

# RETHINKING THE TECHNICAL PROFESSIONALS

## IN THE AGE OF GEN AI AND AGENTIC AI

Reforms and Initiatives for Future-Ready Technical Education



**PEAC 2025 Philippines Education Conference  
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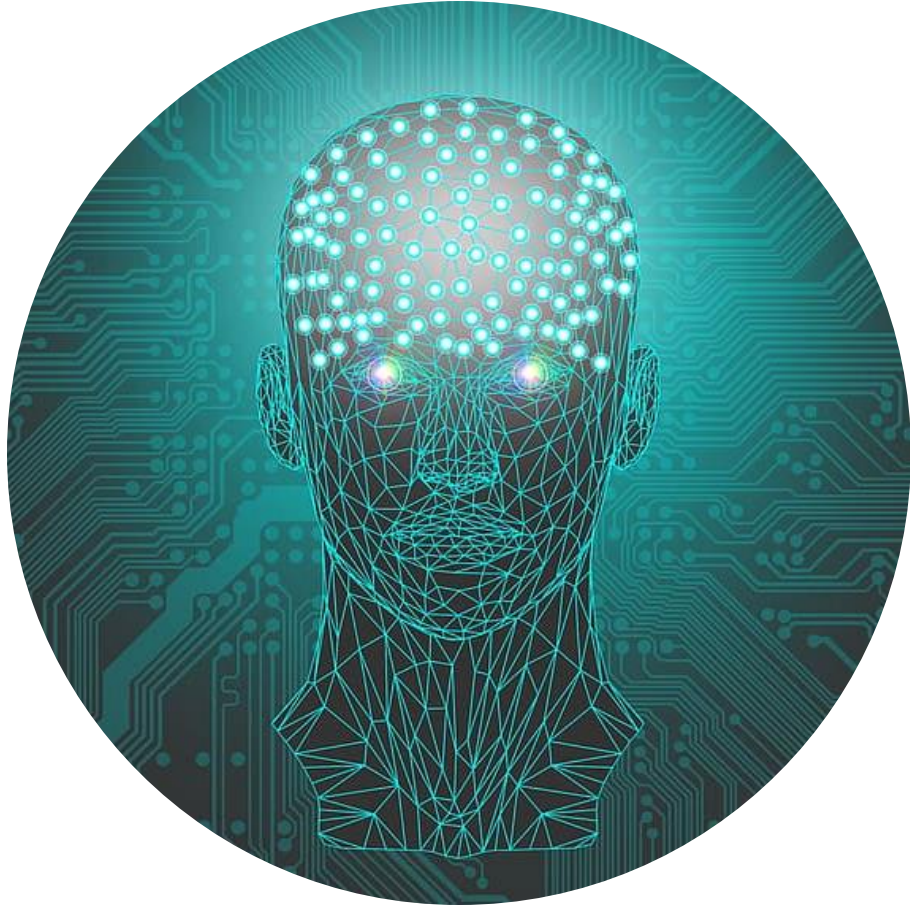


# A NEW INDUSTRIAL RENAISSANCE

- Industry AI-enabled Environment:  
Human-AI Collaboration
- Generative AI and Agentic AI Redefine  
How We Work, Learn, and Innovate



# ADVENT OF GEN AI AND AGENTIC AI



- Rise of **Generative AI** and **Agentic AI** is Transforming Industries
- AI is Moving from **Automation** to **Autonomy** in Decision-making
- Professionals Need to Upskill and Adapt to Stay Relevant

# AI DISRUPTION ACROSS SECTORS



- AI is Redefining Workflows, Reducing Manual Effort, and Increasing Efficiency
- **Key Impacts:**
  - AI-driven Decision-making
  - Autonomous Systems
  - Personalized AI Services
  - AI-augmented Human Roles

*“We are entering an AI-driven era where 80% of jobs will be redefined. The winners will be those who can learn fast and reinvent themselves.”*

*— Dr. Kai-Fu Lee, 2024 World AI Conference*



# EDUCATION & EDTECH

## Disruptions:

- AI-led Adaptive Learning & AI Tutors
- Automated Curriculum Design
- AI-driven Assessments

## Skills To Pivot:

- AI-enhanced Instructional Design
- AI Ethics & Bias In Education
- Human-AI Collaboration In Learning

## Job Replacement Impact (Next 5 Years):

- Estimated Job Reduction: **20-30%**
- Roles Most Affected: Teaching Assistants, Curriculum Developers, Assessment Designers



# UNIVERSAL AI SKILLS FOR ALL SECTORS



- ✓ AI Literacy & Prompt Engineering
- ✓ AI Ethics & Responsible AI
- ✓ AI-Augmented Decision-Making
- ✓ AI Governance & Compliance
- ✓ AI-human Collaboration Models

# SHIFTING LANDSCAPE OF SKILL WORKFORCE

- AI-enabled Design, Diagnostics And Production
- Autonomous Systems And Digital Twins
- Human Oversight In Smart Factories And Service Ecosystems
- Technical Roles Evolving Fast



# RETHINKING THE SKILL PROFESSIONAL

*Technical Professionals Are Evolving From Operators To Innovators And Co-creators With AI*

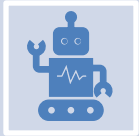


Yesterday	Today	Tomorrow
Skilled Craftsman	Adaptive Technologist	AI-augmented Innovator
Executes Tasks	Solves Problems	Designs Intelligent Workflows
Learns Once	Reskills Continuously	Learns Lifelong With AI Guidance



# CURRICULUM TRANSFORMATION

***Build A Future-ready Curriculum Integrating Technical Depth With AI Fluency And Human-centric Skills***



Integrate AI, Data Analytics And Automation Across Programs



Add Ethics, Sustainability And Digital Responsibility



Teach Systems Thinking And Agentic Problem-solving

# PEDAGOGICAL INNOVATION

- Shift from Instruction To Intelligent, Experiential Learning
- AI Tutors, XR & Spatial AI Virtual Work Environments And Virtual Simulations
- Co-projects With Industry Using AI Feedback



# FACULTY TRANSFORMATION

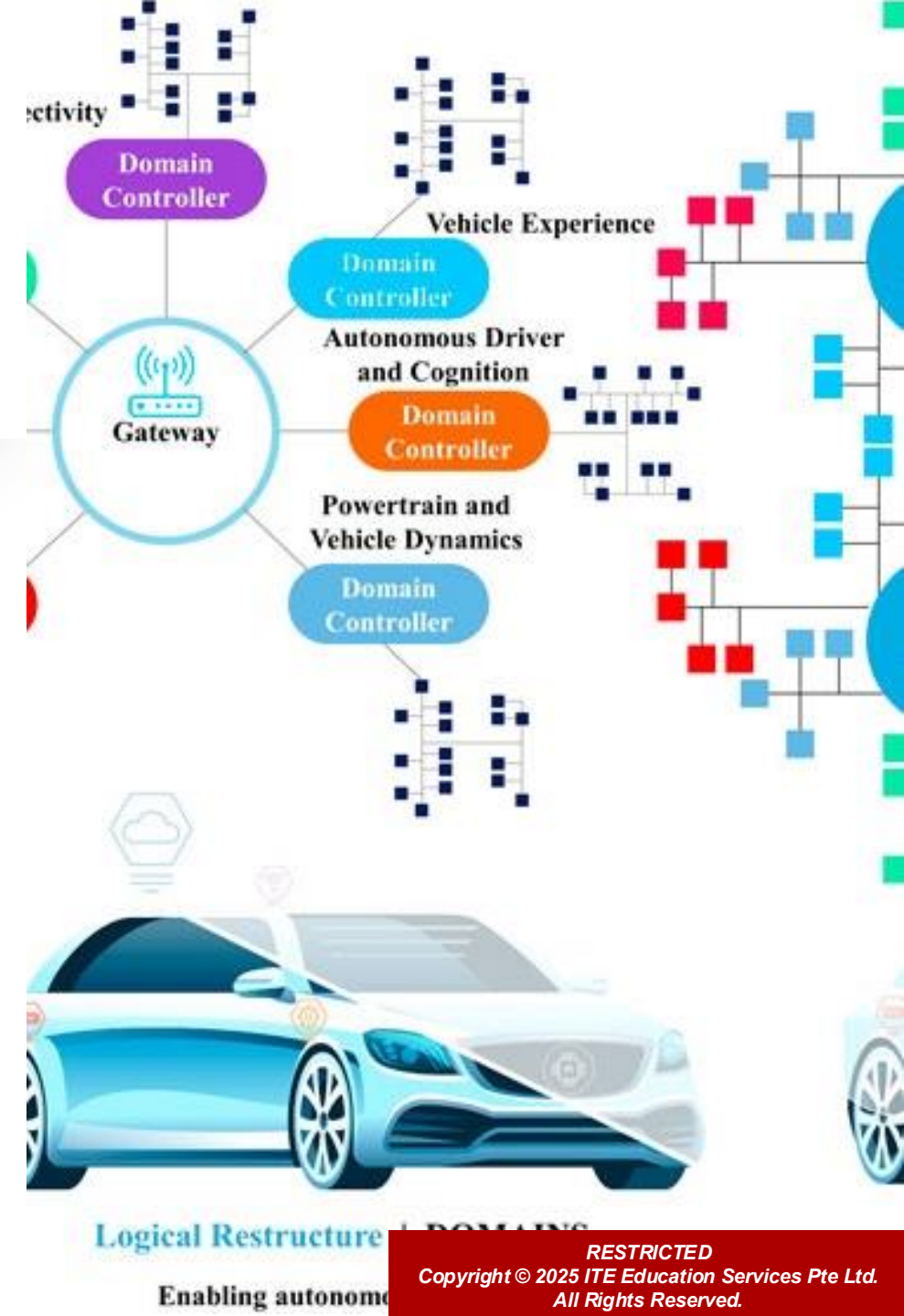
- Train Educators As AI Mentors & Innovation Coaches
- Use AI Co-teaching Assistants For Feedback & Assessment
- Build Communities Of Innovation Practice





# INDUSTRY-ACADEMIA-GOVT PARTNERSHIP

- Government Proactive Support
- Co-create AI-integrated Occupational Standards
- Establish Skills Labs With Employers
- Offer Stackable Micro-Credentials And Digital Portfolios



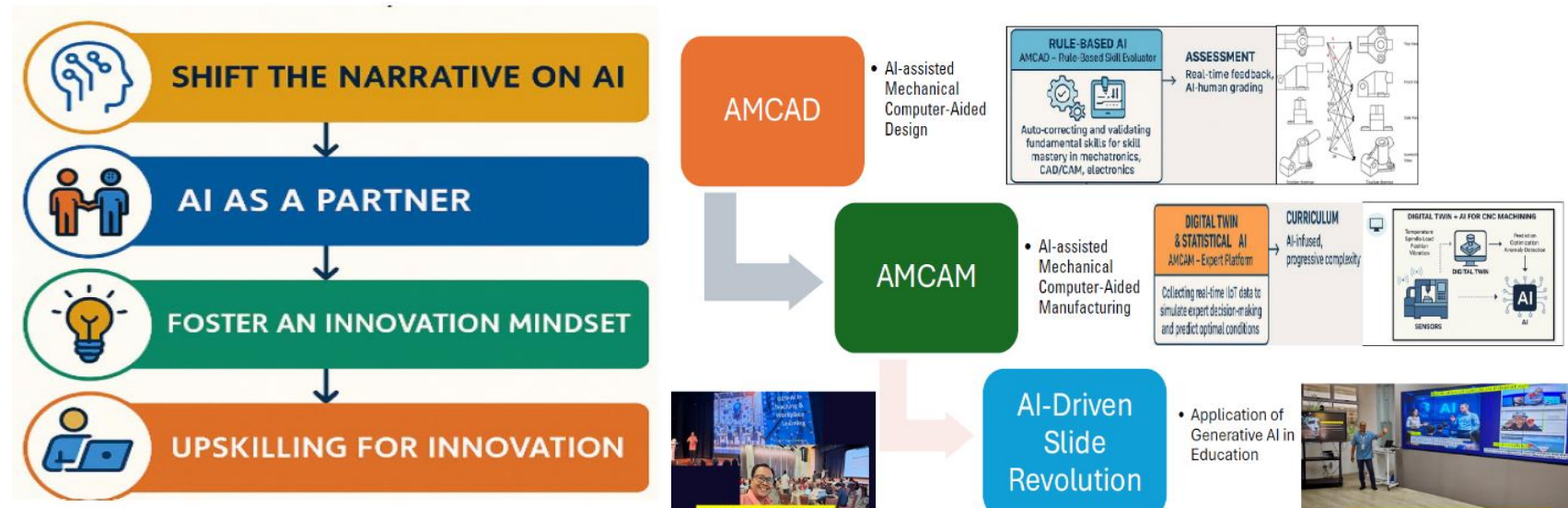
# ITE SIGNATURE PROGRAMMES

## AI-First School

**Physical AI** – Raspberry Pi With AI Kit; Vision AI For Projects And Lab Facilities (2 Trainers, 14 Staff Trained)

**Generative AI** – “AI Empowered You” For The Future Of Life And Work (7 Trainers, 180 Staff Trained As Of 10 Oct) ; Vibe Coding As Edutech Tool For Teachers (10 Trainers, Target Whole Of SOE/CC 230 Staff), AI-driven Slide Revolution (2 Trainers, Target Whole Of CC Staff)

**AI Projects** - AMCAM, AI-assisted Walking Cane, Generative AI-powered Crew Well-being & Fatigue Risk Management





# AI-FIRST BLUEPRINT LEARNER SCAFFOLDING PROGRAM

*Empowering ITE Educators — From No-code To AI-code*

Four-part Learning Journey To Master AI Tools, Design AI-enabled Learning, And Future-proof Our Teaching Practice.



## Key Benefits For Staff:

- ✓ Gain Hands-on AI Literacy And Design Skills
- ✓ Learn Practical No-code And Low-code AI Tools
- ✓ Explore Classroom-ready AI Projects
- ✓ Collaborate And Innovate With Peers
- ✓ Be Part Of ITE's AI-first Movement

Webinar 1  
Vibe Coding -  
No-Code to AI-Code

Webinar 2  
LLM – Using LLM

Webinar 3  
Agent – Building  
Agent

Webinar 4  
Agentic – Using  
Agents



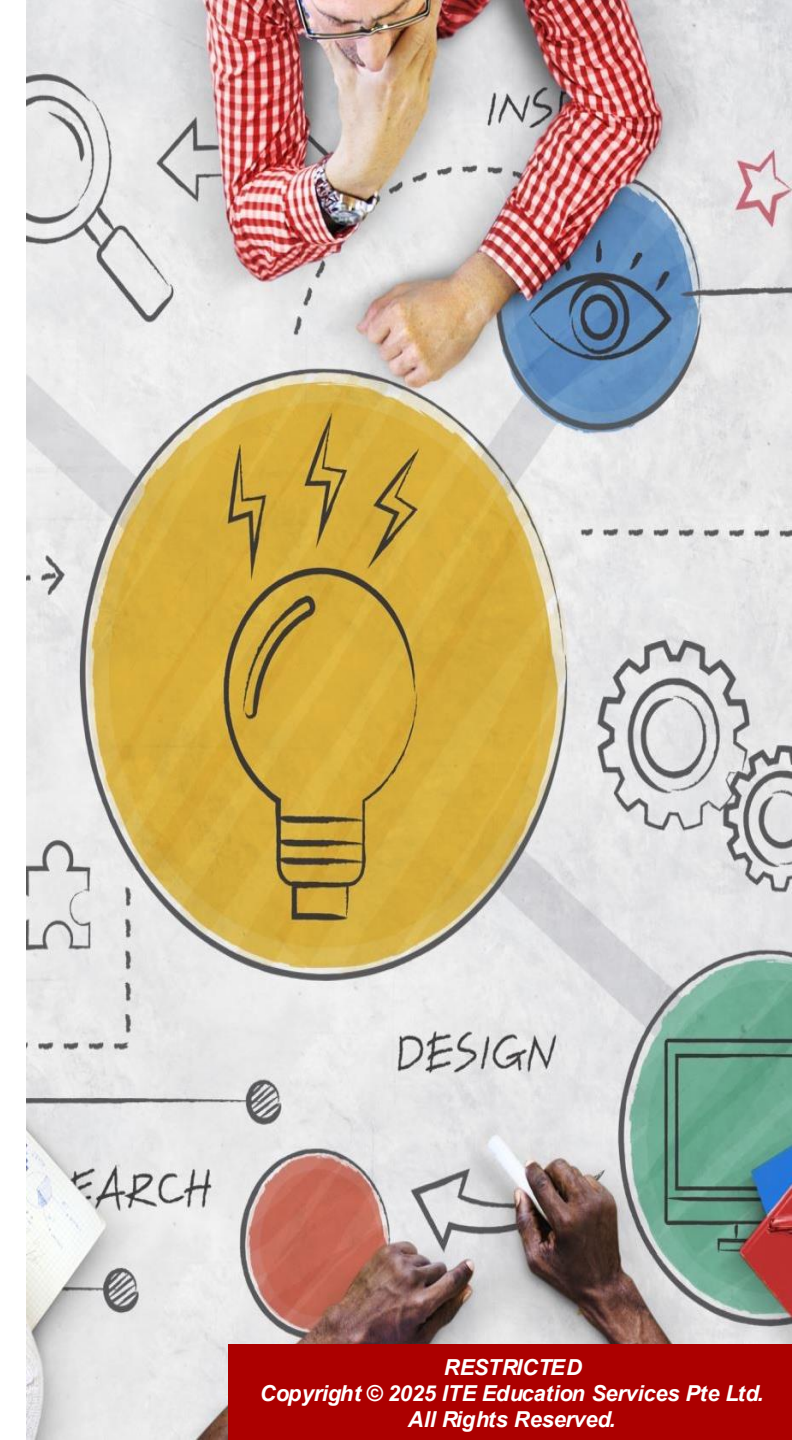
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# NAVIGATING THE CHANGING ENVIRONMENT

## Challenges vs Responses:

- Fast Tech Cycles → Curriculum Renewal
- Skills Obsolescence → Modular Lifelong Learning
- Inequality → AI Democratization
- Ethics → Responsible Governance



# EMPOWERING EMPLOYABILITY & LIFELONG LEARNING

Employability = Capability Agility

Skills → Capabilities → Competencies → Mindsets

AI-driven Lifelong Learning Journeys



# GLOBALLY COMPETENT & LOCALLY RELEVANT



Build Globally Portable Skills



Foster Cross-border TVET And AI Partnerships



Adopt Digital Credentials And International Standards



# THE FUTURE TECHNICAL PROFESSIONAL

- Human In The Loop
- Human Judgment + AI Speed = Next-gen Productivity
- Creativity, Empathy And Ethics Become Differentiators
- Continuous Learning Mindset Is Non-negotiable
- Metaphor: From A Violinist To A Conductor In An Orchestra

***AI-empowered, Human-centered, And Globally Adaptive***



# Thank You



***“We are not just preparing people for today’s jobs but shaping the architects of tomorrow’s intelligent economy.” - Bruce Poh***