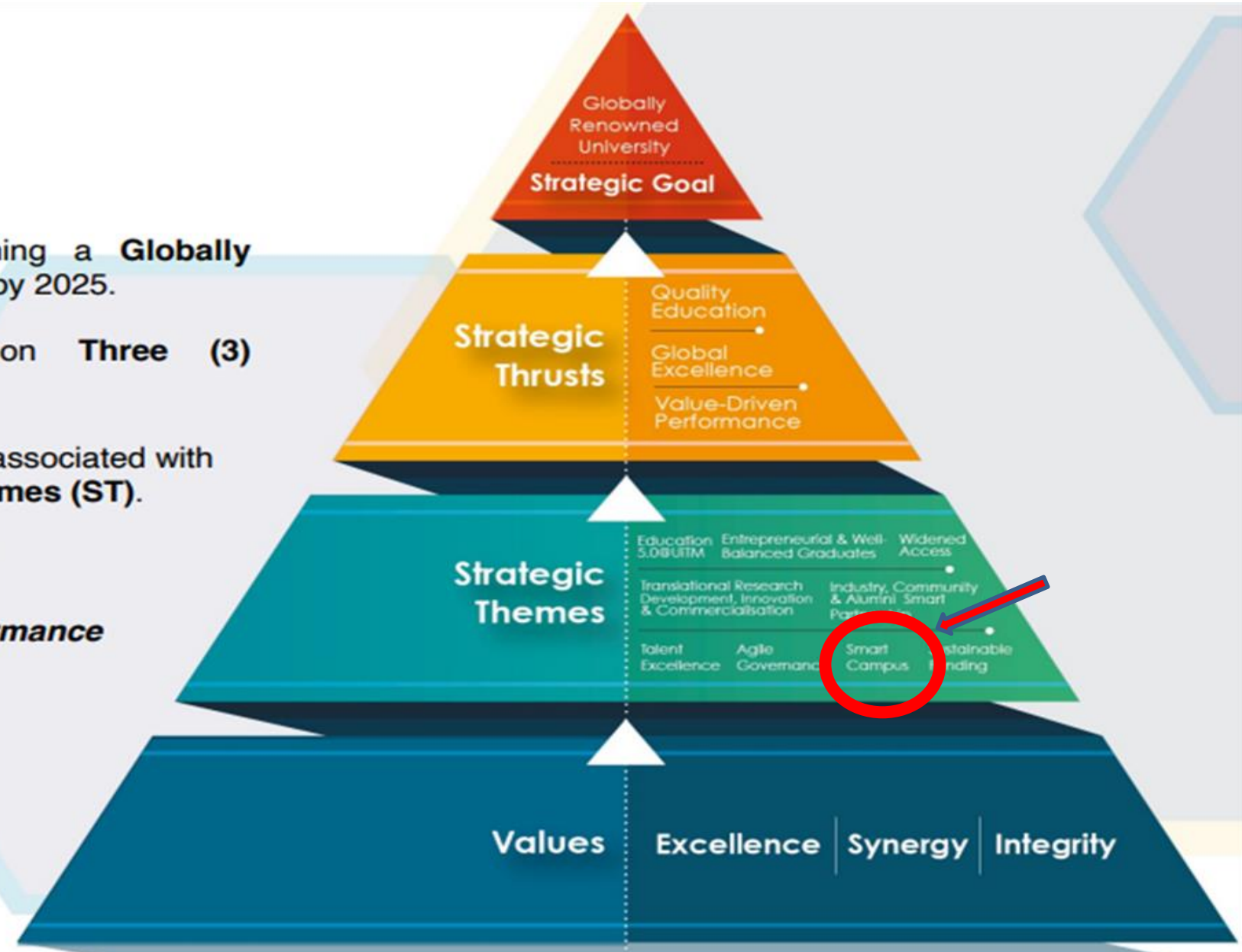
# UiTM2025 DESIRED STATE

UiTM aims at becoming a **Globally Renowned University** by 2025.

UiTM2025 anchors on **Three (3) Strategic Thrusts**.

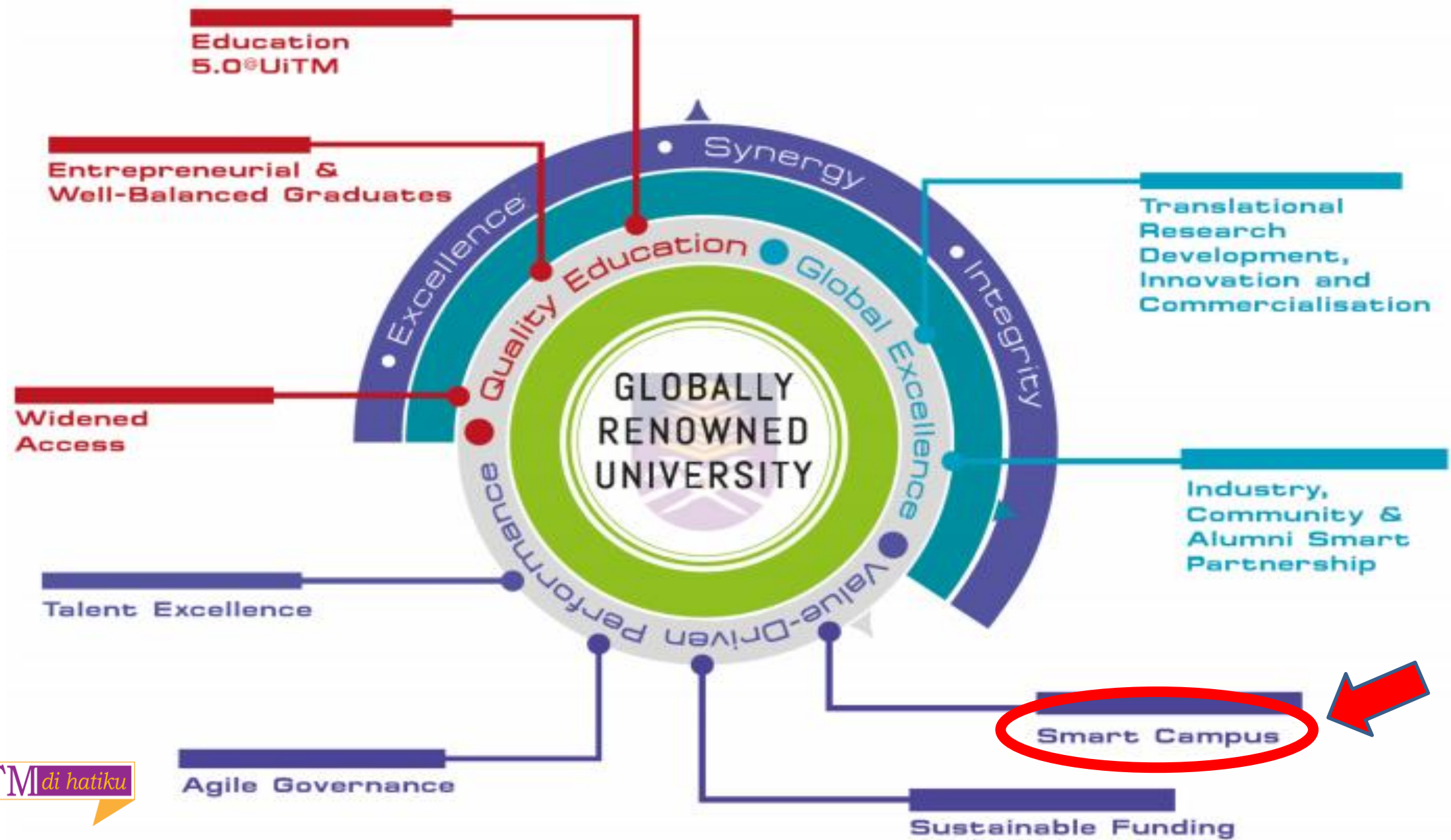
Each strategic thrust is associated with identified **Strategic Themes (ST)**.

- **Quality Education**
- **Global Excellence**
- **Value-Driven Performance**



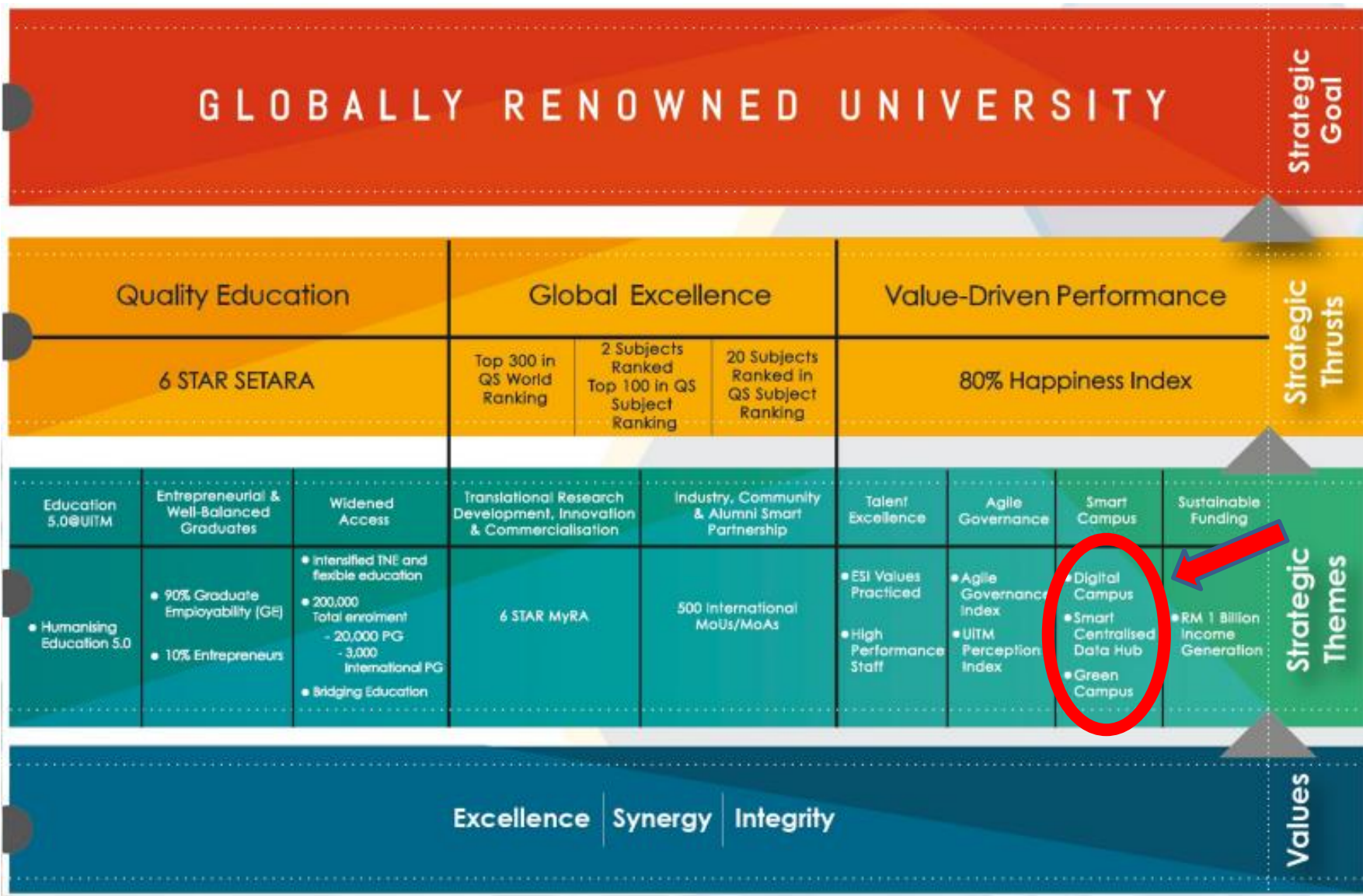


# UiTM2025 STRATEGIC PLAN: SMART CAMPUS





# UiTM2025 DESIRED STATE: DIGITAL CAMPUS





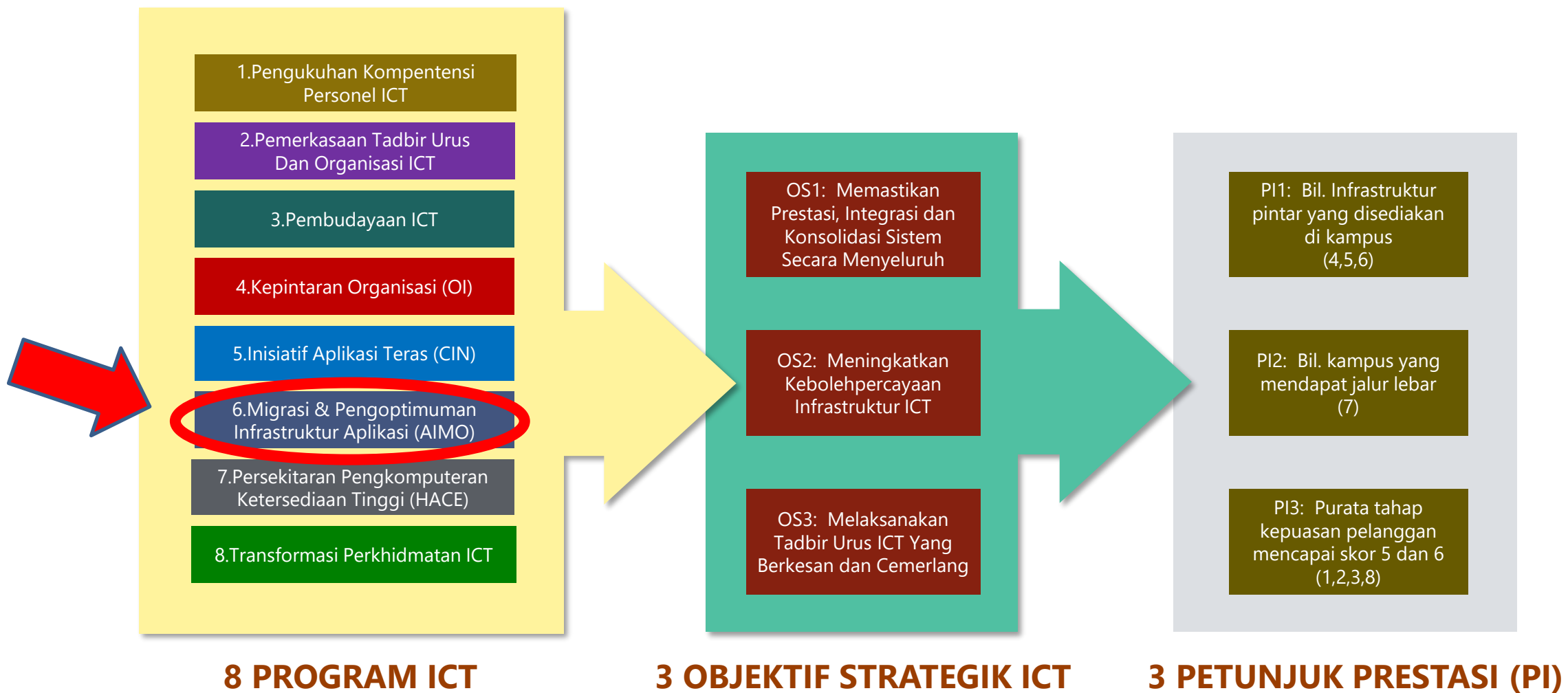
# UiTM ICT STRATEGIC PLAN (ISP UiTM) 2018-2021







# MAPPING ISP PROGRAMME, ICT STRATEGIC OBJECTIVES (SO) & RMKe-11 PERFORMANCE INDICATOR (PI)



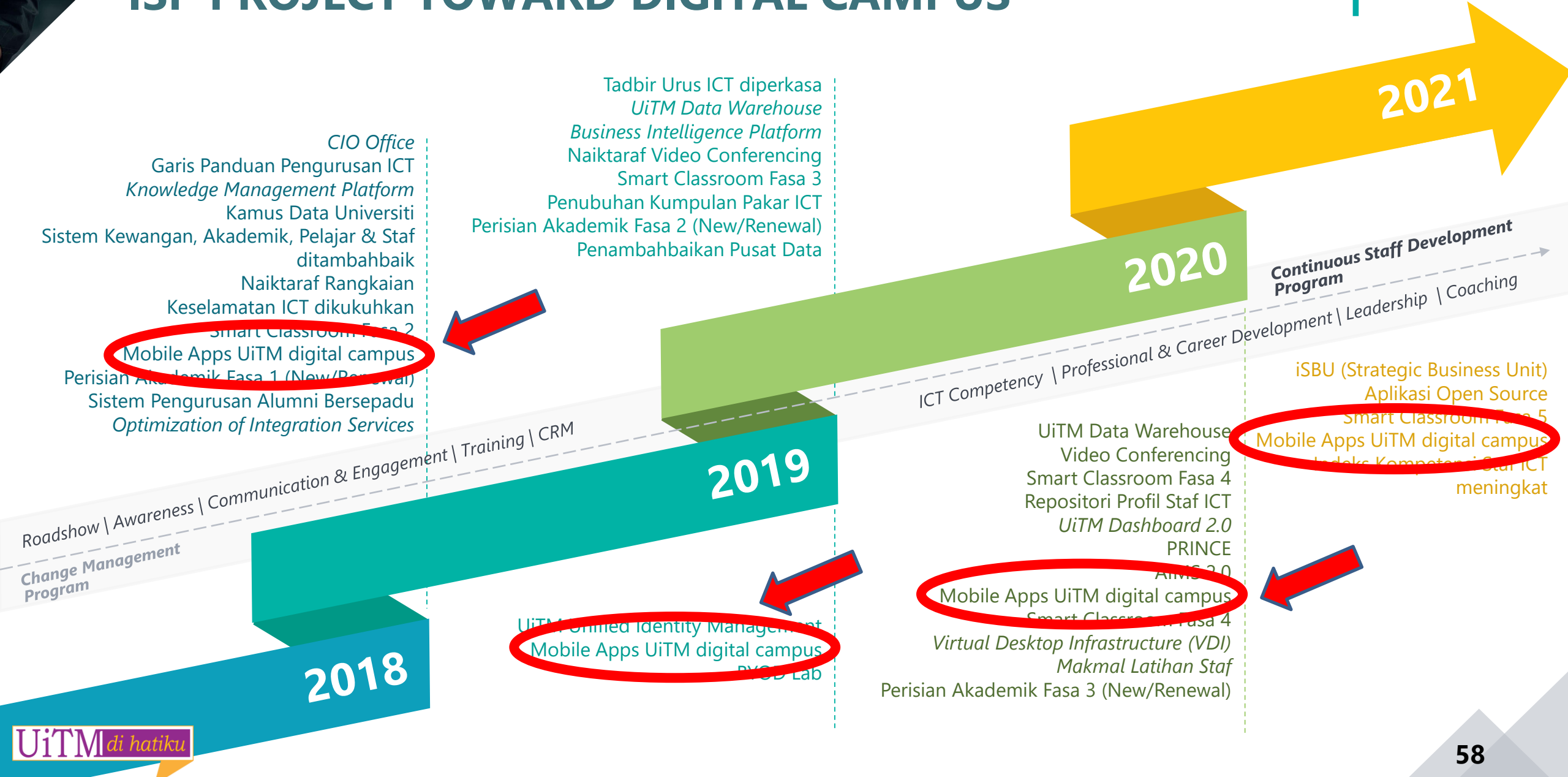
**8 PROGRAM ICT**

**3 OBJEKTIF STRATEGIK ICT**

**3 PETUNJUK PRESTASI (PI)**



# ISP PROJECT TOWARD DIGITAL CAMPUS



2018

UiTM *di hatiku*

2019

2020

2021

*CIO Office*  
 Garis Panduan Pengurusan ICT  
*Knowledge Management Platform*  
 Kamus Data Universiti  
 Sistem Kewangan, Akademik, Pelajar & Staf ditambahbaik  
 Naiktaraf Rangkaian Keselamatan ICT dikukuhkan  
 Smart Classroom Fasa 2  
**Mobile Apps UiTM digital campus**  
 Perisian Akademik Fasa 1 (New/Renewal)  
 Sistem Pengurusan Alumni Bersepadu  
*Optimization of Integration Services*

Tadbir Urus ICT diperkasa  
*UiTM Data Warehouse*  
*Business Intelligence Platform*  
 Naiktaraf Video Conferencing  
 Smart Classroom Fasa 3  
 Penubuhan Kumpulan Pakar ICT  
 Perisian Akademik Fasa 2 (New/Renewal)  
 Penambahbaikan Pusat Data

**Mobile Apps UiTM digital campus**  
 Virtual Desktop Infrastructure (VDI)  
 Makmal Latihan Staf  
 Perisian Akademik Fasa 3 (New/Renewal)

**Mobile Apps UiTM digital campus**  
 Smart Classroom Fasa 4  
 Virtual Desktop Infrastructure (VDI)  
 Makmal Latihan Staf  
 Perisian Akademik Fasa 3 (New/Renewal)

iSBU (Strategic Business Unit)  
 Aplikasi Open Source  
 Smart Classroom Fasa 5  
**Mobile Apps UiTM digital campus**  
 Indeks Kompetensi Staf ICT meningkat

Continuous Staff Development Program  
 ICT Competency | Professional & Career Development | Leadership | Coaching

# MOBILE APPS UiTM DIGITAL CAMPUS



**UiTM Digital Campus**  
UiTM Mobile App for University Staff & Students

**PRIVATE APPS** Features:  
iStudent  
iStaff  
iLearn  
SUFO  
UiTM Library  
MySalary  
UiTM News (use your staff/student's postal login)

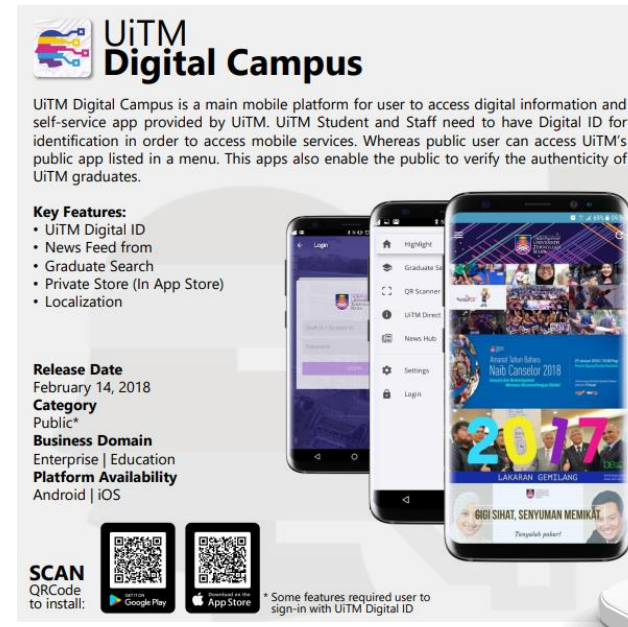
**PUBLIC APPS** Features:  
Graduate Search  
UiTM Program Entry Qualification  
Virtual Campus Tour  
Selangkah  
UiTM Virtual Campus

**GET IT FROM**  
Search for UiTM Digital Campus

GET IT ON Google Play | Available on the iPhone App Store

Scan QR Code to download UiTM Mobile App

UiTM Mobile App Development is a collaborative effort between: Infrastruktur | BPP | BHEA | iNED | IT Sg Buloh | PTAR | INQKA | Pejabat Pendaftar | Pejabat Bendahari



**UiTM Digital Campus**

UiTM Digital Campus is a main mobile platform for user to access digital information and self-service app provided by UiTM. UiTM Student and Staff need to have Digital ID for identification in order to access mobile services. Whereas public user can access UiTM's public app listed in a menu. This apps also enable the public to verify the authenticity of UiTM graduates.

**Key Features:**

- UiTM Digital ID
- News Feed from
- Graduate Search
- Private Store (In App Store)
- Localization

**Release Date**  
February 14, 2018

**Category**  
Public\*

**Business Domain**  
Enterprise | Education

**Platform Availability**  
Android | iOS

**SCAN QRCode to install:**

\* Some features required user to sign-in with UiTM Digital ID



## UiTM Digital Campus Team

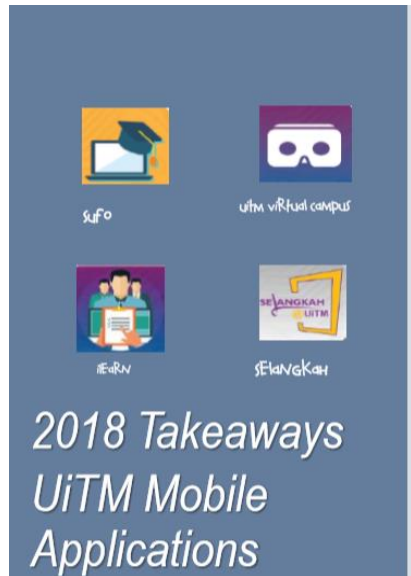
**Project Advisor:** Prof Datin Dr Noor Habibah Haji Arshad | Sariani Sarijo

**Project Manager:** Mohd Hairy Mohamaddiah | **Team Leader:** Mohd Azrul Mohamad Tajudin

**Mobile Developer:** Mohd Yuzi Zali | Ahmad Adam Rusly | Ahmad Farhan Mohd Fadzil | Mohd Rafhan Mohd Amin | Mohamad Firdaus Abd Shukor | Hairulnizam Ghazali | Nur Mohd Raqib Kamarudin | Faidah Muhammad | Mohammed Haire Kahfi | Mohd Izwan Salim | Siti Sapura Binti Jailani | Khairur Faiq Ab Patah | Emilia Hadi @ Mawi | Raihanah Abdullah | Azizian Mohd Sapawi | Dr. Hayati Abd Rahman

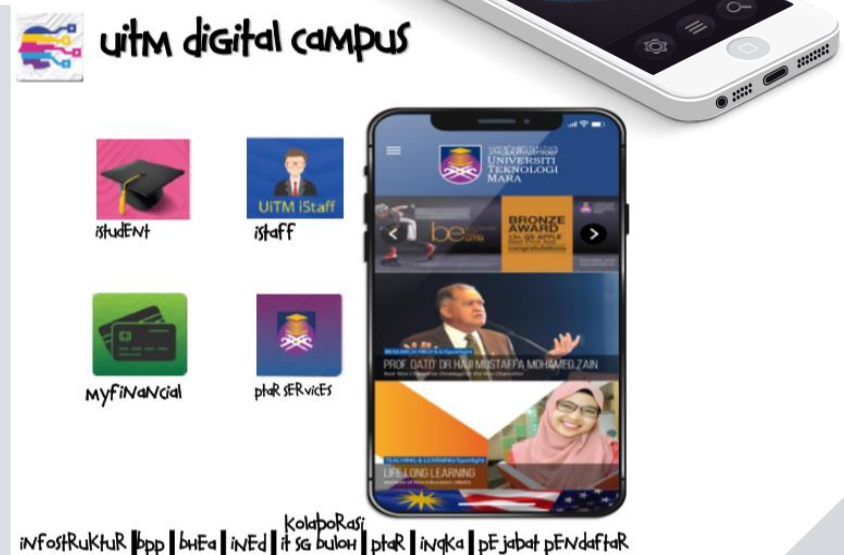
**Business Analyst:** Dr Prasanna Ramakrisnan | Azizi Bin Jantan | Ahmad Faizar Bin Jaafar | Sharina Binti Mohd Nasir | Arfah Binti Jamian

**Digital Marketing:** Mohd Hairy Mohamaddiah | Zamani Umar Husin



2018 Takeaways  
UiTM Mobile Applications

Icons for: SUFO, iLearn, UiTM Library, iStaff, Financial Service, Selangkah, UiTM Virtual Campus.



uitm digital campus

Icons for: iStudent, iStaff, MyFinancial, Ptar Services.

Phone screen showing: BRONZE AWARD, PROF DATO DR HAJI MUSTAPFA MOHAMMED ZAIN, UTM LONG LEARNING.

# DIGITAL CAMPUS BENCHMARK



Curtin University



Melbourne University



Singapore Polytechnic



Universiti Teknologi Malaysia



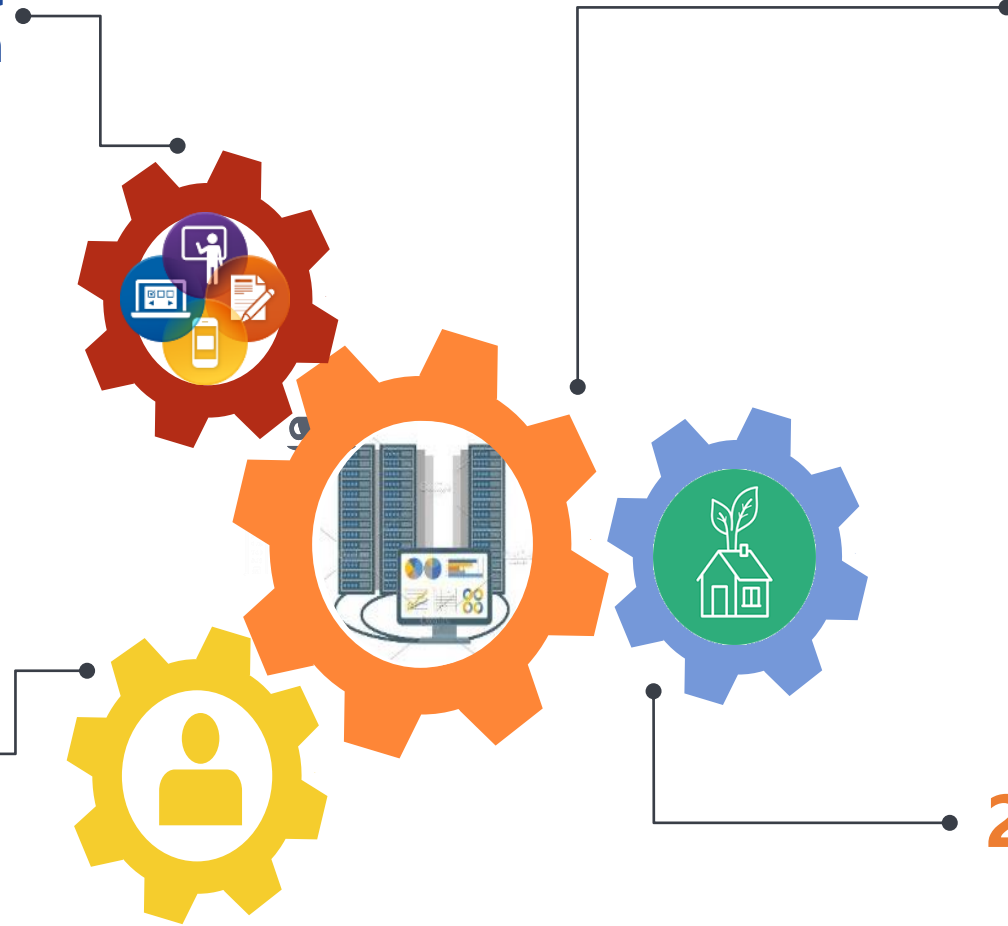
# UiTM DIGITAL CAMPUS FOCUS AREA

**4 Smart Teaching, Learning & Research**

**1 Smart Centralized Data Hub**

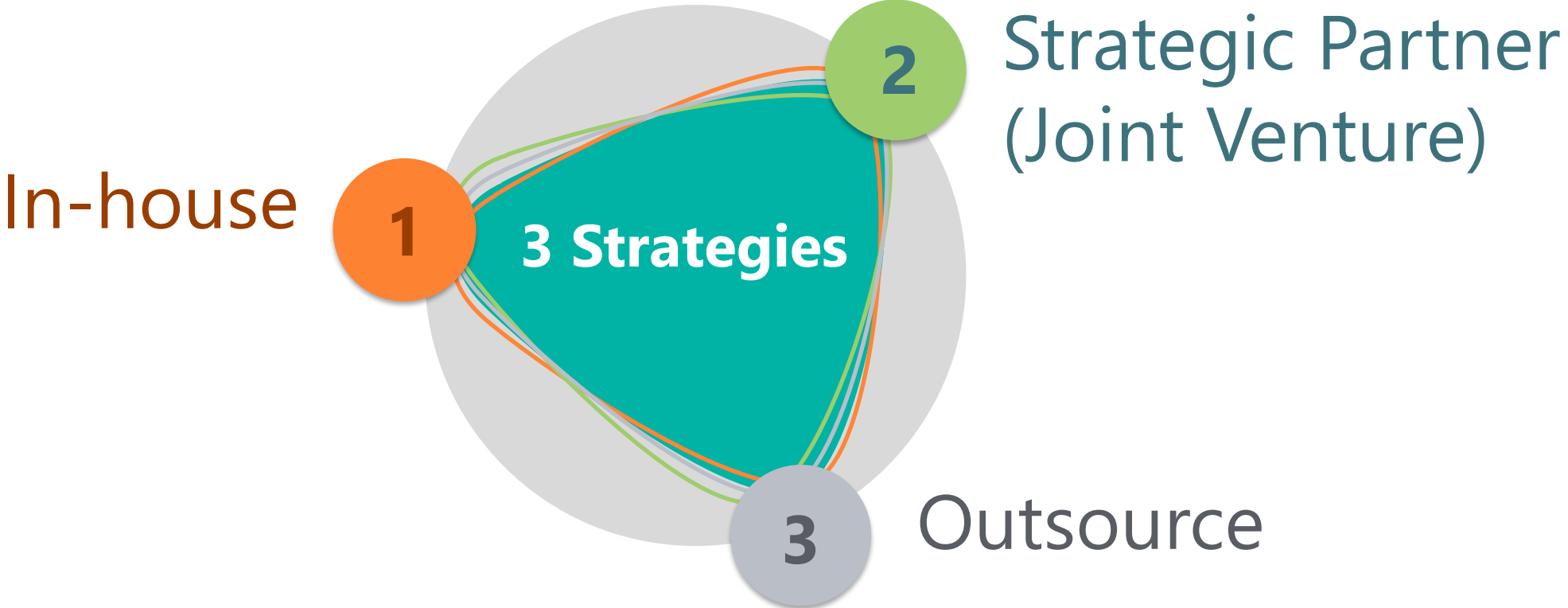
**3 Smart Talent**

**2 Smart and Safe Eco-Friendly Lifestyle**





# UiTM DIGITAL CAMPUS - IMPLEMENTATION STRATEGY



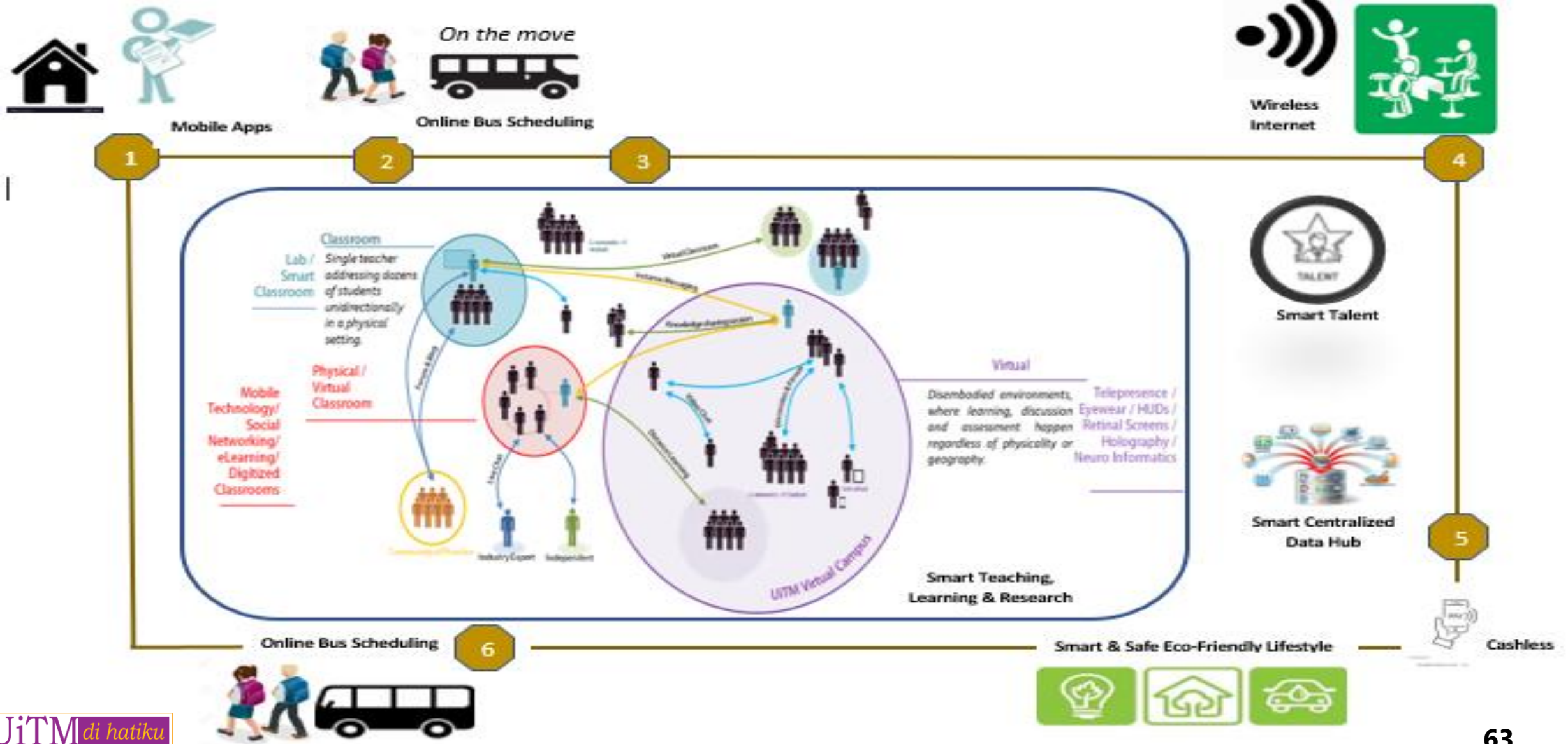


# UiTM DIGITAL CAMPUS – STRATEGY PARTNERS





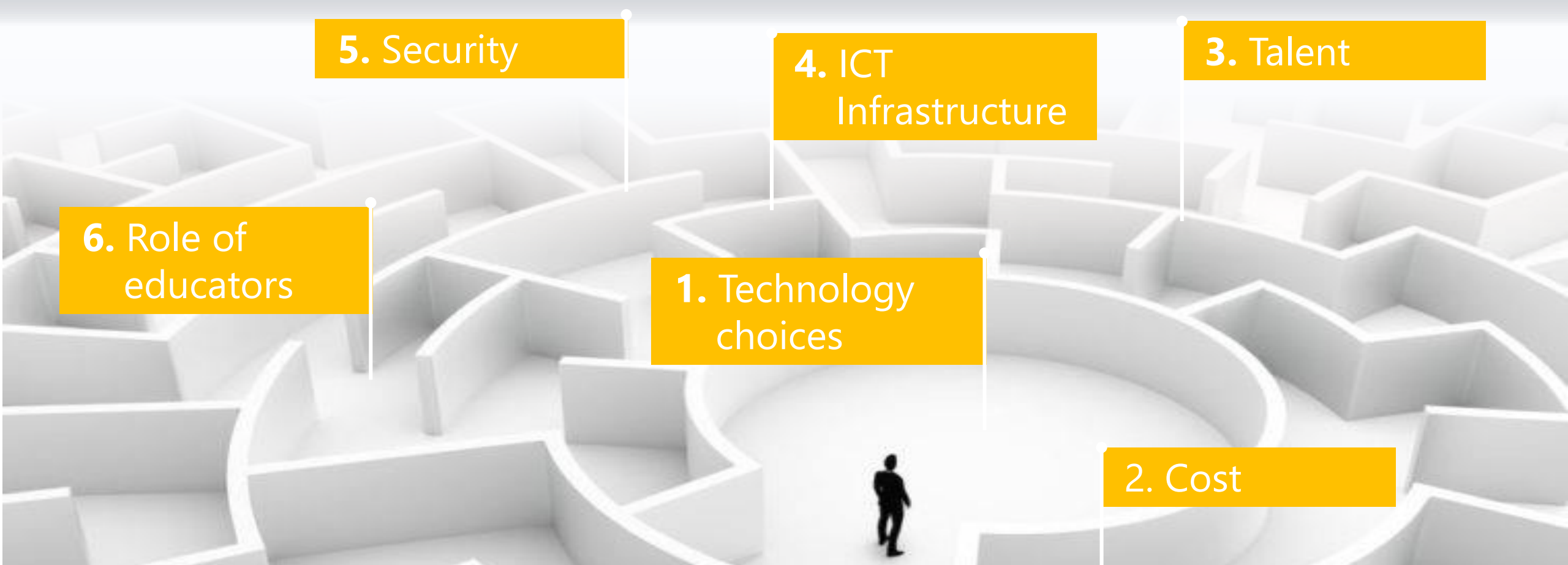
# UiTM'S DIGITAL CAMPUS LIFESTYLE







# DIGITAL CAMPUS CHALLENGES



5. Security

4. ICT  
Infrastructure

3. Talent

6. Role of  
educators

1. Technology  
choices

2. Cost

Key challenges that UiTM is facing in order to strive for the digital campus

# 6. CONCLUSION





Rancangan Malaysia Kedua Belas (RMKe-12) adalah kesinambungan kepada Pelan Rancangan Malaysia Kesebelas (RMKe-11) yang digubal berasaskan 'Wawasan Kemakmuran Bersama 2030' dan menjadi garis panduan kepada pembangunan jangka panjang.

Pembangunan RMKe-12 memfokuskan kepada 7 Tonggak berikut:

- Tonggak 1: Sumber Pertumbuhan
- Tonggak 2: Pertumbuhan Hijau
- Tonggak 3: Pemboleh Pertumbuhan
- Tonggak 4: Modal Insan
- Tonggak 5: Inklusiviti dan Kesejahteraan Rakyat
- Tonggak 6: Reformasi Institusi
- Tonggak 7: Modal Sosial

Tiga dimensi pembangunan dan reformasi institusi adalah sejajar dengan *Sustainable Development Goals* (SDG) yang ditunjangi oleh Tadbir Urus Kerajaan dan Alat Dasar Baharu.



### Kemampuan Alam Sekitar:

Pemuliharaan dan pemeliharaan

2



### Pemerkasaan Ekonomi:

Pemacu dan pemboleh pertumbuhan, ekosistem dan imperatif

1

3

### Perekayasaan Sosial:

Meningkatkan modal sosial, keterangkuman dan kesepaduan sosial



# PSPSA 2021-2025: SINERGI PENDIGITALAN MAMPAN

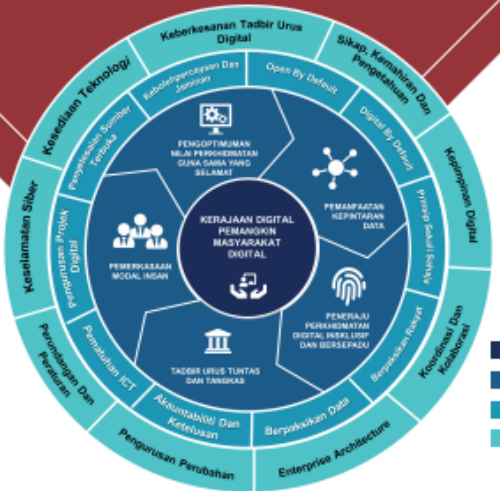
## RINGKASAN TERAS STRATEGIK, STRATEGI & PROGRAM PENDIGITALAN

5 TERAS  
17 STRATEGI  
45 PROGRAM

### PSPSA 2021-2025 PELAN STRATEGIK PENDIGITALAN SEKTOR AWAM 2021-2025

### SINERGI PENDIGITALAN MAMPAN

<b>T1</b> <b>PEMANFAATAN KEPINTARAN DATA</b> S1: Pengukuhan Pengurusan dan Penyelaras Data. S2: Pengukuhan Inisiatif Data Terbuka. S3: Pemerkasaan Penyampalan Perkhidmatan Kerajaan Berasaskan Keperintaran Data.	<b>T2</b> <b>PENERAJU PERKHIDMATAN DIGITAL INKLUSIF DAN BERSEPADU</b> S1: Pemerkasaan Penyampalan Perkhidmatan Digital Berasaskan Rakyat. S2: Pemerkasaan Ekonomi Digital Melalui Inisiatif Digital. S3: Pemerkasaan Ekosistem Kondusif Persekitaran Kerja Digital Pergeser Awam. S4: Transformasi Penyampalan Perkhidmatan Digital Kerajaan Melalui Emerging Technologies.	
<b>T3</b> <b>TADBIR URUS TUNTAS DAN TANGKAS</b> S1: Pemantapan Tadbir Urus Digital. S2: Pemerkasaan Pengurusan Organisasi Digital Bagi Memerajui Pendigitalan Sektor Awam. S3: Pemerkasaan Kepimpinan Strategik Sektor Awam.	<b>T4</b> <b>PEMERKASAAN MODAL INSAN</b> S1: Pemerkasaan Keupayaan Dan Pengakalan Bakat Pemimpin Digital. S2: Pengukuhan Pengurusan Dan Pengakalan Bakat Personal Perkhidmatan Sistem Maklumat. S3: Pemantapan Kompetensi Digital Personal Sektor Awam. S4: Pemantapan Program Pembudayaan, Promosi Dan Pengurusan Perubahan Perkhidmatan Digital.	<b>T5</b> <b>PENGOPTIMUMAN NILAI PERKHIDMATAN GUNA SAMA YANG SELAMAT</b> S1: Pemantapan Infrastruktur Pengkomputeran Awam Sektor Awam. S2: Pemantapan Keupayaan Rangkaian Dan Komunikasi Digital. S3: Pemerkasaan Perkhidmatan Dan Pematuhan Keselamatan Siber. S4: Pemantapan Program Keselamatan Siber.



- Visi
- Teras Strategik
- Prinsip Panduan
- Ekosistem Pemboleh Daya

UNIT PEMODENAN TADBIRAN DAN PERANCANGAN PENGURUSAN MALAYSIA  
Aras 6, Setia Perdana 2, Kompleks Setia Perdana, Pusat Pentadbiran Kerajaan Persekutuan  
62502 Putrajaya Malaysia

Tel: 03 8000 8000 Faks: 03 8888 3721 Portal: www.mampu.gov.my

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## 5 Teras Strategik

Teras Strategik adalah tunjang kepada kelangsungan pelaksanaan aspirasi Kerajaan Digital yang dibahagikan mengikut lima domain yang telah dikenal pasti.

<b>T1 Pemanfaatan Keperintaran Data</b> 1. Memperkukuh pengurusan dan penyelarasan data di peringkat nasional dan sektor awam. 2. Melonjakkan perancangan, pembangunan dasar dan keperluan berasaskan keperintaran data.	<b>T2 Pengeraju Perkhidmatan Digital Inklusif &amp; Bersepadu</b> 1. Memperkaskan sistem penyampalan perkhidmatan digital yang kreatif dan berinovasi merentasi sektor awam, swasta, industri dan rakyat. 2. Menggalak dan menerapkan penggunaan kemunculan teknologi baharu (emerging technologies) bagi menghasilkan aplikasi pintar dan berimpak tinggi.	<b>T3 Tadbir Urus Tuntas &amp; Tangkas</b> 1. Memantapkan, menggerakkan dan mengkoordinasikan tadbir urus pendigitalan yang menyeluruh. 2. Memantapkan pengurusan dan kecekapan organisasi digital sektor awam yang tangkas.
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<b>T4 Pemerikasaan Modal Insan</b> 1. Memantapkan kepimpinan digital personal sektor awam melalui keupayaan dan kemahiran digital. 2. Mengukuhkan keupayaan, kompetensi dan kemahiran keraja Skim Perkhidmatan Sistem Maklumat serta meningkatkan kompetensi digital bagi personal Sektor Awam. 3. Memantapkan inisiatif pembudayaan, promosi, dan pengurusan perubahan bagi meningkatkan penggunaan perkhidmatan digital.	<b>T5 Pengoptimuman Nilai Perkhidmatan Guna Sama Yang Selamat</b> 1. Memantapkan perkhidmatan guna sama ICT dengan nilai tambah penggunaan teknologi terkini yang relevan. 2. Memastikan penawaran perkhidmatan guna sama ICT yang selamat dan mampan.
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**Ekosistem Pemboleh Daya** adalah komponen strategik untuk menyokong kejayaan dan kelestarian inisiatif pendigitalan.

<b>Keberkesanan Tadbir Urus Digital</b> Pengukuhan tadbir urus digital dan organisasi yang mantap bagi memastikan kejayaan agenda pendigitalan sektor awam.	<b>Sikap, Kemahiran dan Pengetahuan</b> Sikap, kemahiran dan pengetahuan yang sesuai dan tepat untuk memastikan kelangsungan perkhidmatan digital yang ditawarkan adalah relevan dan memenuhi keperluan pelanggan seiring dengan kemunculan teknologi terkini baharu.	<b>Kepimpinan Digital</b> Kepimpinan digital diperlukan untuk menentukan dan memandu hala tuju, membuat keputusan dan menorek peluang inovasi digital seiring kemunculan teknologi baharu.
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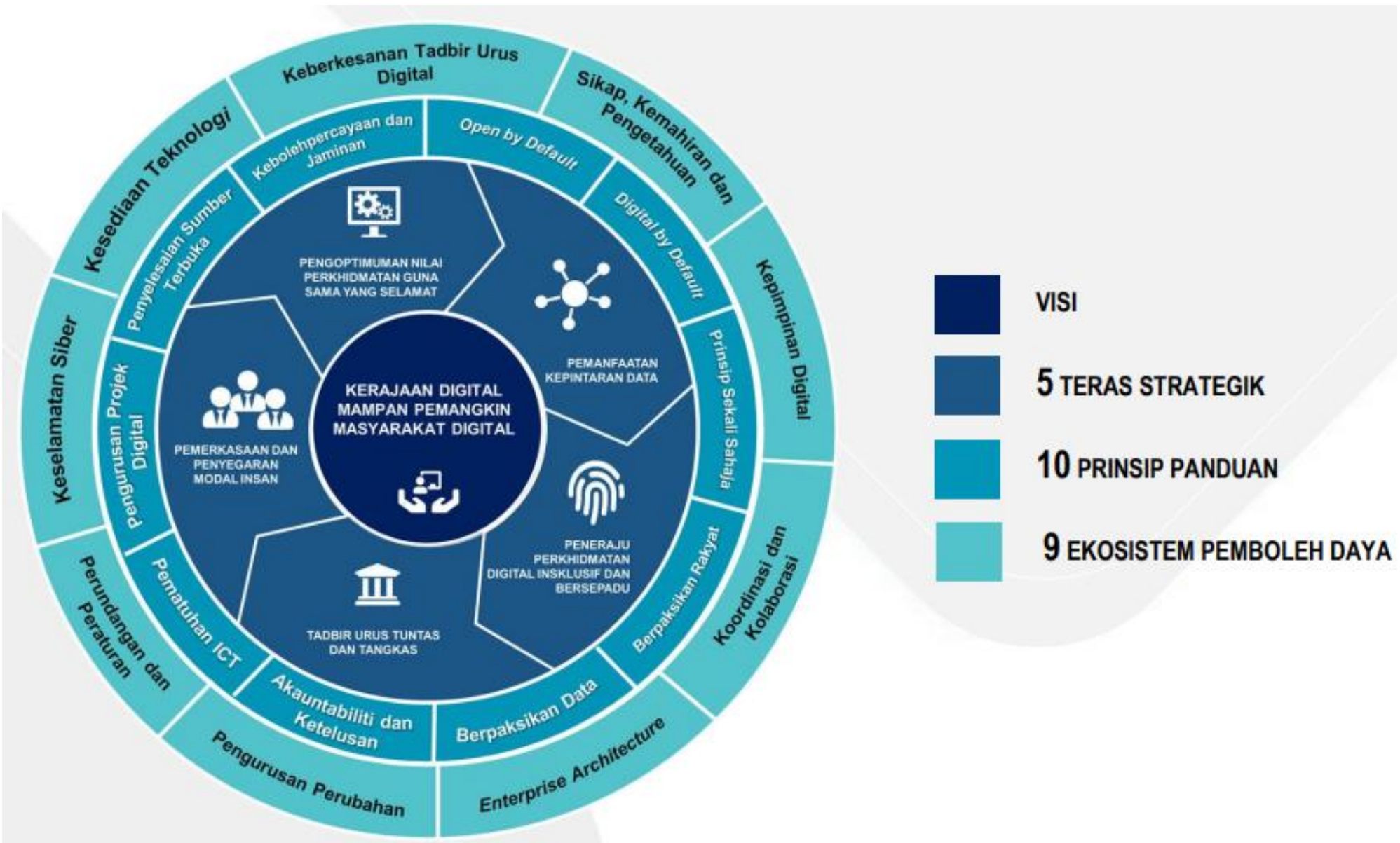
## 10 Prinsip Panduan

Prinsip Panduan adalah dasar yang mendorong ke arah kejayaan pelaksanaan inisiatif pendigitalan.

<b>Kebolehpercayaan dan Jaminan</b> Kebolehpercayaan dalam melaksanakan perkhidmatan yang disediakan dengan tepat, mudah dan lancar di samping memastikan kualiti perkhidmatan adalah terjamin dan selamat.	<b>Penyediaan Sumber Terbuka</b> Membudaya pengurusan sumber terbuka sebagai pilihan utama dalam membangunkan perkhidmatan digital Kerajaan.	<b>Akauntabiliti dan Ketelusan</b> Melaksana tugas mengikut peraturan, undang-undang dan prosedur yang ditetapkan di samping meningkatkan ketelusan dalam operasi kerajaan dan perkongsian maklumat serta pembalikan raykat dalam menjalankan kerjasama di antara agensi ataupun jabatan Kerajaan.
<b>Pematuhan ICT</b> Mematuhi akta, dasar dan garis panduan serta amalan terbaik ICT.	<b>Pengurusan Projek Digital</b> Pengurusan projek dalam era digital yang menggunakan metodologi pengurusan projek ICT Sektor Awam secara elektronik (ePPSA) sebagai rujukan.	<b>Berpakaian Data</b> Mengurus data sebagai aset dan dikongsi sebagai nilai tambah kepada perkhidmatan digital merentasi Kerajaan, akademik, industri dan rakyat secara domestik mahupun global.
<b>Berpakaian Rakyat</b> Menyediakan perkhidmatan digital yang terbaik, mudah digunakan, lancar berteraskan keperluan rakyat dengan saksama dengan memastikan tiada siapa ketinggalan (leaving no one behind) yang juga meliputi golongan rentan.	<b>Digital by Default</b> Transformasi digital kepada sistem dan prosedur kerja semasa membolehkan penyampalan perkhidmatan Kerajaan diberikan secara digital (digital by default), berasaskan keperluan rakyat, telus, mudah dan cepat.	<b>Open by Default</b> Open by default mengartikan data diberikan sebagai data terbuka kecuali data peribadi, data terperincak atau data rahsia rasmi yang dapat memberi impak kepada ekonomi, sosial dan persekitaran di samping mengekalkan ketelusan data.
<b>Koordinasi dan Kolaborasi</b> Penyelaras yang berkesan dan menyeluruh yang didokong oleh tadbir urus yang mantap serta kolaborasi dinamik antara Kerajaan, akademik, industri, rakyat dan sebagainya dalam semua aspek pendigitalan merentas agensi.	<b>Enterprise Architecture</b> Mengamalkan EA berpandukan Garis Panduan Pelaksanaan EA Sektor Awam (MyGovEA) bagi meningkatkan penyampalan perkhidmatan digital dengan selamat dan berkesan.	<b>Pengurusan Perubahan</b> Pemerkasaan amalan pengurusan kerajaan yang berterusan dan berkesan bagi memastikan inisiatif pendigitalan di semua peringkat agensi kerajaan percutaan dan negeri diterima dan dilaksanakan dengan jayanya.
<b>Perundangan dan Peraturan</b> Perundangan/akta/dasar/pelbagai peraturan dan peraturan yang relevan, holistik dan dinamik bagi mematuhi tuntutan persekitaran dan kelangsungan Kerajaan Digital yang mampan.	<b>Keselamatan Siber</b> Memperkaskan Keselamatan Siber bagi memastikan kesinambungan penyampalan perkhidmatan digital yang selamat dan boleh dipercayai serta melindungi maklumat peribadi rakyat.	<b>Kesediaan Teknologi</b> Kesediaan teknologi baharu yang mencipta inovasi dan nilai serta mempercepat tugas dan proses untuk meningkatkan penawaran perkhidmatan digital, meningkatkan prestasi, memberi impak kepada pelbagai sektor dan bermanfaat kepada rakyat.

## VISI "KERAJAAN DIGITAL PEMANGKIN MASYARAKAT DIGITAL"

# PUBLIC SECTOR DIGITILIZATION FRAMEWORK



- VISI
- 5 TERAS STRATEGIK
- 10 PRINSIP PANDUAN
- 9 EKOSISTEM PEMBOLEH DAYA

# ALIGNMENT TO GLOBAL AND NASIONAL DIRECTION

**Sustainable Development Goals 2030**



**Wawasan Kemakmuran Bersama 2030**



**Rancangan Malaysia Ke-12**



**PSPSA 2021-2025**



**Rancangan Malaysia Ke-11**



**Trend Emerging Technologies**



**Pelan Antirasuah Nasional**



**National Policy on Industry 4.0**



# Thank You

JABATAN INFOSTRUKTUR  
Pejabat Pembangunan Infrastruktur & Infostruktur  
UiTM Shah Alam

EDUCATE

COMMUNICATE