



MINISTRY OF HIGHER EDUCATION

# DIGITALISATION OF HIGHER EDUCATION ACTION PLAN 2025-2030



**MINISTRY OF HIGHER EDUCATION**

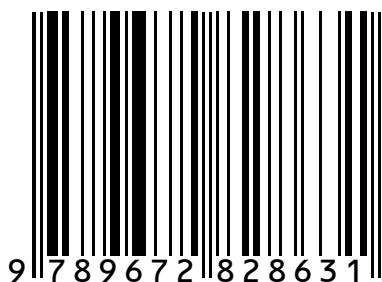
**DIGITALISATION OF HIGHER EDUCATION ACTION PLAN  
2025-2030**

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Digitalisation of Higher Education Action Plan 2025-2030

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# Glossary

<b>ABBREVIATIONS</b>	<b>DEFINITION</b>
4IR	Fourth Industrial Revolution
AI	Artificial Intelligence
API	Application Programming Interface
BCP	Business Continuity Plan
BKPI	HEI Research Excellence Division ( <i>Bahagian Kecemerlangan Penyelidikan IPT</i> )
BPM	Information Management Division ( <i>Bahagian Pengurusan Maklumat</i> )
BPSM	Human Resource Management Division ( <i>Bahagian Pengurusan Sumber Manusia</i> )
BPS	Strategic Planning Division ( <i>Bahagian Perancangan Strategik</i> )
CDO	Chief Digital Officer
DigCompEdu	Digital Competence Framework for Educators
DoHE	Department of Higher Education
EU	European Union
HEI	Higher Education Institution
ICT	Information & Communication Technology
IoT	Internet of Things
ISP	Internet Service Provider
IT	Information Technology
LMS	Learning Management System
MDEC	Malaysia Digital Economy Corporation
MEB	Malaysia Education Blueprint 2015-2025 (Higher Education)
MoHE	Ministry of Higher Education
MPC	Malaysia Productivity Corporation
MQA	Malaysian Qualifications Agency
MRUN	Malaysian Research University Network
MS	Microsoft
RU	Research University
SDG	Sustainable Development Goal
SPSS	Statistical Package for the Social Sciences
SQL	Structured Query Language



## FOREWORD

**Dato' Seri Diraja Dr. Zambry Abd Kadir**  
Minister of Higher Education

With utmost gratitude, I wish to extend my highest appreciation for the successful formulation of the Higher Education Digitalisation Action Plan 2025–2030, which will serve as a key driver of transformation for Malaysia's higher education sector.

The Ministry of Higher Education (MoHE) recognises that the future of education is inseparable from digital technology. The world is undergoing rapid change and only through the courage to embrace transformation and the capacity to adapt can our higher education institutions (HEIs) remain relevant, competitive and capable of producing graduates who are ready to meet the challenges of the 21st century.

This Action Plan is guided by a progressive vision to build an inclusive, flexible and adaptive higher education ecosystem founded on lifelong learning. Through three (3) key enablers, six (6) strategic thrusts and 26 targeted initiatives, the plan will steer HEIs towards higher levels of digital maturity, improved operational efficiency and a stronger culture of data-driven decision-making.

The transformation we aspire to achieve is not limited to technological development, but also involves cultural shifts, strengthened leadership and new ways of working across the entire higher education ecosystem. Success, therefore, demands the collective commitment of institutional leadership, academic staff, administrators, students, industry, communities and the Ministry itself.

I am confident that with structured implementation, rigorous monitoring and strong support from all stakeholders, Malaysia will advance further in strengthening its position as a resilient, innovative and high-impact global higher education hub.

In closing, I call upon all stakeholders to work together in realising this shared aspiration for a brighter future for Malaysia's higher education.



## FOREWORD

**Datuk Dr. Anesee bin Ibrahim**

Secretary General, Minister of Higher Education

The Higher Education Digitalisation Action Plan 2025–2030 was born out of the recognition that digital transformation is no longer an option, but an urgent necessity to ensure the resilience and competitiveness of Malaysia’s higher education system. As the Ministry responsible for coordinating and charting the course of higher education, we regard digitalisation as a critical foundation in ensuring that our education system remains relevant, inclusive and prepared to face the challenges of the 21st century.

This Action Plan sets out a comprehensive and practical framework, emphasising not only the development of infrastructure and technology but also the strengthening of leadership, skills and digital culture. Such an approach requires close coordination between the Ministry, higher education institutions, related agencies and industry. Only through this holistic collaboration can we nurture an education ecosystem that is truly capable of responding to the evolving global landscape.

To ensure the effective implementation of this plan, the Ministry has structured its initiatives across short, medium and long-term phases. This phased planning allows us to assess the effectiveness of each step, make adjustments where necessary and ensure that every action directly contributes to the achievement of the vision set forth.

I am confident that with continued commitment and effort from all stakeholders, the digital transformation of Malaysia’s higher education sector can be successfully realised. This plan will not only strengthen the capacity of higher education institutions to produce digitally literate and competitive graduates, but also contribute to the national aspiration of positioning Malaysia as a knowledge-driven, innovative and technology-based developed nation.

With strong resolve, I call upon all stakeholders to work together in driving the successful implementation of the Higher Education Digitalisation Action Plan 2025–2030, for a brighter and more progressive future for the nation’s higher education.

## Executive Summary

The Digitalisation of Higher Education 2025–2030 Action Plan sets forth a transformative agenda to future-proof Malaysia’s higher education institutions (HEIs) in response to accelerating global digital shifts. As educational relevance, quality, and resilience are increasingly shaped by technological integration, this plan articulates a forward-looking vision for advancing higher education through diverse and innovative technologies, thereby fostering an effective, adaptive, and lifelong learning ecosystem.

The vision of this plan is underpinned by five foundational principles which includes diverse technologies, innovative approaches, effective and adaptive learning systems and the promotion of lifelong learning. Together, these principles envision an ecosystem where learning is flexible, inclusive and accessible to all, regardless of socioeconomic background or geographic location. This digital transformation is not merely about technology adoption; it is about structural and cultural change, elevating the capabilities of institutions, faculty, students and the ministry itself to thrive in a digital-first future.

To bring this vision to life, the action plan introduces a comprehensive effort to accelerate the digital transformation of Malaysia’s higher education ecosystem. This transformation is framed within a structured future state framework, which outlines six progressive stages of digitalisation: Digitisation & Conversion, Automation & Adoption, Interaction & Collaboration, Data-Driven Analysis, High-Speed Connectivity and Integration & Innovation. Each stage provides a foundation for the next, progressively advancing the capabilities of HEIs to function in a digital-first world.

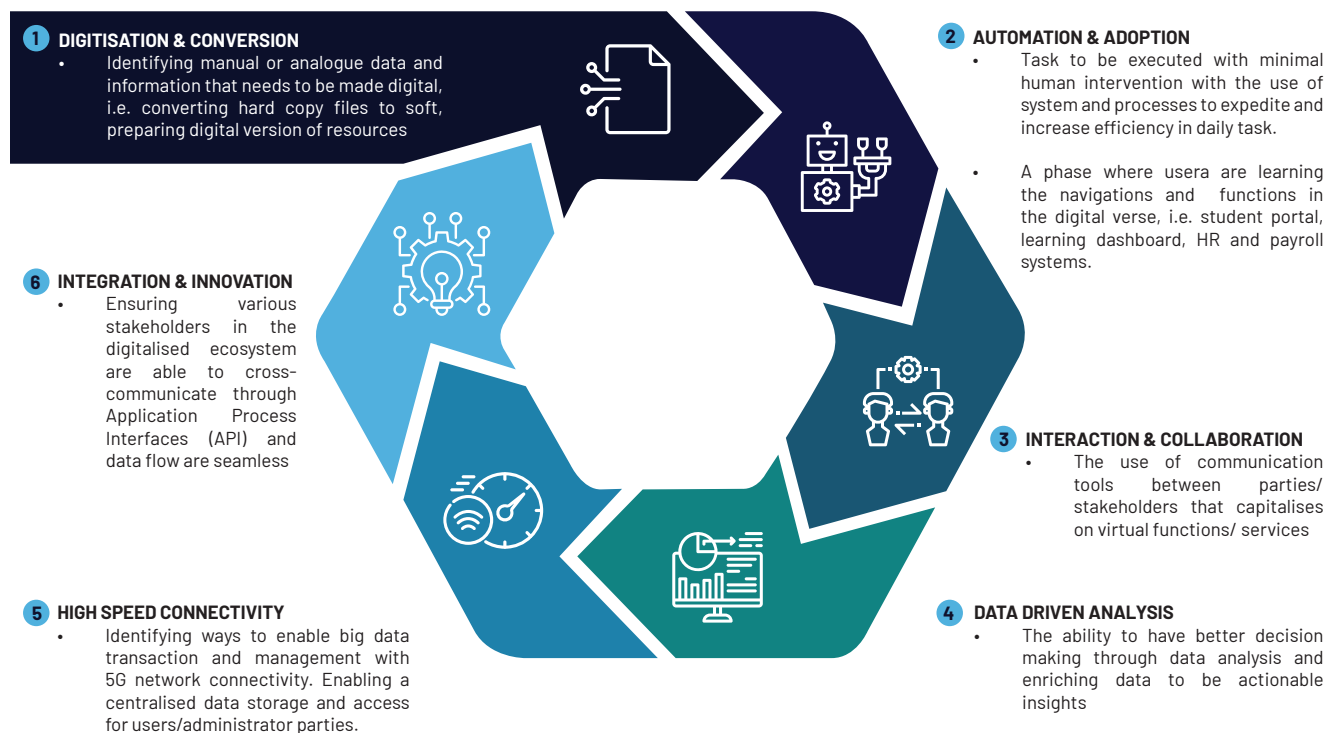


Figure 1: Six Stages of Digitalisation

The transformation plan is underpinned by three cross-cutting Key Enablers, each essential in cultivating the ecosystem, talent and infrastructure required to embed and sustain digitalisation across the higher education landscape. The first enabler, Digital Leadership, highlights the need for strong governance and clear strategic direction to guide and coordinate digital transformation efforts at both institutional and national levels. The second enabler, Skills Development, focuses on building digital capabilities among all stakeholders, including educators, administrators and students, to create a digitally fluent and future-ready academic community. The third enabler, Data Infrastructure, aims to establish a strong technological foundation that supports seamless data integration, sharing and informed decision-making across the entire ecosystem.

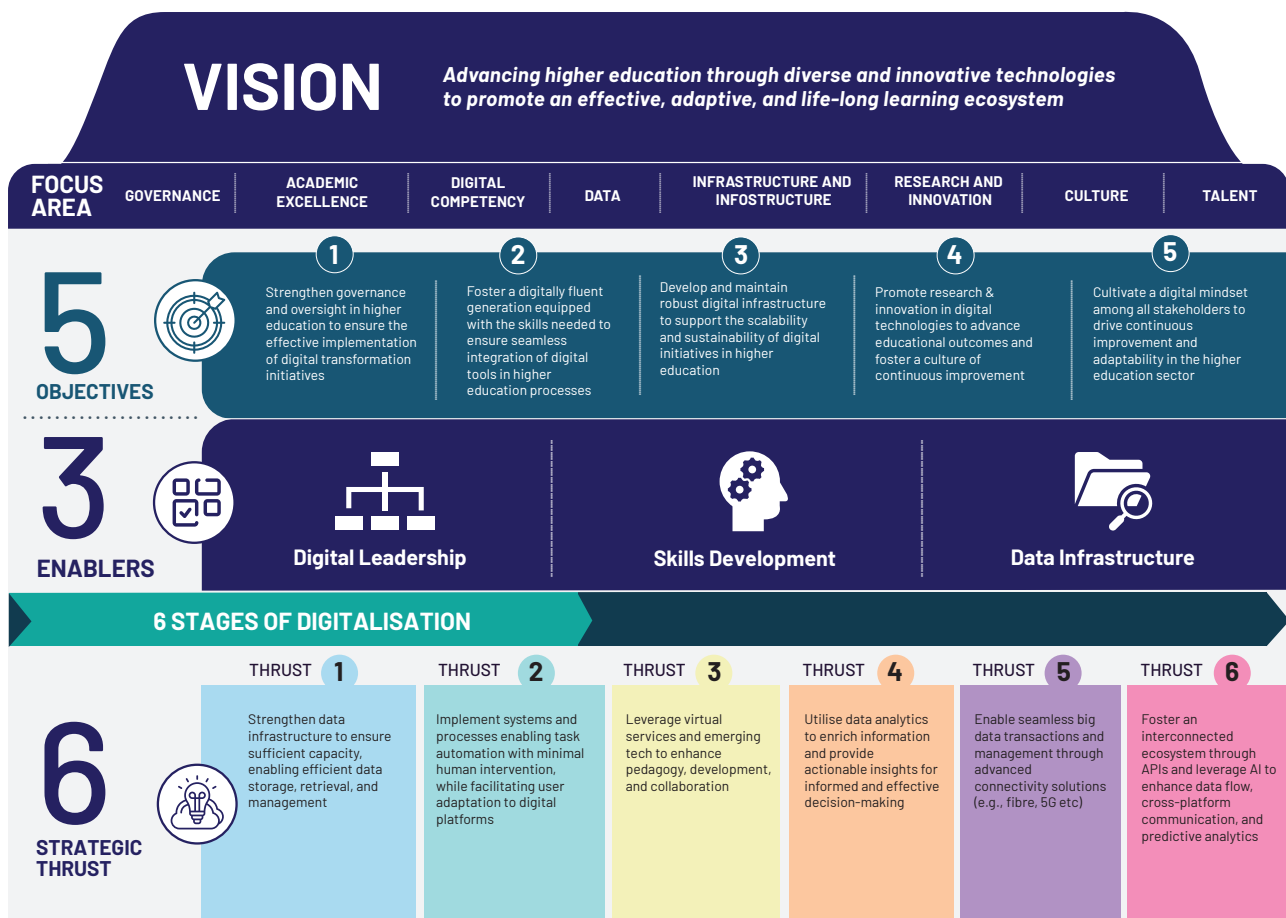
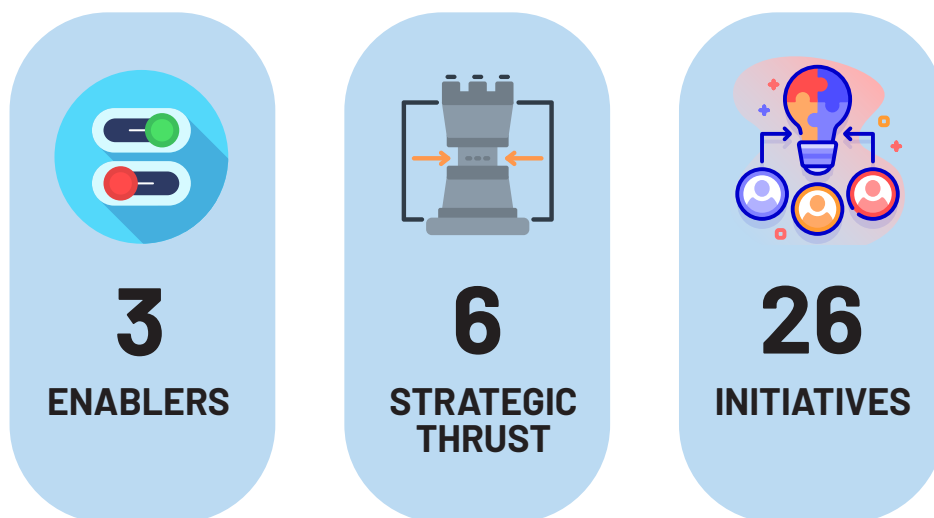


Figure 2: Digitalisation of Higher Education Policy 2025-2030 Framework

In terms of strategic thrusts, the plan outlines six progressive stages of digital transformation, each designed to incrementally build institutional digital maturity. The first thrust focuses on strengthening the data infrastructure of higher education institutions. This involves the digitisation of analogue records and the development of scalable storage systems to establish a secure and accessible foundation for institutional data management. The second thrust promotes the automation of core academic and administrative functions. Through the deployment of automation-ready infrastructure and software solutions, institutions are expected to reduce manual processes, improve operational efficiency and enhance institutional resilience.

The third thrust aims to improve digital connectivity and collaboration both within and between institutions. It encourages the integration of virtual services, hybrid learning platforms and cross-functional systems to support seamless communication and knowledge exchange, particularly during periods of disruption. The fourth thrust seeks to institutionalise data-driven decision-making by embedding analytics into planning, policy formulation and operational management. By cultivating a data-literate academic community and strengthening analytical capacity, institutions will be better positioned to make timely and evidence-based decisions.

The fifth thrust addresses the need for high-performance digital connectivity to support increasingly data-intensive operations, such as cloud computing, big data transactions and real-time analysis. This includes improving network coverage, bandwidth and hardware compatibility across campuses. The sixth and final thrust adopts a forward-looking approach by fostering an interconnected ecosystem supported by artificial intelligence, application programming interfaces and predictive analytics. It emphasises the integration of intelligent systems into institutional processes and highlights the importance of establishing ethical frameworks and updated policies to ensure responsible and effective use of emerging technologies.



Looking ahead, the digital transformation of Malaysia's higher education institutions will be guided by a comprehensive framework comprising eight focus areas, five strategic objectives and three key enablers. These components are operationalised through six strategic thrusts and 26 targeted initiatives, each strategically phased across short-medium-and long-term implementation horizons. This structured yet flexible roadmap offers a clear trajectory toward achieving digital maturity, enhancing institutional efficiency and elevating the global standing of Malaysia's higher education sector. The action plan acknowledges the rapidly evolving demands of the education landscape and aims to future-proof the system by embedding digital competencies across all dimensions of institutional operations. From pedagogy and research to administrative processes and governance structures, digital capabilities will be integrated holistically to ensure that higher education institutions remain adaptive, resilient and responsive to the needs of the future.



# 1. The Way Forward

## 1.1. Future State Framework



The digital transformation of the higher education sector is designed to future-proof institutions, ensuring they remain effective, adaptive and capable of fostering lifelong learning. In an era marked by rapid technological advancements, higher education institutions must embrace digitalisation to remain both competitive and relevant.

Envisioning a robust and dynamic future state framework is imperative to address the unique challenges identified within the higher education sector. The below framework is strategically designed based on key insights gained from the executed comparative analysis that includes various stakeholder engagements sessions such as surveys, in-depth interviews and focus group discussions as well as a visioning workshop, in efforts to capture and distil on-the-ground challenges and opportunities.

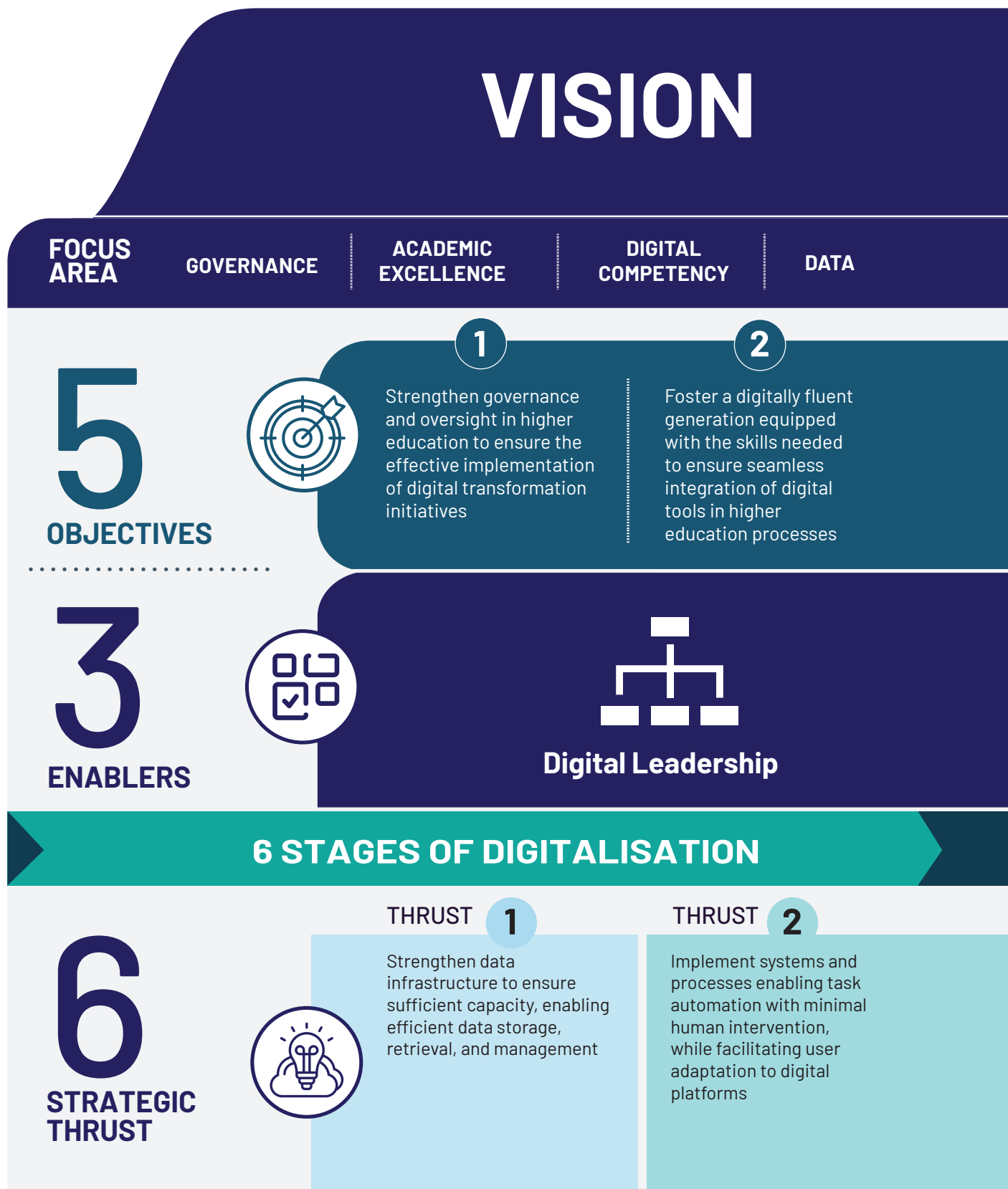


Figure 3: Digitalisation of Higher Education Policy 2025-2030 Framework

**Advancing higher education through diverse and innovative technologies to promote an effective, adaptive, and life-long learning ecosystem**

**INFRASTRUCTURE AND INFOSTRUCTURE**

**RESEARCH AND INNOVATION**

**CULTURE**

**TALENT**

**3**

Develop and maintain robust digital infrastructure to support the scalability and sustainability of digital initiatives in higher education

**4**

Promote research & innovation in digital technologies to advance educational outcomes and foster a culture of continuous improvement

**5**

Cultivate a digital mindset among all stakeholders to drive continuous improvement and adaptability in the higher education sector



**Skills Development**



**Data Infrastructure**

**THRUST 3**

Leverage virtual services and emerging tech to enhance pedagogy, development, and collaboration

**THRUST 4**

Utilise data analytics to enrich information and provide actionable insights for informed and effective decision-making

**THRUST 5**

Enable seamless big data transactions and management through advanced connectivity solutions (e.g., fibre, 5G etc)

**THRUST 6**

Foster an interconnected ecosystem through APIs and leverage AI to enhance data flow, cross-platform communication, and predictive analytics

## 1.2. The Vision: Definition

The vision for the future state framework is centred on advancing higher education through diverse and innovative technologies to promote an effective adaptive education and life-long learning ecosystem. This vision is defined by several key components:

1



### Diverse Technologies

Diverse education refers to the incorporation of a wide range of digital tools and instructional approaches to meet the various learning needs of students. It involves creating inclusive and flexible learning environments that cater to different learning styles, backgrounds and needs.

Through the utilisation of diverse education technologies such as online platforms, multimedia resources and adaptive learning systems, it ensures equitable access to quality education and support students from various cultural and socio-economic backgrounds.

2



### Innovative Technologies

Innovative technologies encompass the use of advanced digital tools and methodologies such as the integration of online learning platforms, artificial intelligence, augmented and virtual reality and other digital innovation in teaching and learning processes. It aims to enhance the education experience by facilitating an interactive and personalise learning experience, making higher education more accessible and engaging.

3



### Effective Education

Effective education is characterised by the achievement of desired learning outcomes through evidence-based teaching practices that is grounded in research and provides tailored solutions to address learners' needs. This involves implementing strategies that have been proven to enhance student engagement and comprehension as well as comprehensive assessment methods and continuous feedback mechanisms.

4



## Adaptive Education

Adaptive education focuses on the flexibility of the higher educational system to meet the changing needs of students, learners and job market. This includes offering personalised learning experiences and flexible learning pathways.

Adaptive education leverages data-driven approaches to tailor education content and methods to individual learners needs, ensuring that students are prepared to thrive in a dynamic and uncertain future.

5



## Life-Long Learning

Life-long learning refers to the continuous, voluntary and self-motivated pursuit of knowledge throughout an individual's life for both personal and professional development. Emphasised on the necessity for current higher educational systems to support and encourage learning beyond schooling years.

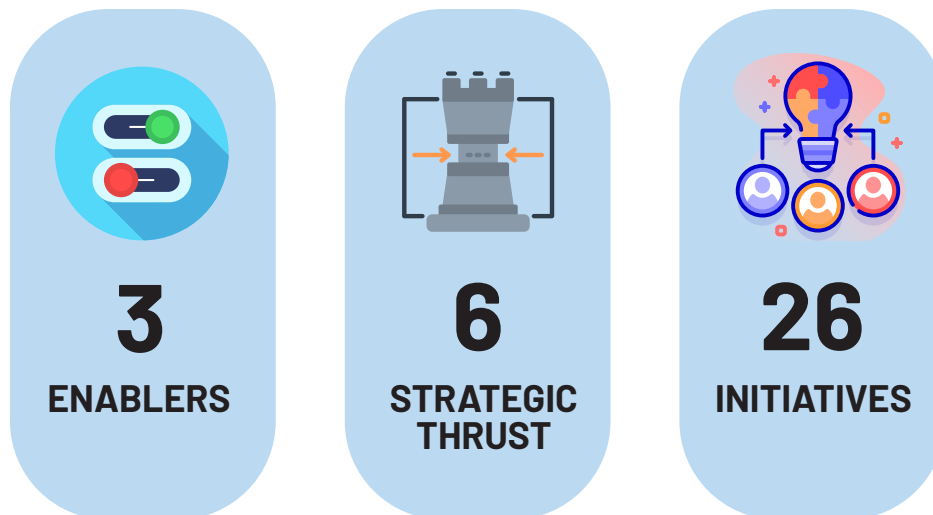
It encompasses various forms of education, including formal education through degrees and certifications, non-formal education via short courses and informal education through self-study and online resources.





### 1.3. Strategic Recommendation

The future state framework for the digitalisation of higher education from 2026 to 2030 outlines a comprehensive and holistic approach to addressing the multifaceted challenges identified within the sector. This framework is designed to transform the higher education landscape through targeted initiatives focusing on critical areas that demand immediate and sustained attention.



Essentially, this framework articulates a comprehensive and strategic roadmap for a multi-dimensional transformation within the higher education sector, designed to secure long-term sustainability, operational efficiency and a culture of continuous innovation. It is anchored by 8 identified focus areas, each meticulously selected to address the core challenges and opportunities of the digital age. To ensure targeted and measurable progress across these areas, we have developed 5 overarching objectives. These objectives serve as strategic pillars, providing a clear and actionable pathway for achieving the desired transformational outcomes.

To ensure equitable and comprehensive attainment of the 5 strategic objectives across all focus areas, 3 key enablers with an overarching coverage across the higher education landscape have been identified: Digital Leadership, Skills Development and Data Infrastructure. These key enablers act as critical horizontal integrators, strategically permeating and reinforcing the identified strategic thrusts. Operationalised through 9 targeted initiatives, each are designed to reinforce and drive synergetic progress across the 6-core strategic thrust. The development of these six core strategic thrusts is predicated upon a structured, six-stage model of digital evolution as described in the previous section.

Within both identified key enablers and strategic thrusts, 26 initiatives have been formulated to address the identified challenges across the higher education landscape in efforts to achieve the desired future state. These curated initiatives offer comprehensive plans which are designed to address the specific challenges identified and leverage opportunities present within the higher education digital landscape, ensuring digitalisation efforts can be maximised with efficiency and effectiveness.

The initiatives under the key enablers and strategic thrusts have been strategically phased across short-term (2026-2027), medium-term (2026-2028/2029 and 2027-2030) and long-term (2026-2030, continuous) horizons. This ensures both immediate remediation of identified challenges and a continuous cycle of assessment and refinement within the evolving higher education landscape. Consequently, the policy functions as a dynamic document, facilitating a holistic and adaptive approach to digital transformation.

### 1.3.1 Key Enabler 1: Digital Leadership

The first of the three key enablers, Digital Leadership, is a foundational pillar in driving and sustaining the digital transformation of HEIs. It entails the establishment of strong, visionary governance structures that can provide strategic direction, ensure policy coherence and champion change across all levels of the higher education ecosystem. The primary objective of this enabler is to instil a culture of accountable and future-forward leadership that prioritises digitalisation as a long-term institutional strategy. Through a robust leadership framework, institutions are better positioned to orchestrate cross-functional digital efforts, monitor progress and ensure that national digital agendas are effectively localised and implemented at the institutional level. The rationale behind this enabler lies in the growing complexity of digital ecosystems within HEIs, which require centralised oversight, clear leadership roles and consistent evaluation mechanisms to maintain alignment with national priorities. As the digital landscape continues to evolve, effective leadership becomes the linchpin that binds strategy, execution and adaptability, laying the groundwork for a resilient and digitally mature higher education sector.



- **Enabler 1.1:** Establish a centralised digital governance unit (Digitisation of Higher Education Committee) at MoHE level
- **Enabler 1.2:** Establish and define roles of CDO offices in all public higher education institutions to ensure policy alignment and effective digitalisation
- **Enabler 1.3:** Establish a structured biennial review framework for digitalisation of higher education policy and action plan



## Enabler 1.1:

### Establish a Centralised Digital Governance Unit (Digitisation of Higher Education Committee) at MoHE Level

#### Objective

To form a dedicated taskforce within the Ministry to oversee, monitor and coordinate digitalisation efforts of HEIs, ensuring alignment with national digital policies

#### SDG Alignment



#### Key Activities

1. Develop scope of taskforce, defining the specific roles, responsibilities and objectives
2. Identify, select and appoint respective individuals for the taskforce based on the scopes developed
3. Operationalise the centralised governing unit by identifying and develop respective tools, guidelines and metrics for monitoring and tracking digitalisation initiatives
4. Develop and implement direct communication channels between Central Governing Unit and respective HEIs
5. Conduct regular data collection and provide feedback reports

#### Output/KPI

To establish one (1) unified digitalisation governance unit at KPT level

#### Initiative Owner

Ministry of Higher Education - Human Resource Management Division (BPSM)

#### Timeline

Short Term: 2026 – 2027

#### Focus Area

Governance

#### Policy Alignment

This initiative is aligned with **T3.S1.P2** of **Ministry of Higher Education Digitalisation Strategic Plan 2021-2025**. This initiative supports the programme objective in improving governance structure to support digitalisation efforts



## Enabler 1.2:

# Establish and define roles of CDO offices in all public higher education institutions to ensure policy alignment and effective digitalisation

### Objective

To establish CDO offices across all public HEIs to address policy misalignments, streamline digitalisation efforts and ensure effective implementation of government digital policies

### SDG Alignment



### Key Activities

1. Establish clear roles and responsibilities for the CDO offices, including oversight of digital strategy, policy implementation and coordination
2. Identify and appoint qualified candidates and conduct comprehensive onboarding sessions based on government guidelines

### Output/KPI

1. Availability of a dedicated officer to oversee data driven analysis activities (Baseline - 2025: 66%, Target - 2030: 100%)
2. Availability of a dedicated unit to oversee data driven analysis activities (Baseline - 2025: 83%, Target - 2030: 100%)

### Initiative Owner

Ministry of Higher Education –Information Management Division (BPM)

### Timeline

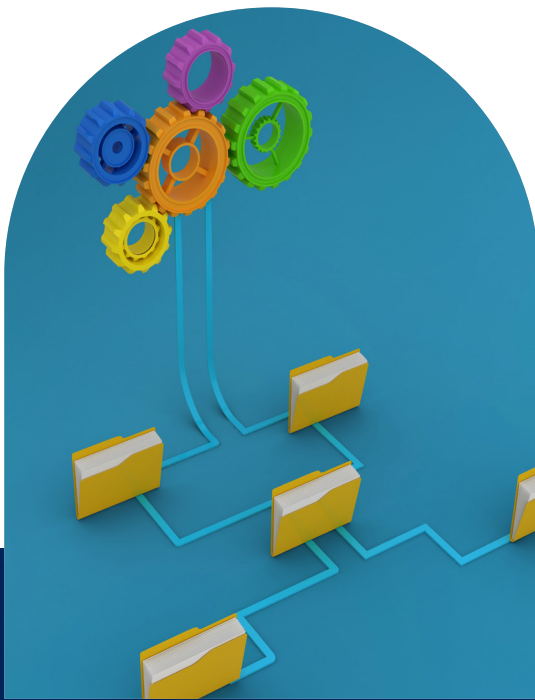
Short Term: 2026 – 2027

### Focus Area

Governance

### Policy Alignment

- This initiative is aligned with **T3.S1P2** of **Ministry of Higher Education Digitalisation Strategic Plan 2021-2025**
- This initiative supports the programme objective in improving governance structure to support digitalisation efforts



### Enabler 1.3:

## Establish a structured biennial review framework for Digitalisation of Higher Education Policy And Action Plan

#### Objective

Ensure the continuous relevance and effectiveness of Digitalisation Of Higher Education Policy and Action Plan 2025-2030 by implementing a structured review process every two years, allowing for data-driven improvements, stakeholder engagement and policy refinements based on emerging trends and institutional needs

#### SDG Alignment



#### Key Activities

1. Develop a biennial review framework with clear evaluation metrics, stakeholder engagement processes and reporting structures
2. Conduct formal assessments every two years, analysing policy impact, institutional adoption and emerging challenges
3. Gather input from HEIs, policymakers and industry experts to ensure alignment with evolving digital transformation priorities
4. Publish review reports with findings and recommendations, guiding necessary policy adjustments and strategic refinements

#### Output/KPI

Frequency and completion rate of formal policy reviews conducted every two years

#### Initiative Owner

Digitisation of Higher Education Committee

#### Timeline

Long Term: 2026 – 2030 (continuous)

#### Focus Area

Governance

#### Policy Alignment

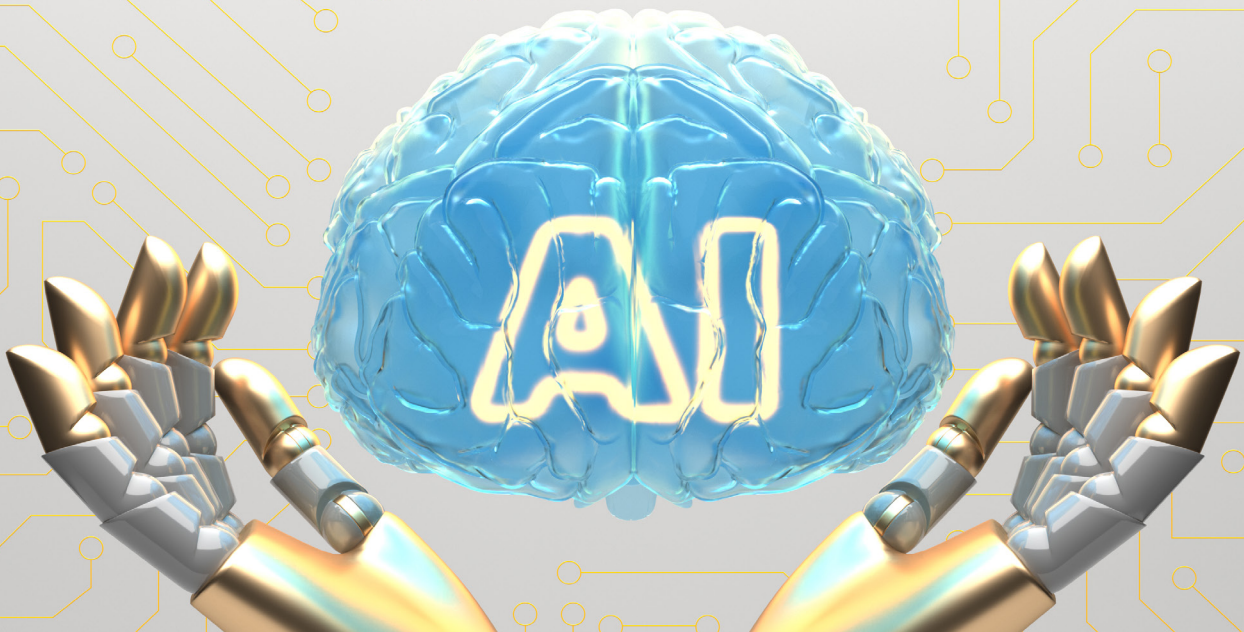
- This initiative is aligned with **T3.S1.P2** of **Ministry of Higher Education Digitalisation Strategic Plan 2021-2025**
- This initiative supports the programme objective in improving governance structure to support digitalisation efforts

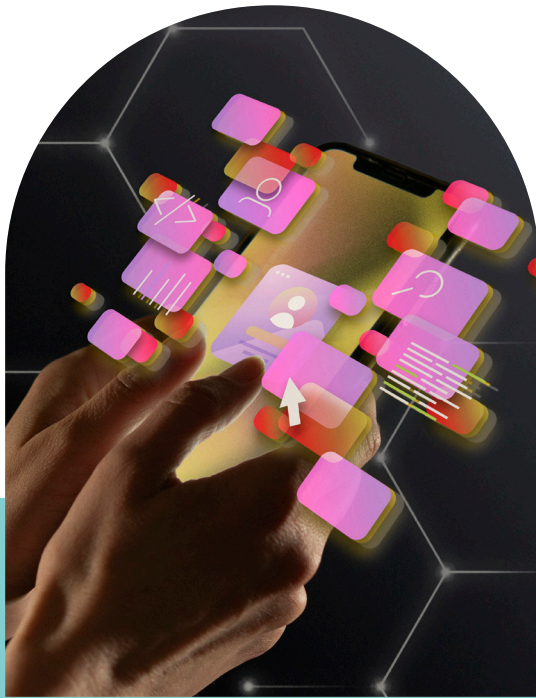
## 1.3.2. Key Enabler 2: Skills Development

The second of the three key enablers, Skills Development, represents a critical enabler in ensuring the success and sustainability of digital transformation in Malaysia's HEIs. This enabler focuses on building and enhancing the digital competencies and leadership capabilities of all stakeholders including students, educators, staff and policy implementers across higher education institutions and the Ministry of Higher Education. Its objective is to establish a digitally proficient ecosystem where all actors are equipped to operate effectively in an increasingly digitalised academic and administrative environment. The rationale stems from the rapid evolution of digital technologies, which necessitates continuous upskilling and reskilling to ensure that stakeholders remain agile, adaptable and competent in using emerging tools, platforms and systems. By fostering digital literacy, cultivating forward-looking leadership and institutionalising systematic capability assessments, HEIs can embed digital maturity at every level of operation and engagement, thereby supporting the wider transformation agenda.



- **Enabler 2.1:** Development of a digital competency and leadership framework for Malaysian higher education educators and staff (HEI and MoHE)
- **Enabler 2.2:** Assess and strengthen digital competencies and leadership capabilities among HEI and MoHE educators and staff
- **Enabler 2.3:** Assess and address digital competency and accessibility gaps among higher education students
- **Enabler 2.4:** Accelerate adoption of micro-credentials which are components of accredited programmes of multiple HEIs across all public universities





## Enabler 2.1:

### Development of a digital competency and leadership framework for Malaysian higher education educators and staff (HEI and MoHE)

#### Objective

To develop a comprehensive digital competency and leadership framework that guides the design of targeted training programmes, enhancing digital skills, teaching effectiveness and leadership capabilities among Malaysian higher education educators and MoHE staff

#### SDG Alignment



#### Key Activities

1. Identify required competency areas and leadership capabilities specific to Malaysian HE educators and MoHE staff, ensuring a balance between digital proficiency and strategic leadership
2. Localise relevant competencies by referencing global frameworks (e.g., EU's DigCompEdu) while integrating leadership and institutional digital transformation elements
3. Consolidate and validate identified competencies with key stakeholders, ensuring alignment with HEI needs, policy objectives and leadership development pathways

#### Output/KPI

Establishment of the Digital Competency and Leadership Framework for educators and staffs (HEI and MoHE)

#### Initiative Owner

Digitisation of Higher Education Committee

#### Timeline

Short Term: 2026 – 2027

#### Focus Area

Digital Competency

#### Policy Alignment

This initiative aligns with **Policy Enabler 2. Strategy A3 of the 12th Malaysia Plan**, the **Education sector** focus of the **National Fourth Industrial Revolution (4IR) Policy, TS4.S1.P1 & P2 of the Ministry of Higher Education Digitalisation Strategic Plan 2021-2025** and **Thrust 4 of the Malaysia Digital Economy Blueprint**

## Enabler 2.2:

### Assess and strengthen digital competencies and leadership capabilities among HEI and MoHE educators and staff

#### Objective

To assess and enhance the digital competencies and leadership capabilities of higher education educators, MoHE staff and future digital leaders through a structured evaluation framework, enabling the identification of competency gaps and the provision of targeted training programme. This initiative aims to promote a culture of digital proficiency, innovation and strategic leadership across HEIs

#### SDG Alignment



#### Key Activities

1. Develop and implement a digital competency assessment based on the established framework to evaluate the proficiency levels of HEI educators, MoHE staff and future digital leaders
2. Conduct a nationwide digital competency evaluation to identify skill gaps, leadership potential and areas for targeted development
3. Analyse assessment results to design structured training programmes that enhance digital proficiency, leadership skills and innovative capabilities in HEIs and MoHE
4. Develop and implement a continuous certification programme that endorses educators' proficiency in each component of the digital competency framework (e.g., digital pedagogy), aligned with ongoing professional development pathways for educators, staffs and leaders

#### Output/KPI

1. Availability of staff to perform:
  - a. Data digitisation activities (Baseline – 2025: 55%, Target – 2030: 70%)
  - b. Technical databasing activities (Baseline – 2025: 77%, Target – 2030: 90%)
  - c. AI management (Baseline – 2025: 37%, Target – 2030: 70%)
2. Training sessions to promote collaborative tools and practices:
  - a. Faculty (Baseline – 2025: 75%, Target – 2030: 90%)
  - b. Staff (Baseline – 2025: 60%, Target – 2030: 90%)
3. Training on AI tools and integration into curriculum and operations:
  - a. Faculty (Baseline – 2025: 80%, Target – 2030: 100%)
  - b. Admin personnel (Baseline – 2025: 28%, Target – 2030: 100%)

#### Initiative Owner

1. Malaysia Productivity Corporation (MPC)
2. Department of Higher Education

#### Timeline

Long Term: 2026 – 2030 (continuous)

#### Focus Area

Digital Competency

#### Policy Alignment

This initiative aligns with **Policy Enabler 2. Strategy A3 of the 12th Malaysia Plan**, the **Education sector** focus of the **National Fourth Industrial Revolution (4IR) Policy**, **TS4.S1.P1 & P2 of the Ministry of Higher Education Digitalisation Strategic Plan 2021-2025** and **Thrust 4 of the Malaysia Digital Economy Blueprint**



### Enabler 2.3:

## Assess and address digital competency and accessibility gaps among higher education students

### Objective

To systematically assess and monitor students' digital competency levels and access to essential digital tools (e.g., personal computers), identifying and addressing key gaps across diverse student populations to ensure inclusive digital readiness in higher education

### SDG Alignment



### Key Activities

1. Design a comprehensive digital competency assessment tool based on key indicators leveraging existing digital frameworks
2. Administer the assessment annually to a representative sample of students across various levels and courses
3. Analyse assessment results to design targeted intervention programmes that enhance students' digital competencies and improve access to essential digital tools

### Output/KPI

Coverage of training sessions conducted to promote collaborative tools and practices (Baseline - 2025: 82%, Target - 2030: 90%)

### Initiative Owner

Malaysia Digital Economy Corporation (MDEC)

### Timeline

Long Term: 2026 - 2030 (continuous)

### Focus Area

Digital Competency

### Policy Alignment

- This initiative aligns with the **Ministry of Education's Digital Education Policy**, specifically **Thrust 1, Strategy 1.2**
- It shares the goal of identifying digital literacy gaps among students, enabling targeted interventions to enhance digital competencies



## Enabler 2.4:

### Accelerate adoption of micro-credentials which are components of accredited programmes of multiple HEIs across all public universities

#### Objective

To broaden access to flexible, credit-bearing learning pathways by encouraging the adoption of MQA Category 2 micro-credentials model thus enabling learners to accumulate and convert these micro-certifications across public universities into more comprehensive formal qualifications through mutual recognition and stackability

#### SDG Alignment



#### Key Activities

1. Facilitate mutual recognition agreements among public HEIs to enable cross-institutional acceptance of micro-credentials toward diploma, degree, or professional certification pathways
2. Develop a centralised digital credentialing platform to issue, track and verify learners' progress toward full qualifications
3. Design guidelines for modular, outcome-based learning units aligned with industry needs and academic standards, enabling learners to stack credentials across multiple HEIs in a structured, credit-bearing pathway towards a more comprehensive formal qualifications

#### Output/KPI

To onboard all public universities to recognise Category 2 micro-credential pathways

#### Initiative Owner

Department of Higher Education

#### Timeline

Medium Term: 2026 – 2028

#### Focus Area

Academic Excellence

#### Policy Alignment

- This initiative aligns with **Shift 9** of **Malaysian Higher Education Action Plan 2022-2025**
- This initiative supports the action plan's aim to make Malaysia as a main educational hub through Globalised Online Learning

### 1.3.3. Key Enabler 3: Data Infrastructure

The final key enabler, Data Infrastructure, serves as the backbone of an integrated, responsive and future-ready higher education ecosystem. This enabler is centred on establishing robust, scalable and secure data foundations that allow for seamless information collection, storage, processing and sharing across institutions and governing bodies. Its primary objective is to enable evidence-based policy formulation, operational efficiency and strategic agility by ensuring that accurate and up-to-date data is readily available to decision-makers at all levels. The rationale lies in the increasing reliance on data to drive innovation, monitor performance and assess institutional effectiveness in a digitalised education landscape. With rising demands for cross-institutional collaboration, standardised reporting and predictive analytics, a unified and resilient data infrastructure is imperative to ensure consistency, transparency and interoperability across the higher education sector.



- **Enabler 3.1:** Establish a nationwide higher education data warehouse for seamless integration & decision-making
- **Enabler 3.2:** Explore the development of a unified cloud storage system for seamless data sharing across all higher education institutions



## Enabler 3.1:

### Establish a nationwide higher education data warehouse for seamless integration & decision-making

#### Objective

To establish a centralised data warehouse that seamlessly integrates and manages data from all participating HEIs, creating a unified digital ecosystem that enhances accessibility, analytics and decision-making

This includes appointing data custodians, consolidating institutional data and leveraging IoT and API technologies to automate processes, reduce data retrieval time and strengthen data-driven decision-making across HEIs and MoHE

#### SDG Alignment



#### Key Activities

1. Align with MoHE's Centralised Data Warehouse Initiative to ensure seamless integration of institutional data into a unified national platform
2. Appoint Data Custodians in each HEI to oversee data governance, security and compliance
3. Develop a Centralised Data Integration Platform that consolidates data from all institutional systems, providing a single source of truth for analytics and decision-making
4. Leverage IoT and API Technologies to automate data collection, streamline business processes and enhance real-time data accessibility

#### Output/KPI

Presence of a backend data management system in place for:

- a. Storing large volumes of data efficiency (Baseline - 2025: 95%, Target - 2030: 100%)
- b. Organising and cleaning data for better accuracy (Baseline - 2025: 65%, Target - 2030: 100%)
- c. Focused on examining data to uncover insights and trends (Baseline - 2025: 18%, Target - 2030: 70%)
- d. Utilises AI for making informed, strategic decisions (Baseline - 2025: 10%, Target - 2030: 70%)

#### Initiative Owner

Ministry of Higher Education - Data Section, Strategic Planning Division (BPS)

#### Timeline

Medium Term: 2027 - 2030

#### Focus Area

Data

#### Policy Alignment

- This initiative aligns with **Thrust 1, Strategy 4, Initiative 8 of the Malaysia Digital Economy Blueprint**
- Both aim to enhance the data sharing environment to improve government services. By establishing a two-way data sharing platform, this initiative will enhance the efficiency of processes and activities between HEIs and MoHE



## Enabler 3.2:

### Explore the development of a unified cloud storage system for seamless data sharing across all Higher Education Institutions

#### Objective

To explore and design a unified cloud storage system that enables seamless data sharing, collaboration and accessibility across higher education institutions, ensuring scalable, secure and high-capacity digital storage to support full-scale data digitisation

#### SDG Alignment



#### Key Activities

1. Conduct a feasibility study to assess institutional storage needs, existing infrastructure and integration challenges
2. Evaluate and identify cloud storage models (centralised, distributed, or hybrid) that align with security, compliance and performance needs
3. Develop a strategic roadmap for phased implementation, ensuring interoperability, cost efficiency and long-term scalability

#### Output/KPI

Sufficient capacity to accommodate complete digitisation of data (Baseline - 2025: 39%, Target - 2030: 70%)

#### Initiative Owner

Ministry of Higher Education - Data Section, Strategic Planning Division (BPS)

#### Timeline

Medium Term: 2027 - 2030

#### Focus Area

Data

#### Policy Alignment

This initiative aligns with **Thrust 1, Strategy 4, Initiative 8 of the MyDIGITAL**, which focuses on enhancing data-sharing to improve government services. By developing a unified cloud storage system, it aims to boost efficiency and collaboration between HEIs and the MoHE



### 1.3.4. **Strategic Thrust 1: Strengthen data infrastructure to ensure sufficient capacity, enabling efficient data storage, retrieval and management**



- **Initiative 1.1:** Strengthen and expand institutional digital storage infrastructure for scalable data management
- **Initiative 1.2:** Accelerate the digitisation of institutional records for enhanced data management

Thrust 1 represents the first stage of digitalisation in higher education which begins with the foundational process of digitisation and conversion. This thrust is focused on transforming traditional, manual and analogue information systems into a structured and accessible digital format. At its core, the objective is to enable institutions to build resilient digital ecosystems by ensuring that data assets often scattered or paper-based are systematically digitised, securely stored and efficiently managed. Establishing a robust backend infrastructure is critical not only to facilitate day-to-day administrative and academic functions, but also to lay the groundwork for more complex digital applications in the future. This thrust recognises that without the digital availability and reliability of institutional data, subsequent digitalisation efforts will be constrained. Accordingly, this stage necessitates foundational improvements in storage capacity, digitisation processes and institutional readiness, which collectively position higher education institutions for long-term, data-driven transformation.



## Initiative 1.1:

### Strengthen and expand institutional digital storage infrastructure for scalable data management

#### Objective

Enhance and expand institutional digital storage infrastructure to support the full-scale digitisation of data, ensuring secure, scalable and high-performance storage solutions that enable seamless data access, management and long-term preservation across higher education institutions

#### SDG Alignment



#### Key Activities

1. Assess current storage capacity and develop an expansion roadmap to ensure scalability and long-term digitisation support
2. Upgrade and integrate high-performance storage solutions (cloud, on-premise, hybrid) with enhanced security, backup and compliance measures
3. Establish a continuous monitoring framework to track storage performance, optimise efficiency and ensure maintenance

#### Output/KPI

Sufficient capacity to accommodate complete digitisation of data (Baseline – 2025: 39%, Target – 2030: 70%)

#### Initiative Owner

Higher Education Institutions (HEIs) – IT Departments

#### Timeline

Short Term: 2026 – 2027

#### Focus Area

Infrastructure & Infostructure

#### Policy Alignment

This initiative aligns with the **Ministry of Higher Education Digitalisation Strategic Plan 2021-2025**, specifically under **Strategic Thrust 2: Strengthening ICT Infrastructure and Security**, which emphasises enhancing digital infrastructure within higher education institutions



## Initiative 1.2:

### Accelerate the digitisation of institutional records for enhanced data management

#### Objective

To systematically digitise institutional records across HEIs, ensuring comprehensive coverage, improved accessibility and secure data management. This initiative aims to convert key academic, administrative and research records into digital formats, supporting automation, efficiency and long-term data preservation

#### SDG Alignment



#### Key Activities

1. Conduct an institutional digitisation audit to assess the current status and identify gaps in digitised records
2. Prioritise and implement large-scale digitisation efforts for registrar records, student records, financial data, research archives and library resources
3. Integrate digitised records into centralised data management systems for seamless access, security and automation

#### Output/KPI

Level of institution data digitised (Baseline – 2025: 83%, Target – 2030: 100%)

#### Initiative Owner

Higher Education Institutions (HEIs) – IT Departments

#### Timeline

Medium Term: 2026 – 2029

#### Focus Area

Data

#### Policy Alignment

This initiative aligns with the **Ministry of Higher Education Digitalisation Strategic Plan 2021-2025**, specifically under **Strategic Thrust 2: Strengthening ICT Infrastructure and Security**, which emphasises enhancing digital infrastructure within higher education institutions



### 1.3.5. **Strategic Thrust 2: Implement systems and processes enabling task automation with minimal human intervention, while facilitating user adaptation to digital platforms**



- **Initiative 2.1:** Accelerate deployment of automation-ready infrastructure and software solutions to enhance digital transformation in HEIs
- **Initiative 2.2:** Expand and accelerate full automation of institutional data management across HEIs

Thrust 2 represents the second stage of digitalisation which focuses on automation and adoption, marking a pivotal shift from manual data handling to system-driven processes that streamline institutional operations. This thrust is aimed at embedding automation into routine administrative and academic functions to enhance productivity, reduce human error and ensure operational continuity. The objective is twofold: to enable institutions to leverage digital infrastructure for process efficiency and to foster user familiarity and adaptation to new digital platforms. At this stage, the integration of hardware and software capable of automating repetitive tasks is essential, as is the cultivation of a digital-savvy culture among faculty, staff and students. By embedding systems such as learning dashboards, human resource management platforms and academic portals into institutional workflows, HEIs can begin to realise the benefits of speed, scalability and data integrity. As automation becomes more embedded, institutions are better positioned to transition towards more advanced stages of digital maturity, driven by reliable systems and a digitally empowered community.



## Initiative 2.1:

### Accelerate deployment of automation-ready infrastructure and software solutions to enhance digital transformation in HEIs

#### Objective

To strengthen HEI digital infrastructure by upgrading automation-ready hardware and deploying essential software solutions that enhance data management, operational efficiency and digital tool adoption. This initiative aims to reduce manual workloads, improve workflow automation and accelerate institutional digital transformation across HEIs

#### SDG Alignment



#### Key Activities

1. Assess institutional automation gaps in both hardware and software, identifying key infrastructure and system needs
2. Upgrade and deploy automation-ready infrastructure, including high-performance servers, cloud storage and computing devices to support seamless software integration
3. Procure and deploy data automation software (e.g., MS Access, SQL, workflow automation tools) that align with institutional needs and enhance efficiency

#### Output/KPI

1. Availability of **hardware** to perform data automation activities (Baseline – 2025: 96%, Target – 2030: 100%)
2. Availability of **software** to perform data automation activities (Baseline – 2025: 83%, Target – 2030: 100%)

#### Initiative Owner

Higher Education Institutions (HEIs) – IT Departments

#### Timeline

Short Term: 2026 – 2027

#### Focus Area

Infrastructure & Infostructure

#### Policy Alignment

This initiative aligns with **Strategy A2 of Priority Area A under Boosting Digitalisation and Advanced Technology in the Twelfth Malaysia Plan (12MP)** by enhancing HEI digital infrastructure and accelerating automation adoption to drive institutional digital transformation



## Initiative 2.2:

### Expand and accelerate full automation of institutional data management across HEIs

#### Objective

To enhance institutional efficiency and digital transformation by expanding and accelerating the full automation of institutional data management systems. This initiative aims to eliminate manual data processing, improve workflow efficiency and ensure seamless, real-time data integration across HEIs

#### SDG Alignment



#### Key Activities

1. Assess the current state of automation adoption and prioritise systems for full automation
2. Deploy and integrate automation solutions into the upgraded infrastructure for seamless data processing
3. Standardise data workflows and interoperability between institutional systems for real-time updates and minimal manual intervention

#### Output/KPI

Level of institution data automated  
(Baseline – 2025: 84%, Target – 2030: 100%)

#### Initiative Owner

Higher Education Institutions (HEIs) – IT Departments

#### Timeline

Medium Term: 2026 – 2029

#### Focus Area

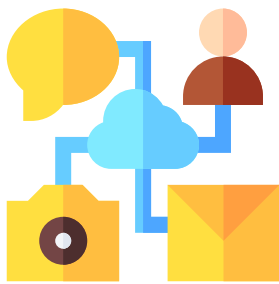
Data

#### Policy Alignment

This initiative aligns with **Strategy A2 of Priority Area A under Boosting Digitalisation and Advanced Technology in the Twelfth Malaysia Plan (12MP)** by enhancing HEI digital infrastructure and accelerating automation adoption to drive institutional digital transformation



### 1.3.6. **Strategic Thrust 3: Leverage communication tools and virtual services to enhance connectivity and collaboration among stakeholders**



- **Initiative 3.1:** Enhance cross-departmental and remote accessibility of institutional records
- **Initiative 3.2:** Co-share bulk subscription and access to primary academic journals and literature platforms across HEIs to enhance research capabilities
- **Initiative 3.3:** Establish a resource sharing ecosystem for all public institutions to enhance research collaboration and access
- **Initiative 3.4:** Identify and promote interactive learning platforms that cultivates 2-way engagements in HE learning environments (i.e. gamification solutions, immersive learning experience), promoting digital pedagogy, inclusivity and digital accessibility
- **Initiative 3.5:** Design, develop and implement a business continuity plan (BCP) across HEIs to mitigate potential impact from cybersecurity incidents

Thrust 3 is anchored in the stage of interaction and collaboration, emphasising the seamless integration of communication tools and virtual services to foster deeper engagement across the higher education ecosystem. This stage of digitalisation focuses on strengthening digital connectivity between faculty, students and administrative bodies, enabling real-time collaboration regardless of physical location. Its objective is to institutionalise a culture of digital interaction that supports research, pedagogy and administration through virtual means. By promoting platforms that enable hybrid learning environments, interactive virtual classrooms and remote access to key institutional records, this thrust aims to create a resilient digital infrastructure that enhances academic delivery and research outcomes. Moreover, it recognises the importance of proactive disaster preparedness and inclusive data accessibility to maintain uninterrupted learning and operations during emergencies. As higher education institutions increasingly rely on digital tools for day-to-day functions, advancing this stage is crucial to ensure equitable, efficient and inclusive collaboration within and beyond campus borders.



### Initiative 3.1:

## Enhance cross-departmental and remote accessibility of institutional records

#### Objective

To improve the seamless sharing and remote accessibility of institutional records across relevant departments, ensuring secure, efficient and integrated data access for authorised personnel. This initiative aims to eliminate data silos, enhance collaboration and support informed decision-making in HEIs

#### SDG Alignment



#### Key Activities

1. Standardise and integrate institutional databases to enable seamless data sharing across departments
2. Assess accessibility gaps and upgrade systems to ensure secure, remote access to institutional records
3. Implement security protocols with role-based access and authentication to protect sensitive institutional data

#### Output/KPI

Level of institution data accessible by relevant staff members (Baseline – 2025: 74%, Target – 2030: 100%)

#### Initiative Owner

Higher Education Institutions (HEIs) – IT Departments

#### Timeline

Medium Term: 2026 – 2029

#### Focus Area

Data

#### Policy Alignment

This initiative aligns with **Thrust 6, Strategy 3, Initiative 4 of MyDIGITAL**, which focuses on ensuring **seamless, safe and secure cross-border data flows**. By improving **cross-departmental and remote accessibility of institutional records**, this initiative enhances **collaboration between HEIs**, facilitates **efficient data sharing**



### Initiative 3.2:

## Co-share bulk subscription and access to primary academic journals and literature platforms across HEIs to enhance research capabilities

#### Objective

To enhance research capabilities and academic output in HEIs by facilitating subscriptions to major academic journals and literature platforms

#### SDG Alignment



#### Key Activities

1. Identify high-impact academic journals and literature platforms that align with the research needs of HEIs
2. Negotiate bulk subscription packages through partnerships with publishers to secure cost-effective access
3. Implement centralised access systems to ensure seamless availability of subscribed resources across participating HEIs
4. Conduct user awareness campaigns to encourage faculty, researchers and students to maximise the use of available journal resources

#### Output/KPI

Availability of research platforms to conduct research activities (Baseline – 2025: 74%, Target – 2030: 100%)

#### Initiative Owner

Department of Higher Education – HEI Research Excellence Division (BKPI)

#### Timeline

Medium Term: 2026 – 2029

#### Focus Area

Research & Innovation

#### Policy Alignment

This initiative aligns with **Policy Enabler 2, Strategy C1 of the 12th Malaysia Plan** which **supports innovation-led growth and commercialisation** of digitalisation breakthroughs. An increased access to academic literature platforms expands information search parameters which greatly enhances an institutions' research capabilities



### Initiative 3.3:

## Establish a resource sharing ecosystem for all public institutions to enhance research collaboration and access

#### Objective

To strengthen equitable access to research, learning and innovation by establishing a resource sharing ecosystem that enables access to shared research repositories, remote utilisation of research labs and the exchange of research findings data and tools

#### SDG Alignment



#### Key Activities

1. Engage stakeholders across public HEIs, research institutions and the ministry to define core requirements, governance structures and interoperability standards for the resource sharing ecosystem
2. Design and develop the digital platform architecture to support shared access to lab scheduling systems, research repositories and the exchange of research findings, data and tools
3. Integrate remote lab access functionalities through secure virtual interfaces, enabling inter-institutional use of high-cost or specialised equipment
4. Develop a unified repository framework for uploading, licensing and managing research papers, datasets, tools and digital resources

#### Output/KPI

Establishment of a resource sharing ecosystem

#### Initiative Owner

Department of Higher Education – HEI Research Excellence Division (BKPI)

#### Timeline

Medium Term: 2026 – 2029

#### Focus Area

Research & Innovation

#### Policy Alignment

This initiative aligns with **Shift 7, Initiative C3** of the **Malaysian Education Development Plan 2015-2025 (Higher Education)** which shares the objective of developing a database containing information on existing facilities and equipment to encourage shared use



### Initiative 3.4:

## Identify and promote interactive learning platforms that cultivates 2-way engagements in HE learning environments (i.e. gamification solutions, immersive learning experience), promoting digital pedagogy, inclusivity and digital accessibility

### Objective

To enhance digital teaching methods by adopting interactive learning platforms that increase student-educator engagement and ensure accessibility for diverse learners, making online learning in HEIs as interactive as physical classrooms while evolving with digital advancements

### SDG Alignment



### Key Activities

1. Conduct a comprehensive assessment to evaluate interactive and accessible learning platforms that align with Malaysia's current and future curricular needs, ensuring inclusivity for diverse learners
2. Identify and collaborate with industry partners to integrate gamification, immersive learning experiences and accessibility features (e.g., text-to-speech, captioning, adaptive interfaces) into digital pedagogy solutions
3. Present a curated list of best-suited interactive learning platforms to HEIs, including recommendations for inclusive implementation to enhance engagement for all students, including those with disabilities

### Output/KPI

1. Degree of adaptation of virtual class among faculty members (Baseline - 2025: 84%, Target - 2030: 100%)
2. Availability of smart classroom for conducting hybrid classes (Baseline - 2025: 50%, Target - 2030: 100%)

### Initiative Owner

Digitisation of Higher Education Committee

### Timeline

Short Term: 2026 - 2027

### Focus Area

Academic Excellence

### Policy Alignment

- This initiative aligns with **Shift 9 of Malaysian Higher Education Action Plan 2022-2025**
- This initiative supports the action plan's aim to make Malaysia as a main educational hub through Globalised Online Learning



### Initiative 3.5:

## Design, develop and implement a Business Continuity Plan (BCP) across HEIs to mitigate potential impact from cybersecurity incidents

### Objective

To utilise digital tools and technologies to ensure that HEIs can maintain operations and deliver educational services without interruption during crises such as cybersecurity incidents, pandemics, natural disasters, or other emergencies

### SDG Alignment



### Key Activities

1. Establish a digital BCP framework that outlines the processes, technologies and protocols necessary for institutions to continue functioning during disruptions
2. Incorporate remote learning capabilities, virtual administration processes and digital communication tools into the BCP framework
3. Conduct regular training and simulation exercises to prepare staff and faculty for digital BCP implementation

### Output/KPI

1. System management readiness towards an emergency or disasters
  - a. Availability of plan (Baseline – 2025: 62%, Target – 2030: 100%)
  - b. System readiness (Baseline – 2025: 53%, Target – 2030: 70%)

### Initiative Owner

Higher Education Institutions (HEIs) – IT Departments

### Timeline

Short Term: 2026 – 2027

### Focus Area

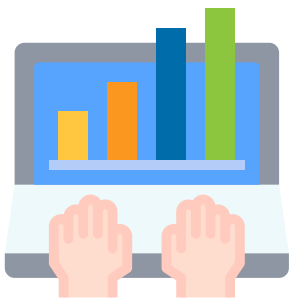
Data

### Policy Alignment

This initiative aligns with **Strategic Thrust 2, Strategy 3** of the **Ministry of Higher Education Digitalisation Strategic Plan 2021-2025**, with both initiatives focusing on improving cybersecurity within the respective institutions



### 1.3.7. **Strategic Thrust 4: Utilise data analytics to enrich information and provide actionable insights for informed and effective decision-making**



- **Initiative 4.1:** Strengthen institutional access to statistical analysis tools (Turnitin, web of science, SPSS) for research universities (RU)
- **Initiative 4.2:** Establish a co-shared statistical analysis software licensing model for HEIs
- **Initiative 4.3:** Establish a dedicated digitalisation research domain in MoHE's platforms to enhance research funding and collaboration (e.g., MyGrants and MRUN)

Thrust 4 focuses on elevating higher education institutions' capacity to harness data analytics for more informed, timely and strategic decision-making. Representing the "Data-Driven Analysis" stage, this thrust is rooted in the belief that digital maturity is best achieved when institutions are empowered to translate raw data into meaningful insights that can guide policy formulation, operational improvements, academic planning and research excellence. The core objective is to institutionalise analytical thinking by embedding the tools, talent and infrastructure needed to support advanced data usage across all academic and administrative functions. This includes ensuring the presence of backend systems, sufficient computing hardware and dedicated personnel who are capable of analysing data and producing actionable outcomes. By promoting access to advanced statistical tools, optimising software licensing models and strengthening digital research ecosystems, this thrust aims to create a data-literate academic community that values evidence-based decisions. A future-ready higher education ecosystem must be underpinned by reliable data flows and robust analytical capabilities that foster transparency, agility and continuous improvement.



## Initiative 4.1:

### Strengthen institutional access to statistical analysis tools (Turnitin, Web of Science, SPSS) for Research Universities (RU)

#### Objective

Enhance research capabilities by equipping major HEIs with essential research and statistical analysis tools through a structured acquisition and deployment strategy, ensuring seamless access to high-impact digital resources for faculty and researchers

#### SDG Alignment



#### Key Activities

1. Conduct an institutional assessment to identify priority research tools required based on academic and research demands (Turnitin, Web Of Science, SPSS)
2. Establish a structured framework for software acquisition and deployment to optimise institutional access and usage
3. Monitor and evaluate software utilisation to maximise research impact and optimise resource allocation

#### Output/KPI

Availability of data analysis tools within your institution (Baseline - 2025: 67%, Target - 2030: 100%)

#### Initiative Owner

Higher Education Institutions (HEIs) - IT Departments

#### Timeline

Medium Term: 2027 - 2030

#### Focus Area

Infrastructure & Infostructure

#### Policy Alignment

This initiative aligns with **Programme 3 of L7.SA.A2 in the Malaysia Higher Education Action Plan 2022-2025**. Both aim to establish a systematic budget line to enhance research output and increase collaboration in research



## Initiative 4.2:

### Establish a co-shared statistical analysis software licensing model for HEIs

#### Objective

Promote equitable access to research and statistical analysis tools among non-research HEIs by developing a shared licensing framework, reducing costs while enhancing research collaboration and digital resource availability

#### SDG Alignment



#### Key Activities

1. Identify HEIs with similar research needs to form collaborative clusters for shared software licensing agreements
2. Negotiate with software providers to enable multi-institutional licensing arrangements that optimise cost efficiency
3. Develop a centralised platform to manage shared licensing, ensure seamless access and provide technical support
4. Implement governance and monitoring mechanisms to track software usage, compliance and renewal needs

#### Output/KPI

Availability of data analysis tools within your institution (Baseline – 2025: 67%, Target – 2030: 100%)

#### Initiative Owner

Higher Education Institutions (HEIs) – IT Departments

#### Timeline

Medium Term: 2027 – 2030

#### Focus Area

Infrastructure & Infostructure

#### Policy Alignment

This initiative aligns with **Programme 3 of L7.SA.A2 in the Malaysia Higher Education Action Plan 2022-2025**. Both aim to establish a systematic budget line to enhance research output and increase collaboration in research



### Initiative 4.3:

## Establish a dedicated digitalisation research domain in MoHE's platforms to enhance research funding and collaboration (e.g., MyGrants and MRUN)

#### Objective

To create a focused research domain on digitalisation, aimed at increasing research funding and fostering collaboration among researchers, thereby advancing the field of digital technologies and their applications

#### SDG Alignment



#### Key Activities

1. Perform stock take on number of researches currently undertaken within the digital field to justify establishment of a new domain
2. Create a new research domain in MyGRANTS and MRUN specifically for 'Digitalisation'

#### Output/KPI

Addition of 'Digitalisation' domain in MyGRANTS and MRUN platform

#### Initiative Owner

Department of Higher Education – HEI Research Excellence Division (BKPI)

#### Timeline

Medium Term: 2027 – 2030

#### Focus Area

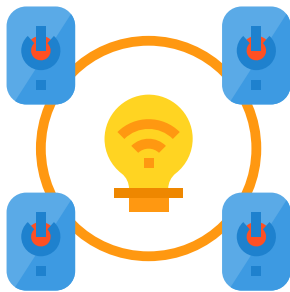
Research & Innovation

#### Policy Alignment

This initiative aligns with **Programme 3 of L7.SA.A2 in the Malaysia Higher Education Action Plan 2022-2025**. Both aim to establish a systematic budget line to enhance research output and increase collaboration in research



### 1.3.8. **Strategic Thrust 5: Enable seamless big data transactions and management through advanced connectivity solutions**



- **Initiative 5.1:** HEIs to undertake a comprehensive assessment on network coverage and capacity assessment within the institutions in collaboration with ISPs
- **Initiative 5.2:** Upgrade and standardise network-optimised hardware to enhance digital connectivity across HEIs

Thrust 5 underscores the critical need for robust, high-speed connectivity as the foundation of a fully digitalised higher education ecosystem. This thrust aims to strengthen the digital backbone of HEIs by enabling seamless, secure and scalable data transactions and network access through advanced technologies. The overarching objective is to ensure that institutional connectivity can support increasingly data-intensive operations ranging from cloud computing and big data analytics to AI-enabled platforms without disruption or degradation in performance. Equally, universal access must be guaranteed to bridge gaps in digital equity and inclusion for students and staff. This stage also involves ensuring that campus-wide hardware specifications to maximise data flow, system uptime and institutional responsiveness. Through comprehensive assessments of existing bandwidth and hardware capabilities and targeted upgrades, this thrust seeks to future-proof Malaysia's higher education network infrastructure, ensuring HEIs can support and sustain advanced digital learning, research and administration well into the next decade.



## Initiative 5.1:

### HEIs to undertake a comprehensive assessment on network coverage and capacity assessment within the institutions in collaboration with ISPs

#### Objective

Upgrading HEIs internet bandwidth and coverage across campus to ensure students have adequate access to the internet based on the assessment report done by ISP, ensuring students have uninterrupted classroom/ learning sessions

#### SDG Alignment



#### Key Activities

1. Conduct a network coverage and capacity assessment to identify areas with high latency, poor coverage, or no internet access
2. Work with ISPs to independently verify the findings from the campus network assessment
3. HEIs to collaborate with ISP to escalate the matter to relevant agencies

#### Output/KPI

Network Population Coverage across Campus (Baseline - 2025: 91%, Target - 2030: 100%)

#### Initiative Owner

Higher Education Institutions (HEIs) - IT Departments

#### Timeline

Short Term: 2026 - 2027

#### Focus Area

Infrastructure & Infostructure

#### Policy Alignment

This initiative is aligned with the **ST2.S1.P4** of the **Ministry of Higher Education Digitalisation Strategic Plan 2021-2025** and **L9.SA.A1** of the **Malaysia Higher Education Action Plan 2022-2025**, maintaining the overarching goal of ensuring seamless online educational processes



## Initiative 5.2:

### Upgrade and standardise network-optimised hardware to enhance digital connectivity across HEIs

#### Objective

To modernise and standardise network-compatible hardware across HEIs, ensuring seamless integration with high-speed connectivity infrastructure and supporting enhanced digital learning, research and administrative operations

#### SDG Alignment



#### Key Activities

1. Conduct a hardware-network compatibility assessment across HEIs to identify outdated or underperforming devices that limit connectivity performance
2. Develop and implement a standardisation framework for network-optimised hardware, ensuring alignment with high-speed connectivity requirements
3. Upgrade and deploy modern network-compatible hardware (e.g., high-speed servers, next-gen routers, IoT-enabled devices) to enhance digital learning, research and administrative efficiency

#### Output/KPI

Compatibility of institutional hardware with existing network infrastructure (Baseline – 2025: 81%, Target – 2030: 100%)

#### Initiative Owner

Higher Education Institutions (HEIs) – IT Departments

#### Timeline

Short Term: 2026 – 2027

#### Focus Area

Infrastructure & Infostructure

#### Policy Alignment

This initiative is aligned with the **ST2.S1.P4** of the **Ministry of Higher Education Digitalisation Strategic Plan 2021-2025** and **L9.SA.A1** of the **Malaysia Higher Education Action Plan 2022-2025**, maintaining the overarching goal of ensuring seamless online educational processes



### 1.3.9. **Strategic Thrust 6:** Foster an interconnected ecosystem through APIs and leverage AI to enhance data flow, cross-platform communication and predictive analytics



- **Initiative 6.1:** Integrate AI & emerging technology to enhance predictive analytics for forecasting institutional, business and curriculum needs in HEIs
- **Initiative 6.2:** Review and update existing guidelines, plans and strategies under MoHE to align with emerging AI trends and ethical standards
- **Initiative 6.3:** Implement a standardised e-assessment policy mandating secure proctoring and AI-driven plagiarism detection to ensure academic integrity

Thrust 6 highlights the future need to transition towards an integrated and innovation-driven digital higher education ecosystem that is interconnected, intelligent and adaptive. This thrust focuses on creating seamless interoperability between institutional systems, enabling efficient data flow through Application Programming Interfaces (APIs) and embedding Artificial Intelligence (AI) to support predictive analytics and smart decision-making. The objective is to promote a higher education landscape that not only adopts digital tools but also integrates them holistically to allow real-time communication across platforms, better anticipate institutional needs and enhance strategic outcomes. This includes equipping academic and administrative staff with the technical capacity to manage AI systems, embedding AI-driven solutions into teaching and learning and ensuring compliance with evolving ethical and governance standards. Institutions must also align policies and guidelines with global developments in AI to safeguard responsible innovation. By fostering a future-ready digital ecosystem, this thrust positions Malaysia's higher education institutions at the forefront of technological innovation and sustainable digital transformation.



### Initiative 6.1:

## Integrate AI & emerging technology to enhance predictive analytics for forecasting institutional, business and curriculum needs in HEIs

#### Objective

To equip HEIs with AI-driven and emerging technology enabled tools that enhance predictive analytics, strategic planning and institutional efficiency, enabling data-driven policies and proactive decision-making across academic and administrative functions

#### SDG Alignment



#### Key Activities

1. Assess HEI readiness for AI and emerging technologies, identifying gaps and opportunities for integrating predictive analytics, automation and data-driven tools
2. Procure and deploy AI & emerging tech-enabled decision-making tools, such as predictive analytics platforms, IoT-driven data collection systems and blockchain-based academic records management
3. Integrate AI & emerging technologies with institutional data systems to ensure seamless access to real-time insights for academic planning, administrative efficiency and institutional governance

#### Output/KPI

Utilisation of AI in institutional processes and strategic decision-making (Baseline - 2025:10%, Target - 2030: 100%)

#### Initiative Owner

Higher Education Institutions (HEIs) - IT Departments

#### Timeline

Medium Term: 2027 - 2030

#### Focus Area

Infrastructure & Infostructure

#### Policy Alignment

This initiative aligns with **Strategic Thrust 1, Strategy 3, Programme 2 of Ministry of Higher Education Digitalisation Strategic Plan 2021-2025** which focuses on **enhancing data analytics for institutional decision-making**. By deploying advanced data analysis tools, this initiative supports **real-time monitoring, predictive insights and centralised reporting**, improving financial, academic and operational planning in HEIs



## Initiative 6.2:

### Review and update existing guidelines, plans and strategies under MoHE to align with emerging AI trends and ethical standards

#### Objective

To review, refine and update existing guidelines, plans and strategies under MoHE to ensure alignment with emerging AI trends, ethical standards and evolving higher education needs. This initiative aims to enhance responsible AI adoption across academic and administrative functions, addressing governance, integrity, compliance and implementation challenges while promoting ethical and effective AI integration in higher education institutions

#### SDG Alignment



#### Key Activities

1. Assess the effectiveness of the current guideline and identify gaps in AI integration within HEIs
2. Engage key stakeholders, including policymakers, educators and industry experts, to gather insights and best practices
3. Update the guideline to address emerging AI trends, academic integrity concerns and ethical considerations

#### Output/KPI

Policy review and update completed

#### Initiative Owner

Digitisation of Higher Education Committee

#### Timeline

Long Term: 2026 – 2030 (continuous)

#### Focus Area

Academic Excellence

#### Policy Alignment

- This initiative aligns with the **12th Malaysian Plan's Priority Area D, Strategy D3** by strengthening education and empowering human capital
- It supports equipping students with AI skills through a guided framework for ethical and effective use in education



### Initiative 6.3:

## Implement a standardised e-assessment policy mandating secure proctoring and AI-driven plagiarism detection to ensure academic integrity

### Objective

To encourage usage of proctoring and AI detection tools in HEIs to mitigate usage of AI in assignments or examinations, ensuring integrity and quality of education

### SDG Alignment



### Key Activities

1. Draft the e-assessment policy framework and engage key stakeholders, including universities, accreditation bodies and tech providers, for input and alignment
2. Evaluate and select suitable proctoring and AI-driven plagiarism detection and secure proctoring tools based on effectiveness, scalability and data privacy standards
3. Pilot the selected tools in a few institutions to test functionality, gather feedback and identify implementation challenges
4. Conduct training sessions for educators and administrators and provide orientation for students to ensure smooth adoption and understanding
5. Integrate the tools with existing LMS to streamline exam administration and monitoring
6. Establish clear academic integrity guidelines and a governance mechanism to ensure compliance and address misconduct

### Output/KPI

Degree of integration of AI into curriculum (Baseline - 2025: 51%, Target - 2030: 100%)

### Initiative Owner

Higher Education Institutions (HEIs) - IT Departments

### Timeline

Medium Term: 2027 - 2030

### Focus Area

Academic Excellence






### Policy Alignment

This initiative aligns with **Thrust 6, Strategy 1 of the Malaysia Digital Economy Blueprint**, which aims to strengthen the ethics of online activities. This objective is particularly relevant in the context of using AI in education



## 1.4. Management & Monitoring: Digitisation of Higher Education Committee

As part of the policy framework, a management and monitoring body is proposed at the Ministry level in the form of Digitisation of Higher Education Committee. The objective of this body is to drive and oversee the digital transformation of higher education by monitoring the progress of initiatives, tracking performance metrics, gathering stakeholder feedback and providing regular updates to ensure the effective execution of digital strategies. Additionally, the proposed committee aims to align digitalisation efforts for both HEIs and the ministry. By coordinating the strategic efforts of both the Digitalisation of Higher Education Policy 2025-2030 and Ministry of Higher Education Digitalisation Strategic Plan 2021-2025, the committee ensures a cohesive digital transformation.

Governing Policies	Role	Description
	 <p><b>PLAN OWNER:</b> <b>MoHE Chief Secretary</b></p>	<p>Provide strategic direction, approve policies and oversee the implementation of the action plan</p>
	 <p><b>PLAN MONITORING:</b> <b>HEI Digitalisation Secretariat</b> <i>Supported by MoHE CDO</i></p>	<p>Oversee the progress and performance of the execution of digital initiatives</p>
	 <p><b>KEY MEMBERS:</b> <b>MoHE (BPSM, BPM, BPS), JPT (BKPI), HEIs (IT Dpt.), MPC, MDEC, ISPs</b> <i>Respective Initiatives Owners</i></p>	<p>Key implementers of the initiatives, ensure that policies and strategies are executed effectively</p>

Note: All key members listed are respective initiatives owners across the 3 key enablers and 6 strategic thrust

## 2. Conclusion



The Digitalisation of Higher Education Action Plan 2025-2030 operationalises the aspirations of the Policy by translating strategic intent into structured programmes, initiatives and measurable outcomes. In essence, the blueprint articulates the nation's strategic direction and long-term objectives while the action plan provides the way forward. It lays out a practical roadmap that ensures all stakeholders are able to execute digital transformation systematically, with clarity of direction, timelines and accountability mechanisms. This pragmatic orientation ensures that strategies are not aspirational alone, but actionable, scalable and sustainable.

The action plan integrates governance frameworks to ensure oversight and coordination, while simultaneously embedding digital solutions into academic delivery to enhance teaching and learning as well as research. The plan prioritises the expansion and modernisation of digital infrastructure and infostructure, while also positioning research, innovation and data driven decision making as core levers for value creation. Stakeholder engagement and the development of digital talent are not ancillary, they are essential enablers that ensure the higher education ecosystem remains responsive, inclusive and resilient in the face of rapid technological evolution.

By bridging vision with implementation, the Action Plan ensures that Malaysia's higher education system evolves into a future-ready ecosystem. It empowers institutions to build resilience, foster inclusive access and deliver high-quality outcomes that are aligned with national aspirations for global competitiveness. In doing so, the Action Plan turns the Policy's strategic vision into concrete results, ensuring that the higher education sector moves from simply being digitally equipped to being fully digitally led.

### 3. Acknowledgement

MoHE extends its deepest appreciation to all stakeholders who have contributed to the development of this policy and action plan. This publication is the result of extensive collaboration and we recognise the valuable insights, expertise and feedback provided by individuals and organisations, whether mentioned or not, for their crucial roles in shaping the Digitalisation of Higher Education Policy and Action Plan 2025-2030. We would also like to express our gratitude to the various divisions within the Ministry as well as partner agencies and organisations, for their unwavering support, cooperation and commitment that have served as key drivers of this initiative. Their collective contributions have enriched this policy and action plan, ensuring its effectiveness and impact in the years to come.

