LET'S TALK AI IN EDUCATION

UNESCO-ICHEI

Let's talk AI in Education

○ What are the applications of AI in Higher Education?
o How can we use AI to optimise educational resources?
○ What are the ethical concerns and how can we deal with them?
○ How to build an AI-based Ecosystem to facilitate learning & innovation?

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Come join us and explore together!

UNESCO
United Nations
Educational,Scientific and
Cultural Organization
联合国教育科学及文化组织

International Centre
for Higher Education Innovation
under the auspices of UNESCO
联合国教文组织高等教育创新中心

International Institute
of Online Education
国际网络教育学院

PART 1

AI & Intelligent Adaptive Learning

Theoretical Framework & Technical Foundations

Teaching Levels of the Intelligent Adaptive Learning (IAL) System

Level 0 – based on Knowledge Hierarchy
E.g.: Khan Academy

Level 1 – based on Basic Principles & Tools
E.g.: Zuoyebang

Level 2 – based on the Item Response Theory (IRT)
E.g.: GRE, ACT

Level 3 – based on Knowledge Network and Statistics
E.g.: ALEKS, Cognitive Tutor, Knewton

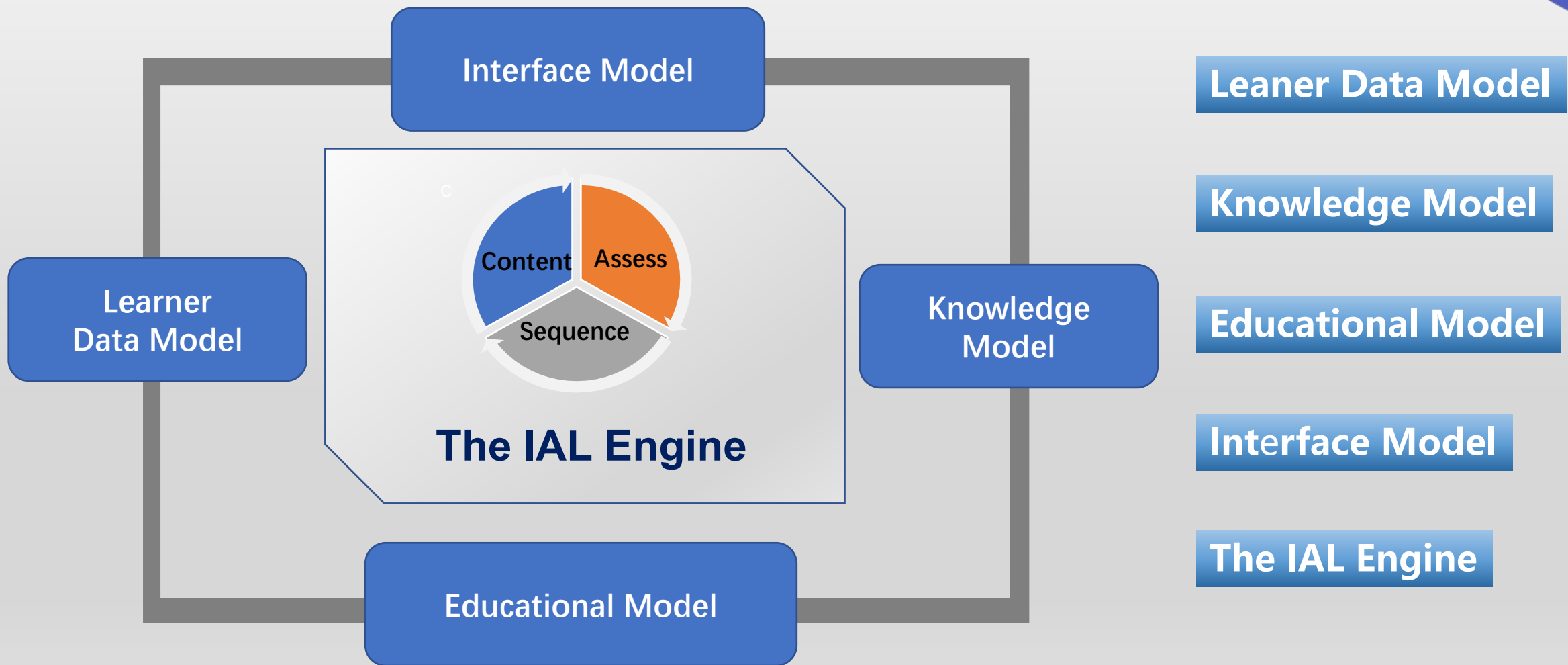**Level 4 – based on multi-level Knowledge Graph**
E.g.: IBM Watson, Squirrel AI
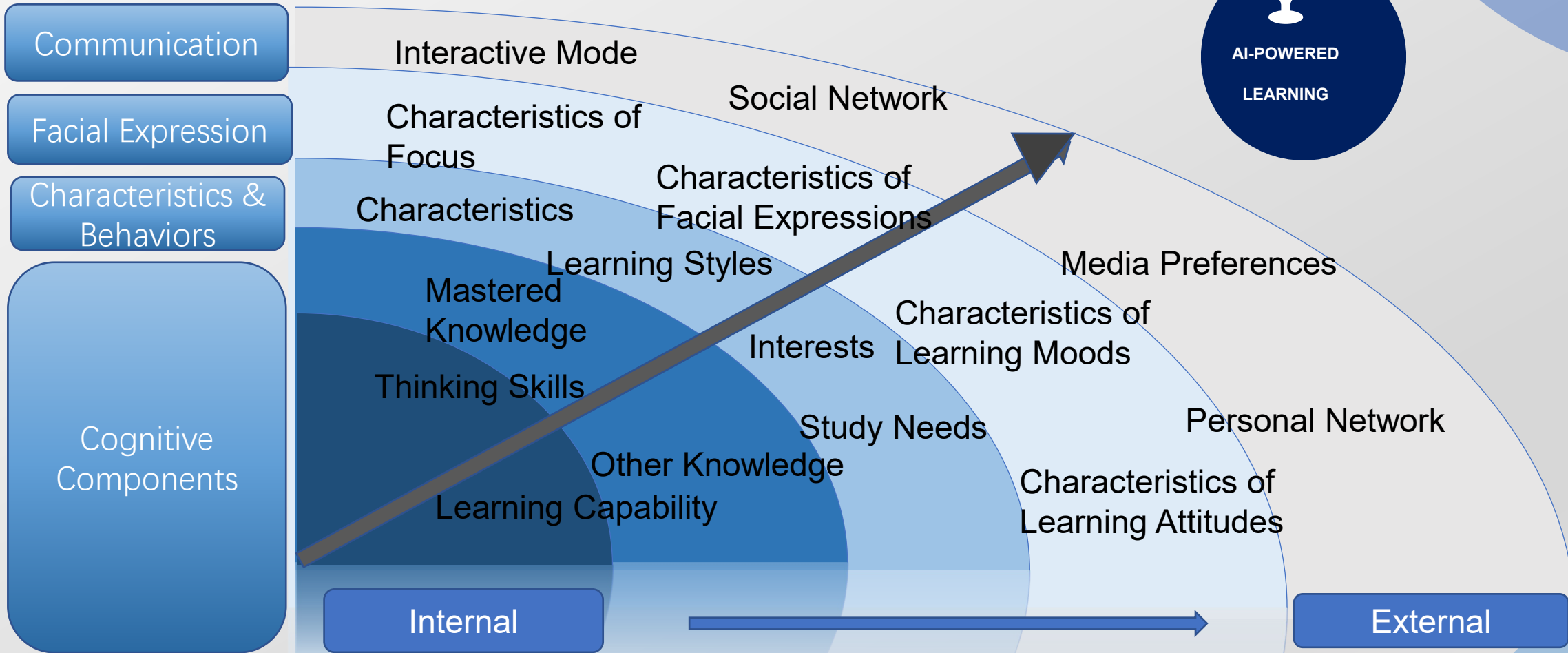
Level 5 – based on Augmented Learning & Genetic Algorithms

Framework of The Intelligent Adaptive Learning (IAL) Platform

Interface Model

Learner
Data Model

Content   Assess

Sequence

The IAL Engine

Knowledge
Model

Educational Model

Leaner Data Model

Knowledge Model

Educational Model

Interface Model

The IAL Engine

The AI-based 'Leaner Data Modeling'

Structure of The IAL Platform

THE LEARNER PLATFORM

| EXERCISE | LEARN | TEACH | PRACTICE | ASSESS |

Educational Contents
Knowledge Modules

Knowledge Objectives
Principles
Unsolved Problems

Educational Tools
Learning Modules

Diagnose   Set Up Plans
Supervise   Recommend

Educational Service
Learner Modules

Personal Info   Personal Habits
Learning Routes   Performance

THE EDUCATION PLATFORM

The Intelligent Adaptive Learning (IAL) Engine

Personalised Recommendation Engine: Anchored Learning Solutions and Materials

Big-data Analytics System: Analyse and Predict Students' Learning Routes

Data Collection and Manipulation: Real-time Data Processing of Students Learning Behaviours

PART 2

Build an AI-powered Higher Education Ecosystem

Future Challenges vs. Opportunities

The AI-powered Education Ecosystem

AI EDUCATION ENTERPRISES

TRADITIONAL EDUCATION BUSINESS	ONLINE LANGUAGE LEARNING	K-12 ONLINE EDUCATION GROUPS
IAL PLATFORMS	AI STAR-UPS	EDUCATION ICT PROVIDERS

SUPPORTING INSTITUTIONS

GOVERNMENT	NON-GOVERNMENTAL ORGANISATIONS

USERS (LEARNERS)

IN/OUTSIDE-CAMPUS LEARNING INSTITUTIONS	STUDENT/ WORK PROFESSIONALS
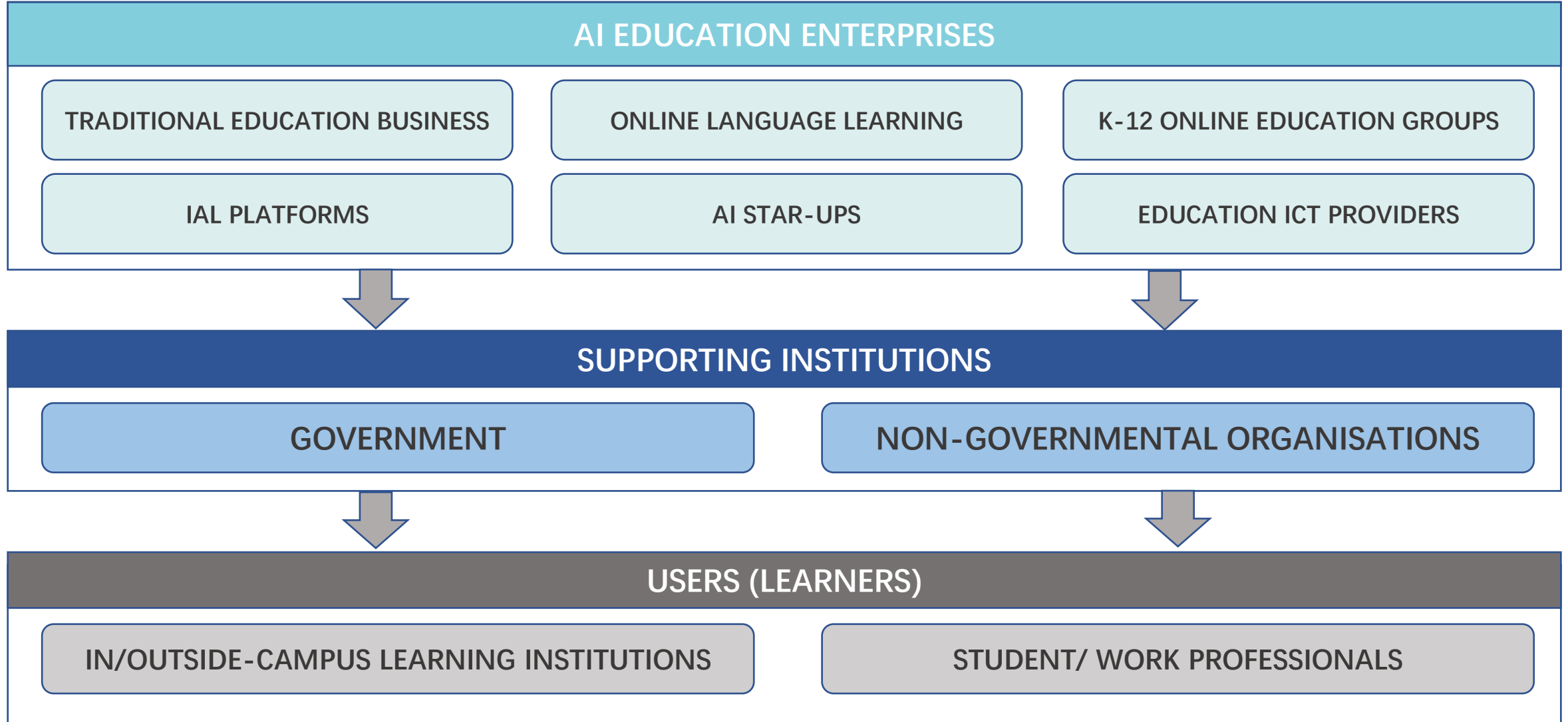
What Can We Do in Response…

Promote **educators** to understand AI in a wide range of professional contexts to establish thorough understandings on 'AI in Higher Education'; enhance teachers' ICT teaching capacity, and empower them to become facilitators who can initiate various Student-centered Learning approaches.

Cultivate Self-directed Learning (SDL) and lifelong learning skills for **Students**, and help them reframe the reflective learning mechanism to learn both individually and collaboratively while many AI functions in Education have not been fully developed.

Improve the ICT infrastructure for **HEIs** and create an innovative educational context. Reform educational practices to foster collaboration and learning motivation. Consider strategically and ethically how AI can bring real benefits to multiple teaching & learning activities.

THANK YOU

شكر 谢谢 Thanks Merci благодаря Gracias

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