



Development of Rule-based AI Framework for Programme Accreditation Assessment based on Code of Practice for Programme Accreditation (COPPA)



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Introduction to Malaysian Qualifications Agency

The **MQA** is a statutory body in Malaysia responsible for quality assurance of higher education. It was established under the **Malaysian Qualifications Agency Act 2007 (Act 679)** and came into operation in **November 2007**, replacing the Lembaga Akreditasi Negara/National Accreditation Board (LAN).



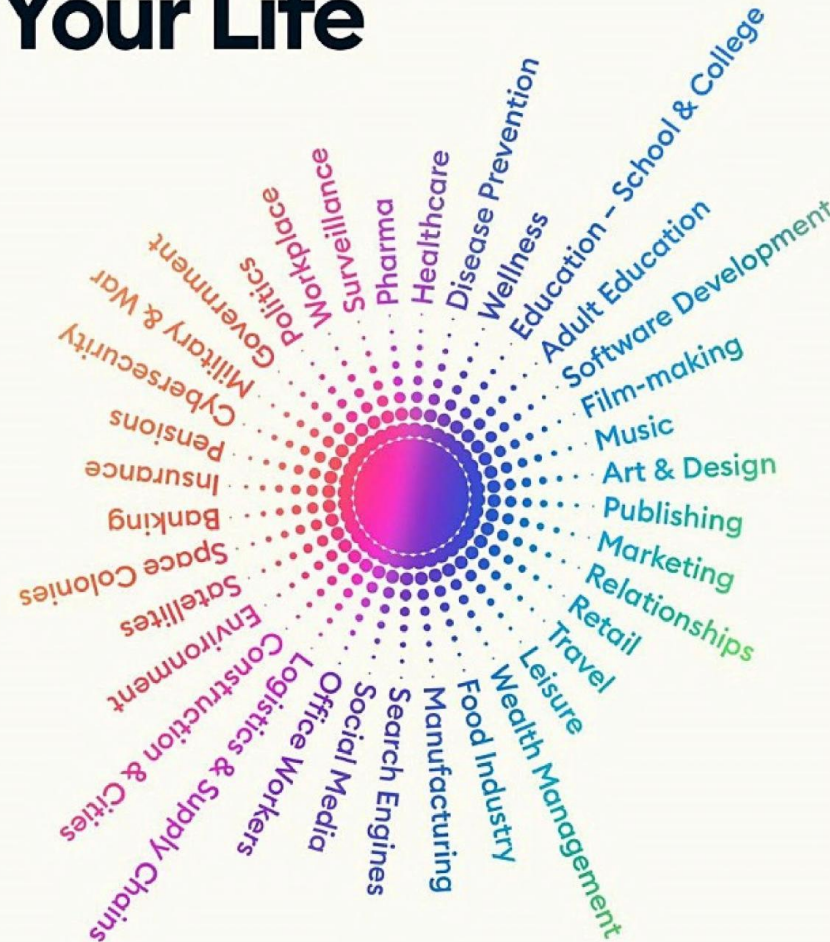
Malaysian Qualifications Framework (MQF)

MQF Level	Minimum Graduating Credits*	Academic Sector	TVET Sector
8	No credit rating	PhD by Research	Doctoral Degree of Professional Practice
	80	Doctoral Degree by Mixed Mode & Coursework	
7	No credit rating	Master's Degree by Research	Master's Degree of Professional Practice
	40	Master's Degree by Mixed Mode & Coursework	
	30	Postgraduate Diploma	
	20	Postgraduate Certificate	
6	120	Bachelor's Degree	Bachelor's Degree
	64	Graduate Diploma	Graduate Diploma
	34	Graduate Certificate	Graduate Certificate
5	40	Advanced Diploma	Advanced Diploma
4	90	Diploma	Diploma
3	60	Certificate	Certificate
2	30	Certificate	Certificate
1	15	Certificate	Certificate

* Inclusive of general studies subjects for an undergraduate programme.

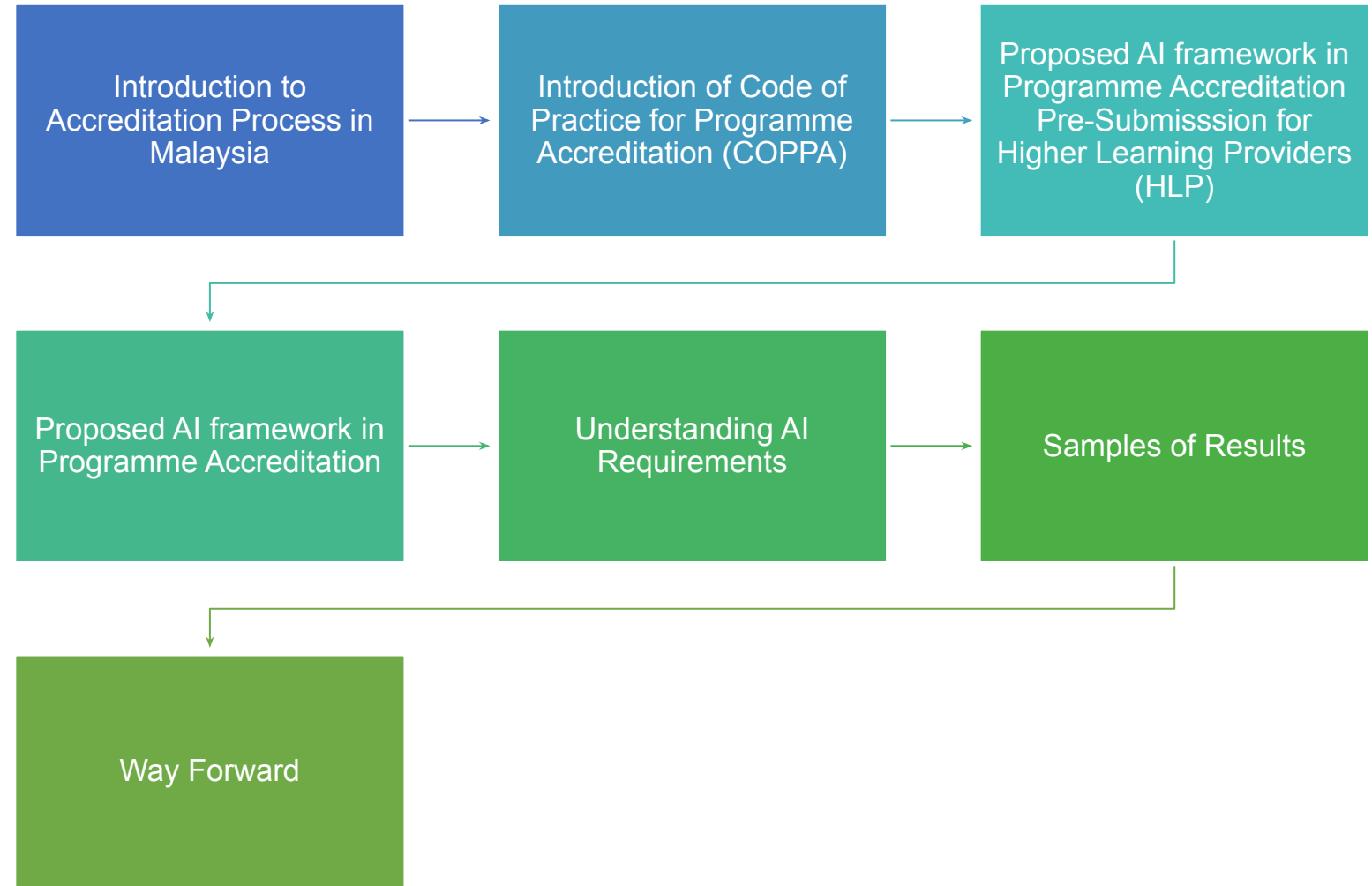
How AI Will Change Your Life

Patrick
Dixon

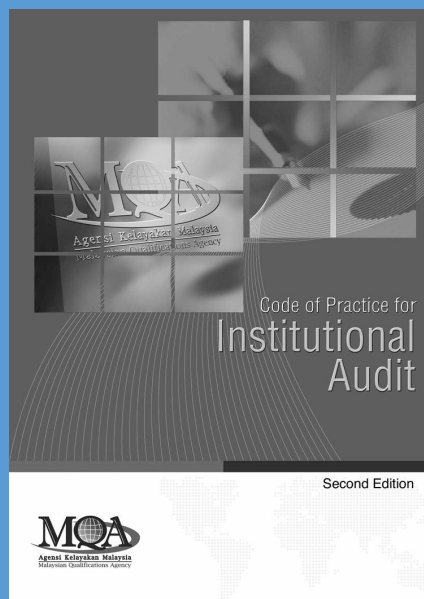


A Futurist's Guide to a Super-Smart World

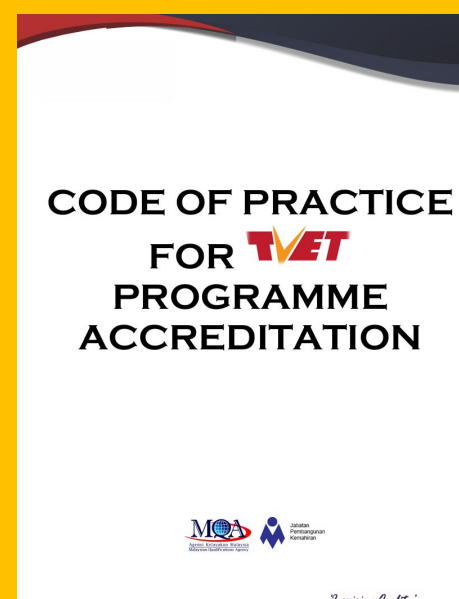
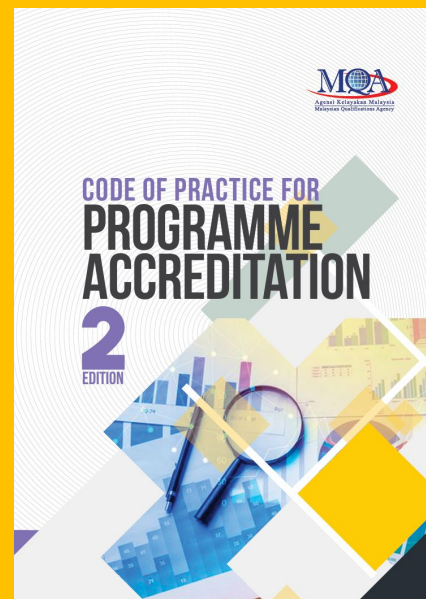
Contents of the Presentation



Accreditation in Malaysia



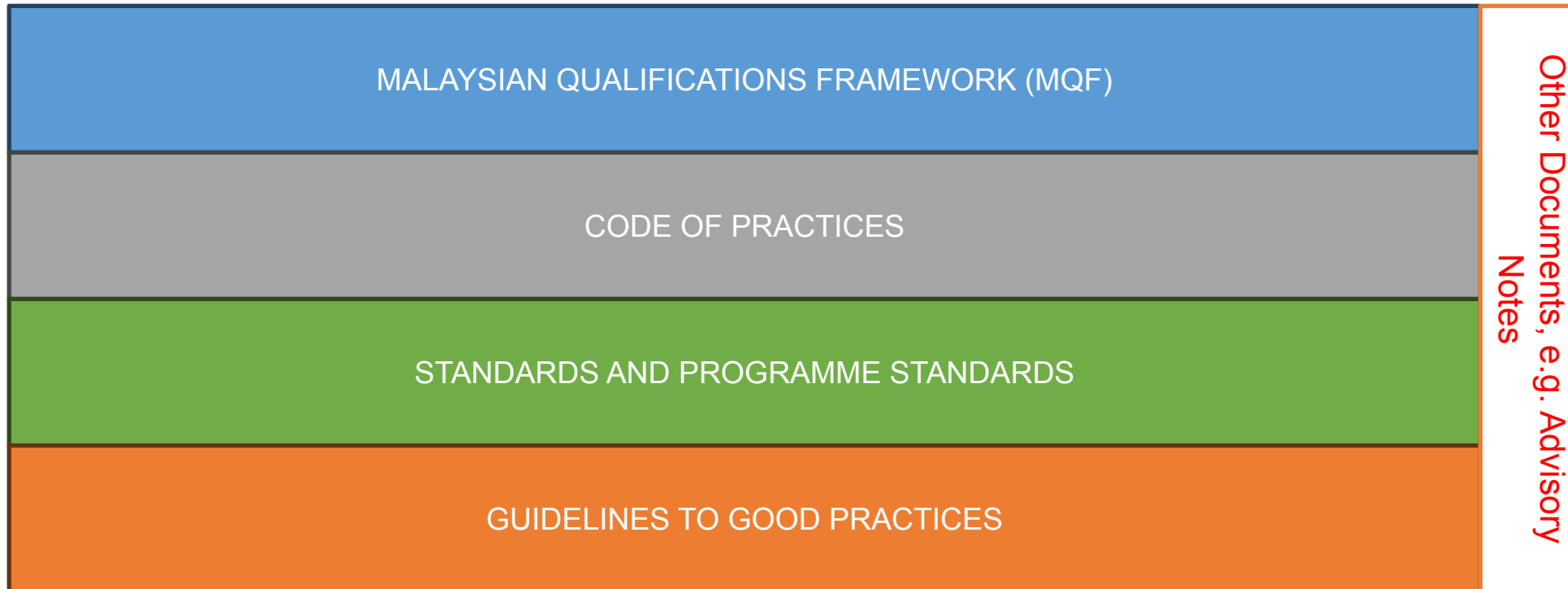
INSTITUTIONAL AUDIT



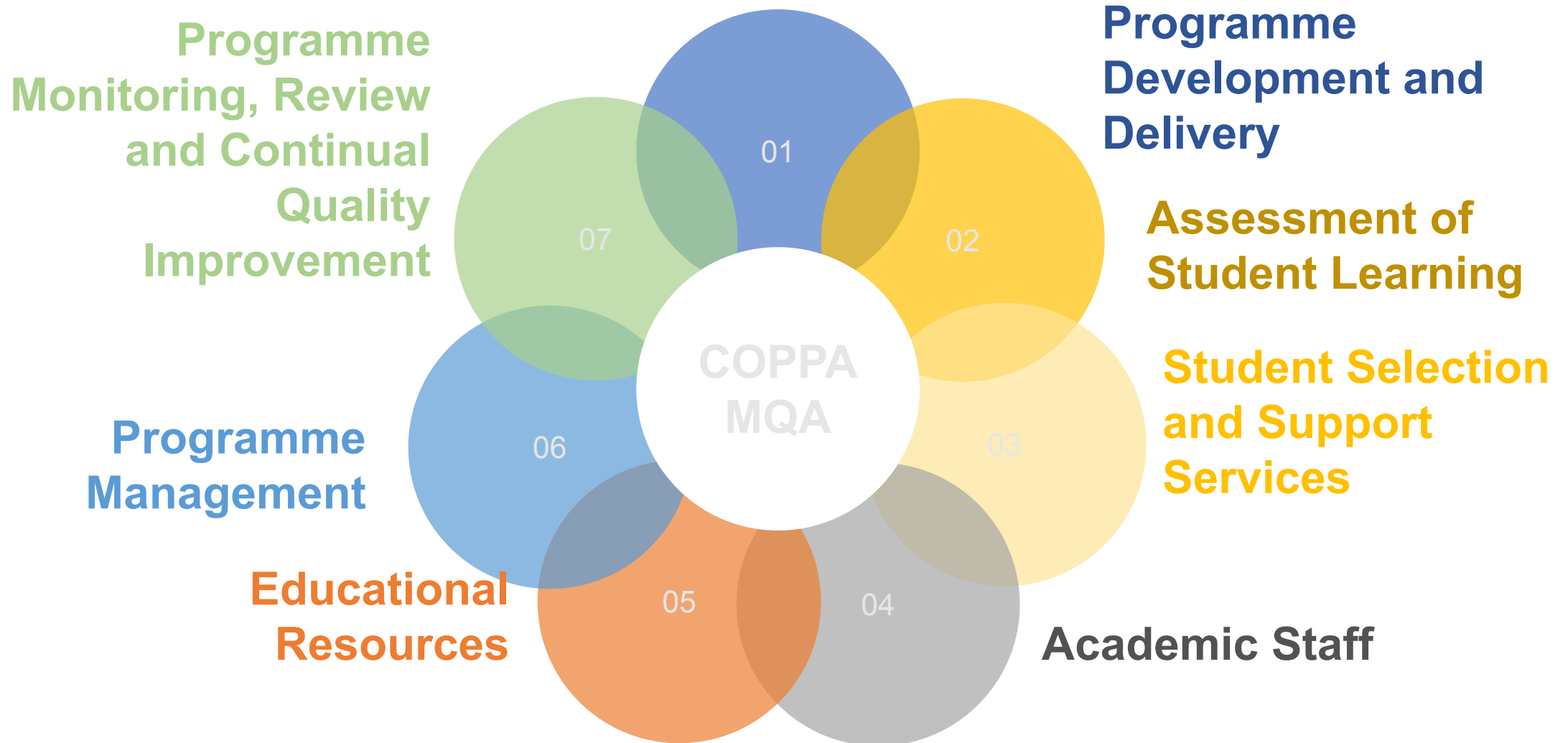
PROGRAMME AUDIT

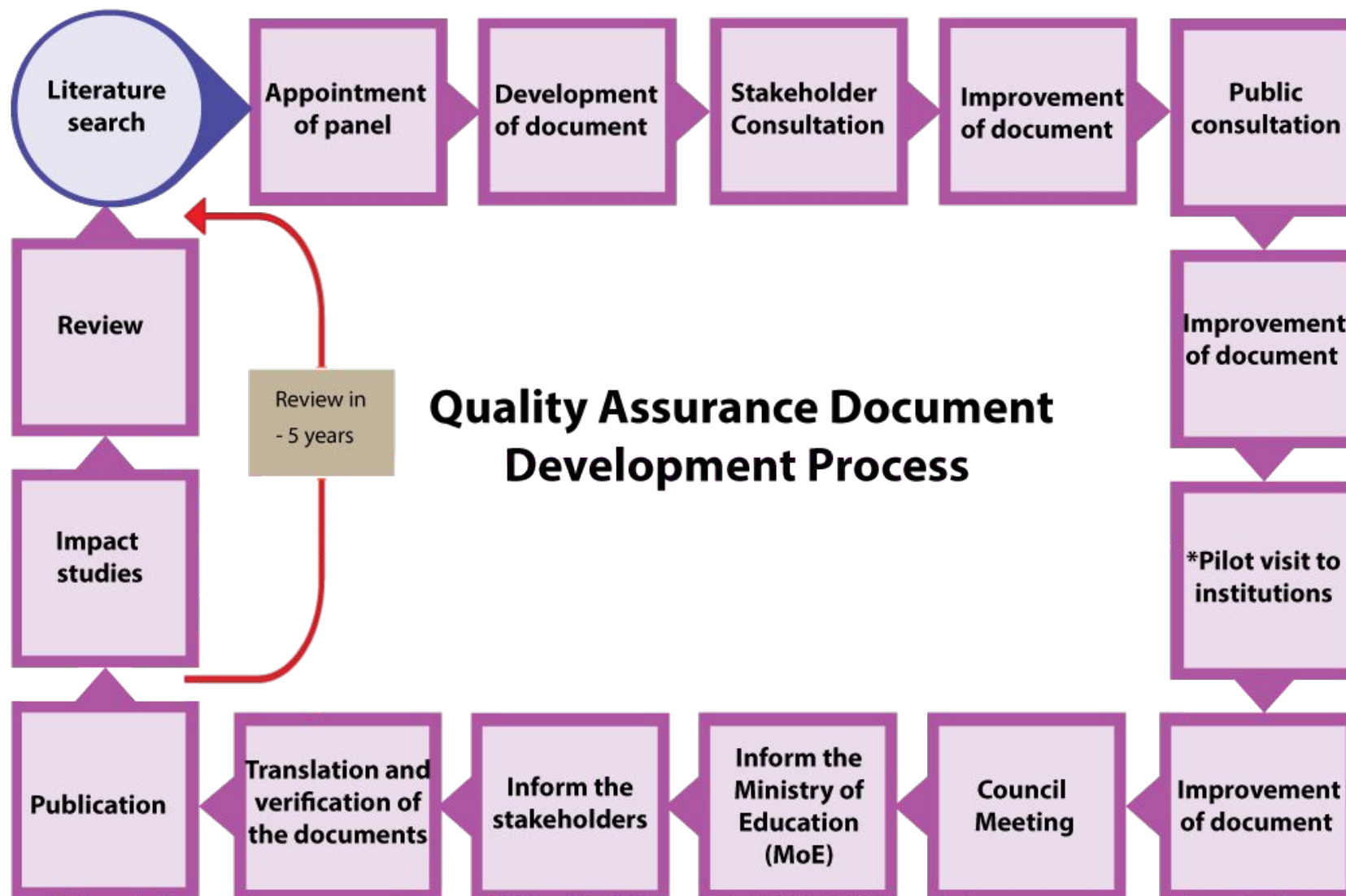


QA Documents in Malaysia

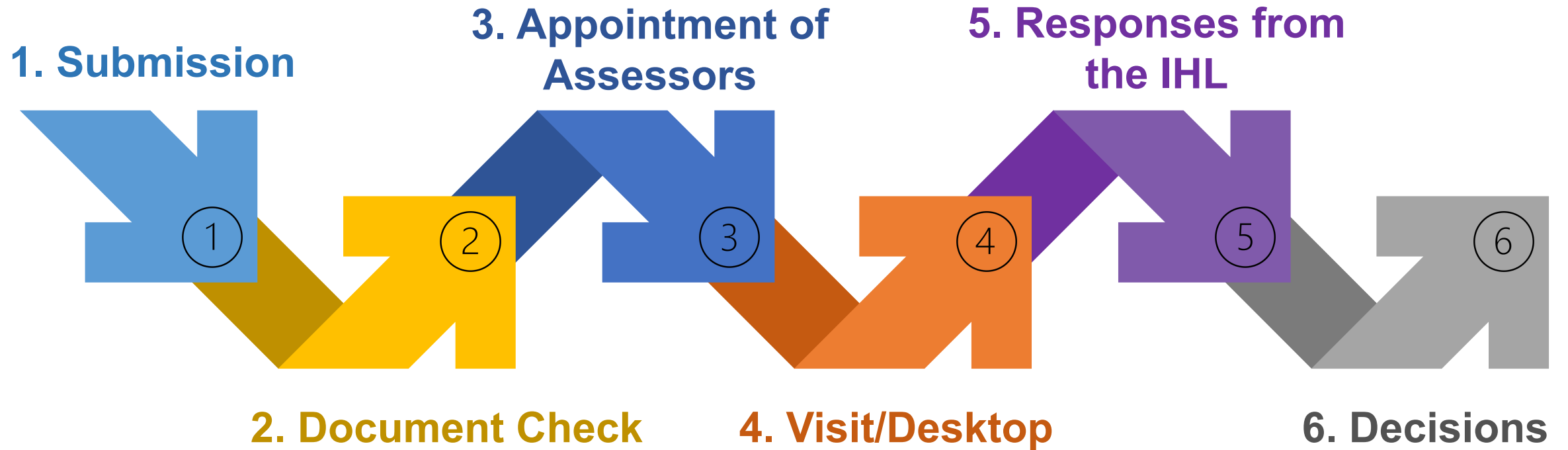


7 Areas of Assessment in Code of Practice for Programme Accreditation (COPPA)

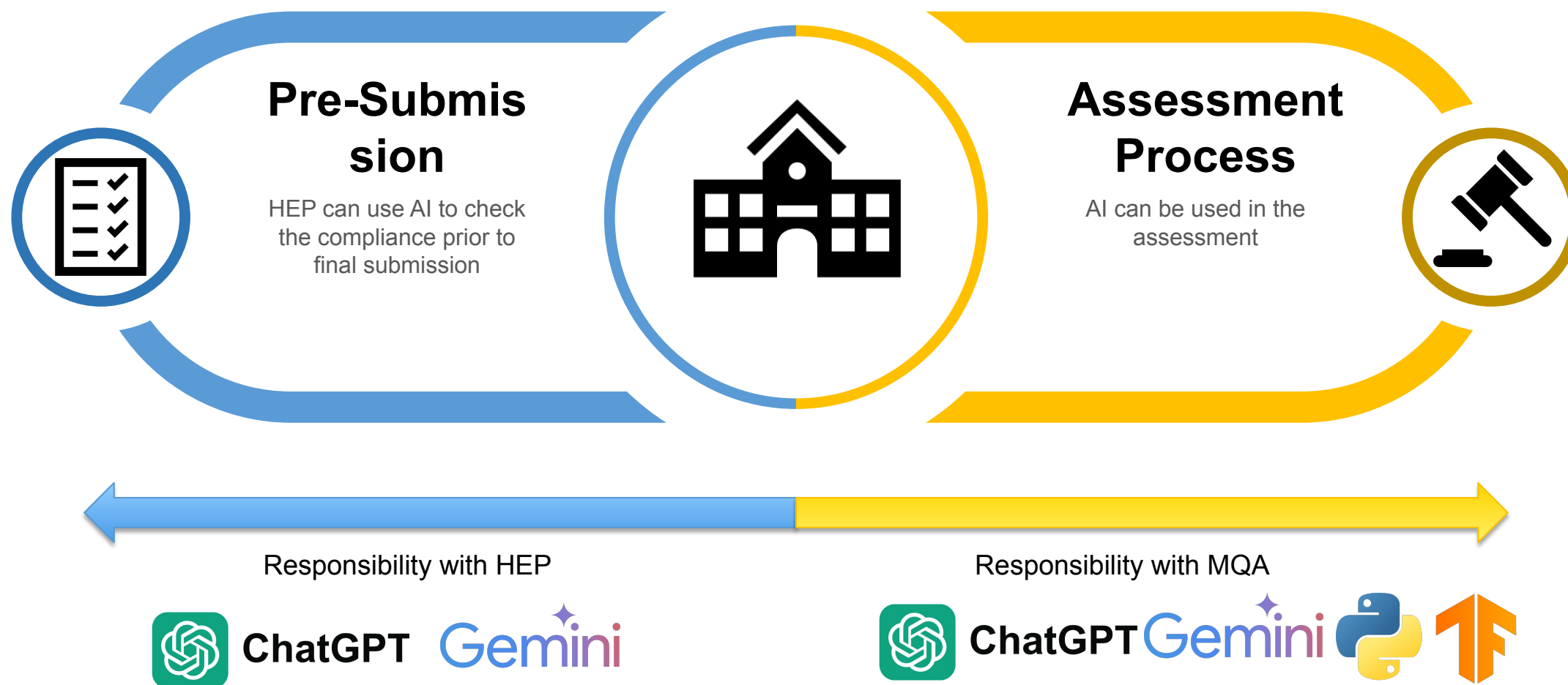




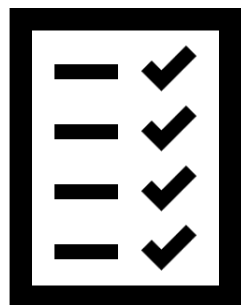
Programme Accreditation Flow



The Use of AI in Accreditation



Advantage of AI for Pre-Submission



Pre-Submission

- Higher Education Providers (HEP) can utilize any Generative AI model like ChatGPT
- Data can be extracted either from online data, or data in the possession of the HEP
- AI can be trained using the Standards (available in the website)

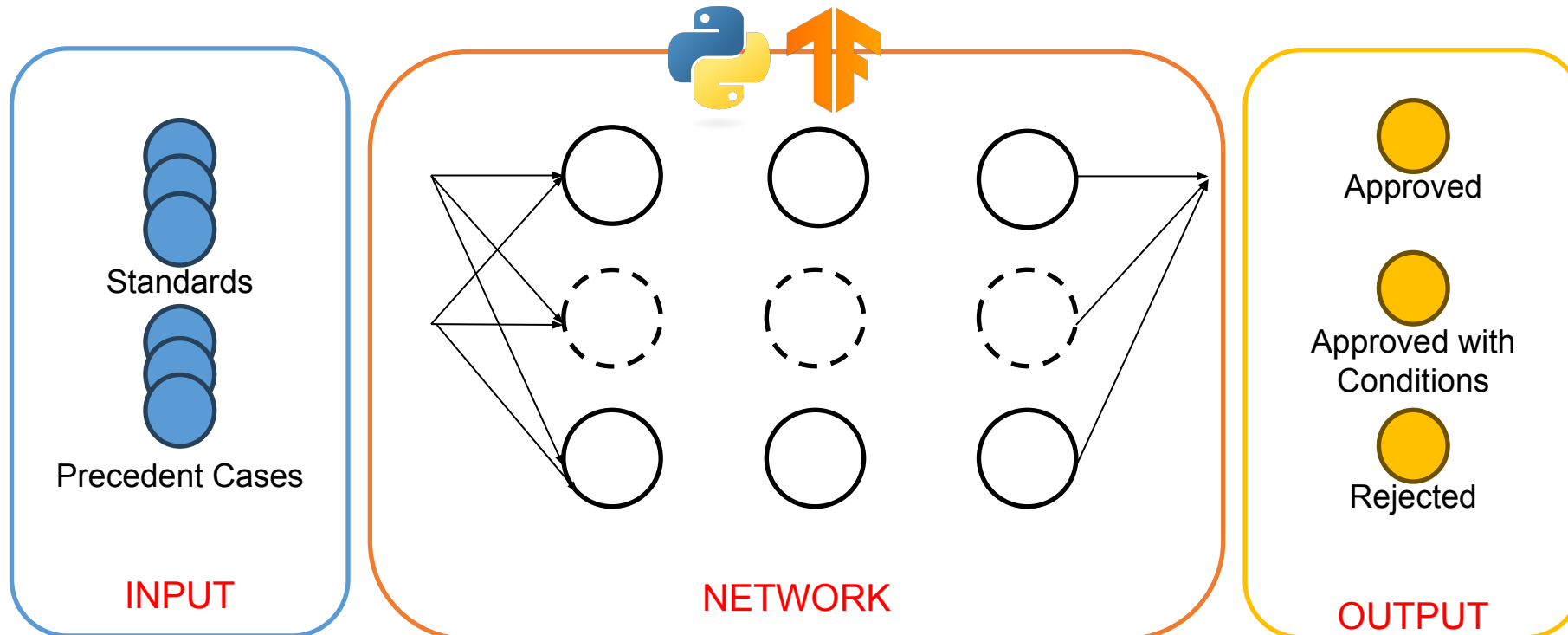


Advantage of AI for Assessment



AI for Assessment

- Utilizing both Generative AI as well as Local Machine Learning Model – deep learning approach



Example 1: Standard 6.2.2 The programme leader must have appropriate qualification, knowledge and experiences related to the programme he/she is responsible for.

Profile:

https://scholar.google.com/citations?user=DEILx_UAAAAAJ&hl=en

Programme: Masters in Biomedical Engineering

AI : Strong candidates

Example 1: Standard 6.2.2 The programme leader must have appropriate qualification, knowledge and experiences related to the programme he/she is responsible for.

Profile:

https://scholar.google.com/citations?user=DEILx_UAAAAAJ&hl=en

Programme: Masters in Civil Engineering

Criterion

Evaluation for Civil Engineering

Qualification

He holds a PhD and is a Professor — but in **Computer/Electrical Engineering, not Civil Engineering.**

Knowledge

His expertise is in **medical imaging, image processing, embedded systems** — all unrelated to **core Civil Engineering areas** like structures, geotechnics, hydraulics, or construction.

Experience

No evidence of involvement in civil engineering research, teaching, or industry.

AI : Not suitable

Disadvantage of AI



Highly Dependence on AI

HEP as well as panel of assessors may be relying too much on AI

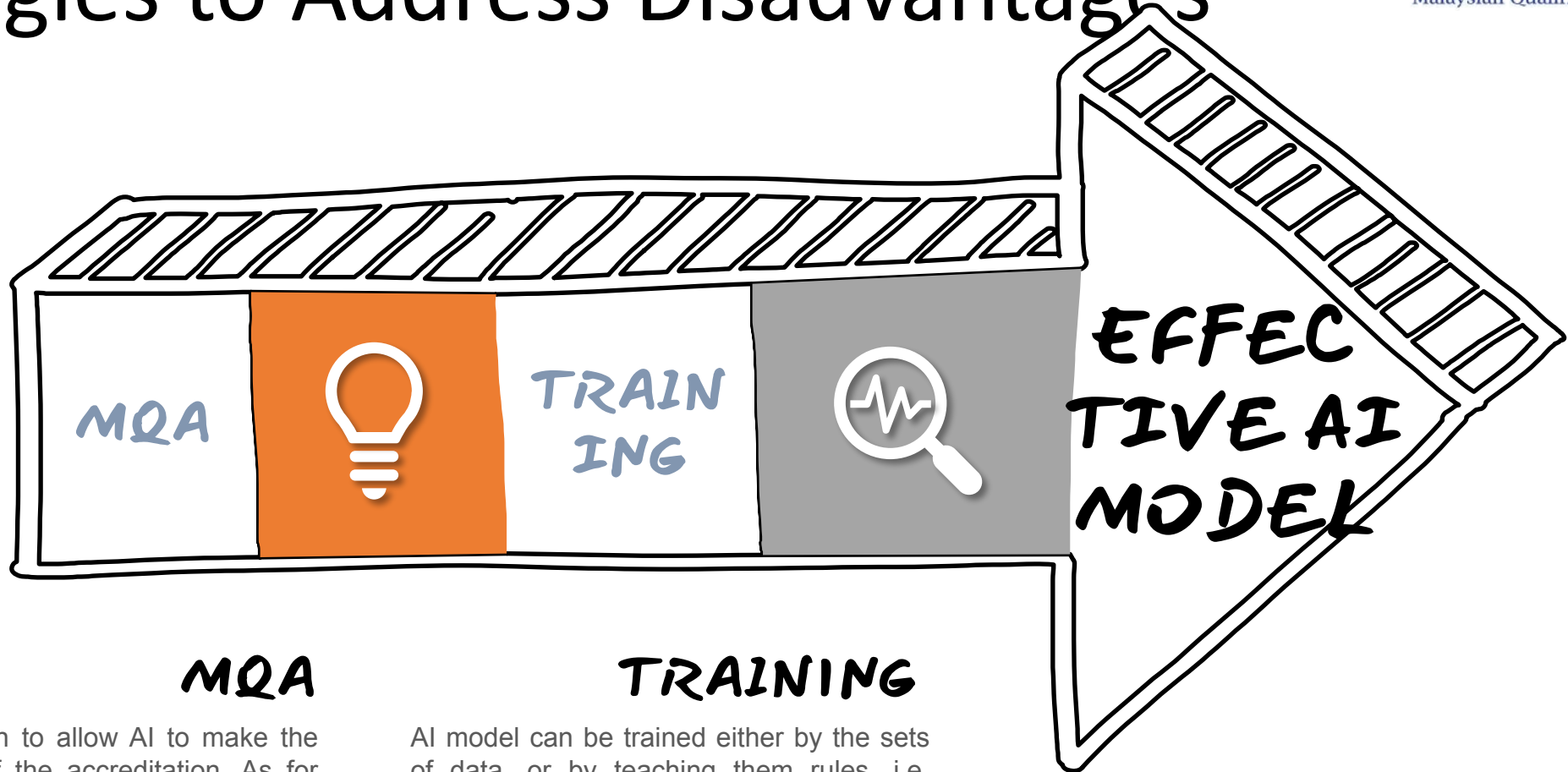
AI Requires Training

Building a resilient and consistent AI model require a huge set of data for training

Lack of Wisdom

Wisdom requires years of experience, and the X-factor of empathy, i.e. IQ and EQ

Strategies to Address Disadvantages



MQA

There is no plan to allow AI to make the final decision of the accreditation. As for now, the results from AI are used to guide the assessors and MJA, but not to give the final verdict

TRAINING

AI model can be trained either by the sets of data, or by teaching them rules, i.e. standards

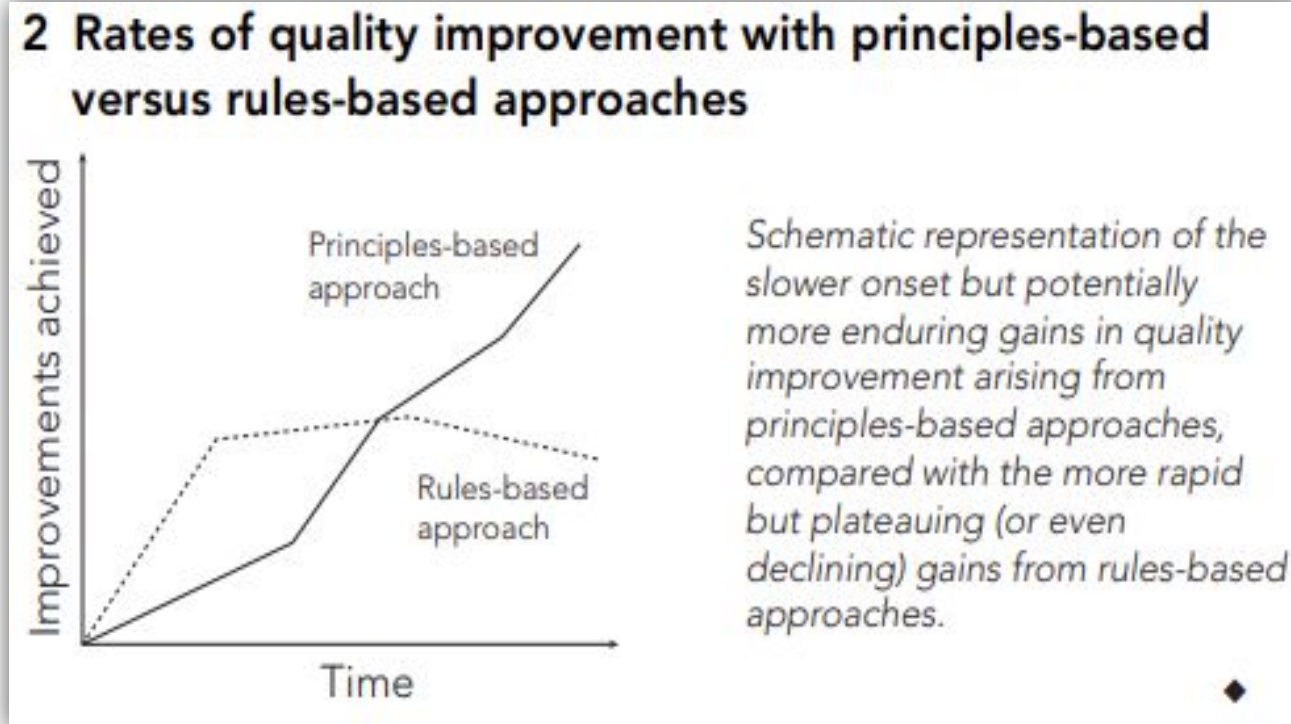
Feedbacks From Other Countries

- What is the Level of AI Adoption for QA at your respective countries?
- Do you foresee that AI will play a role (minor or major) in QA in the future?

The Transformation to AI-assisted Accreditation Process

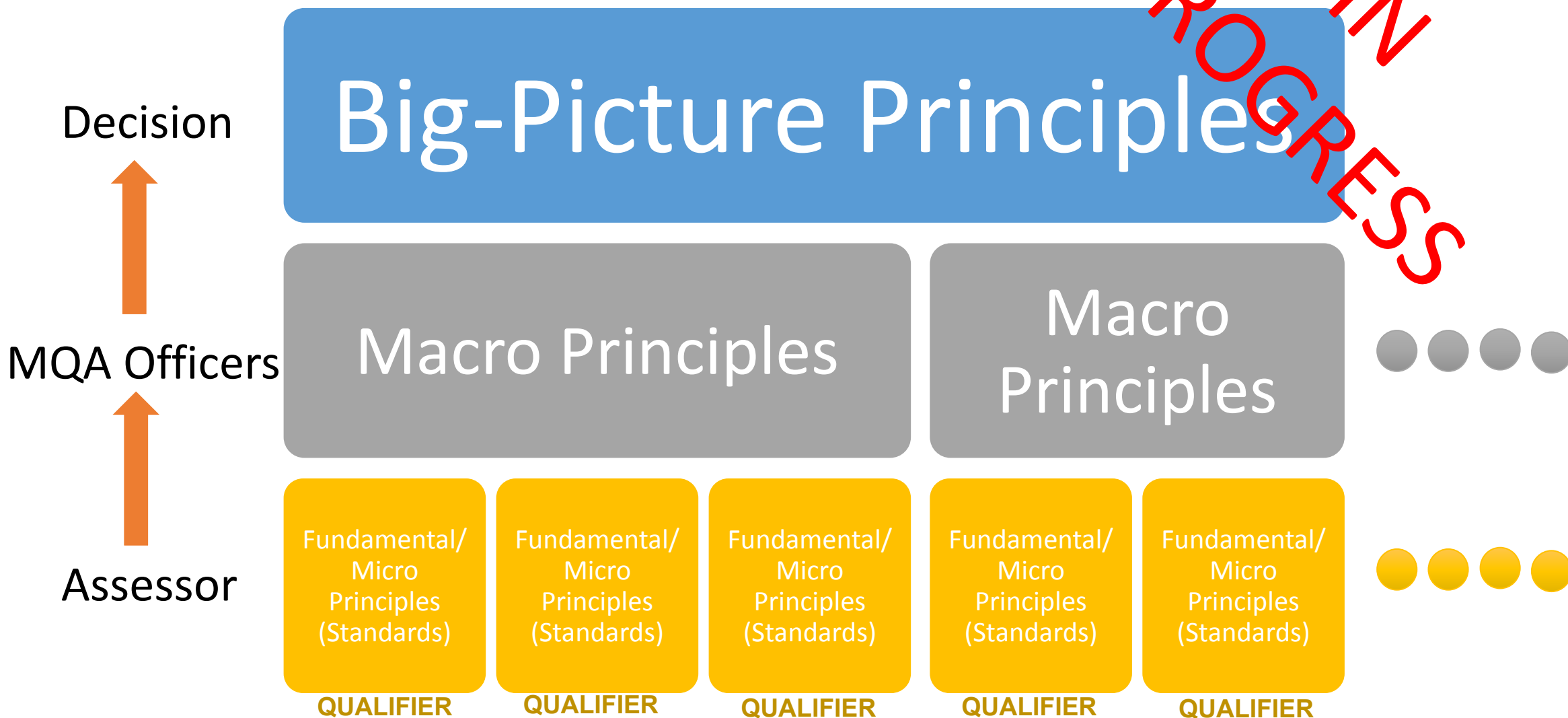
1. Inputs for AI – come in many forms:
 - Standards and all quality-related documents
 - Digital information online
 - Local information offline
2. The whole process is supporting towards **Principle-based Assessment**
 - Promoting sustainable CQI after a period of compliance phase
 - Sustainable through a strong Internal Quality Assurance (IQA)

AI in Assisting Principle-based Assessment

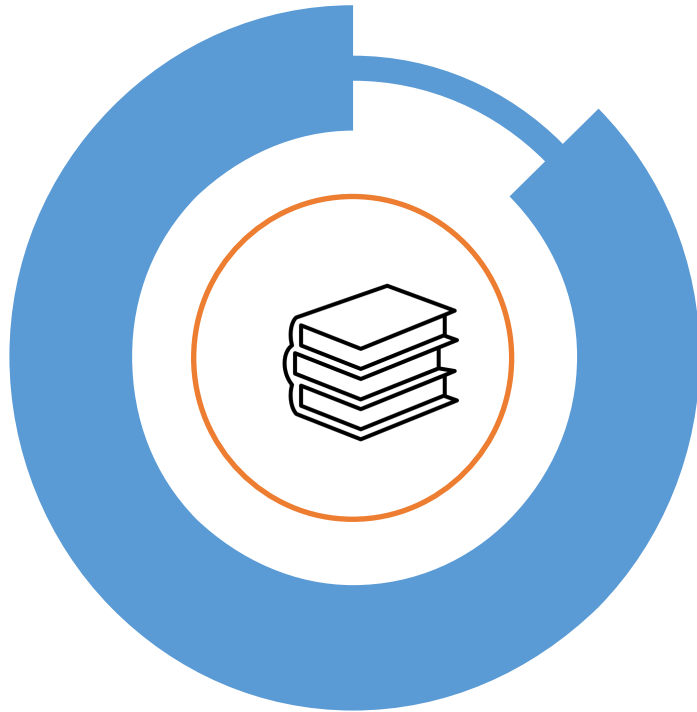


Lindsay H Heywood, Principles-based accreditation: the way forward? The Medical Journal of Australia, Vol 186 (S7), April 2007
<https://doi.org/10.5694/j.1326-5377.2007.tb00964.x>

Proposed Framework



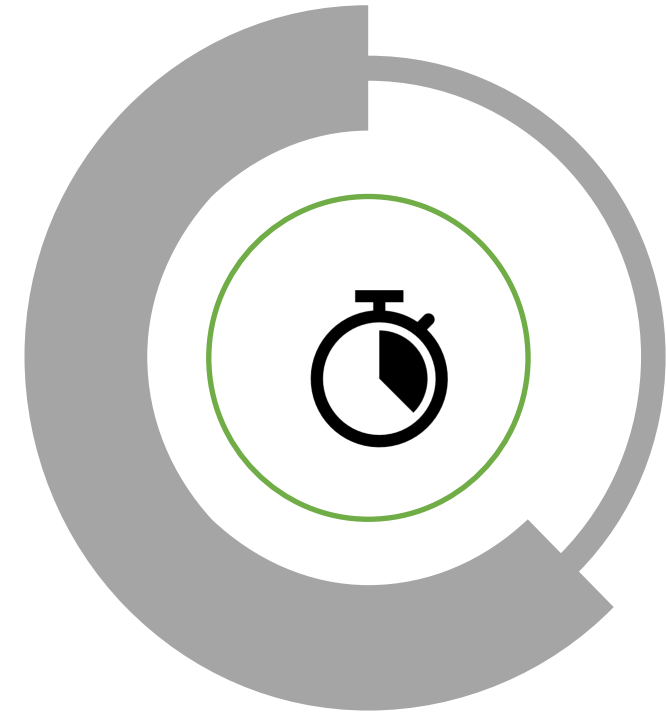
Unlocking Principle Based Assessment (in Future)



Programme Standards
becoming Guidelines

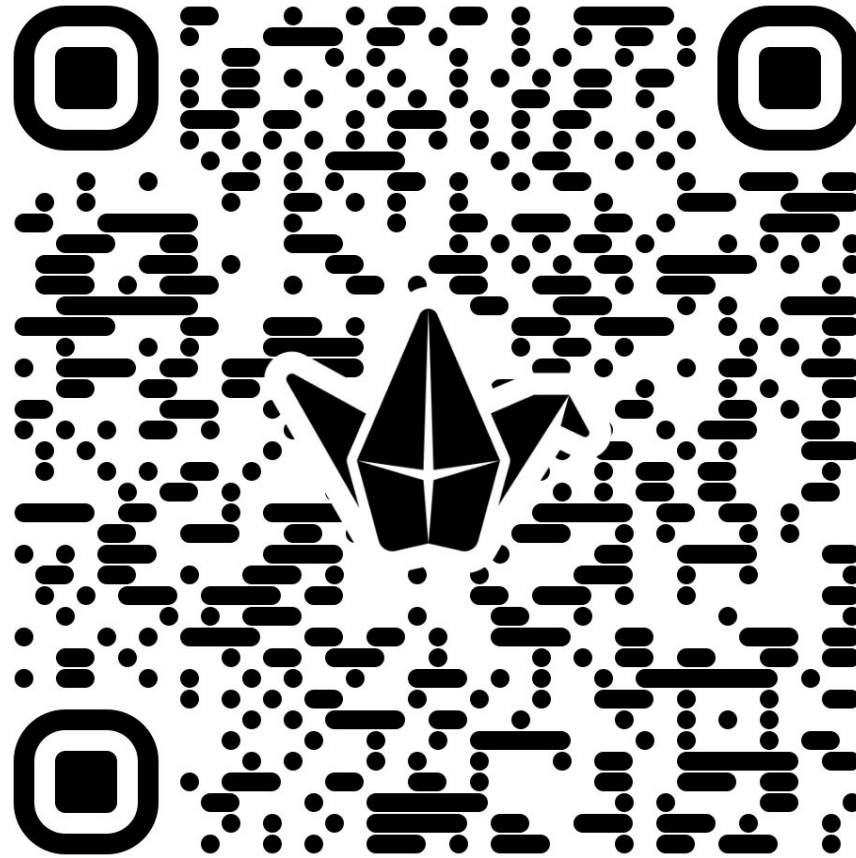


Training



Term-based
Accreditation

What Do You Think? Is AI helpful?



Way Forward

1. AI is here to stay
2. Ethical AI
3. Build a new ecosystem to live together (remember COVID?)

| Thank You |
| Terima Kasih |

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