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# ADB'S DIGITAL TRANSFORMATION ACTION PLAN (DTAP)

Digital x ADB Week

19 September 2023

11:15 am to 12:00 p.m.

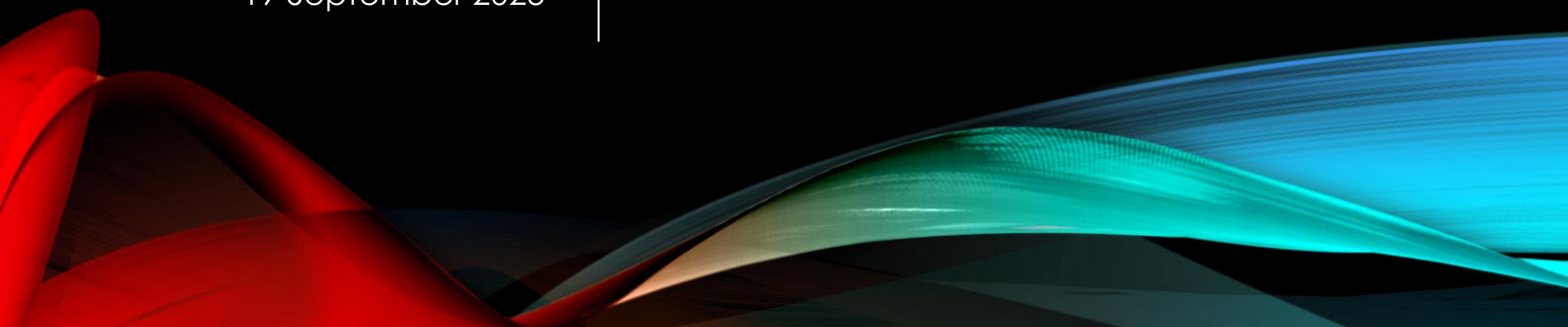
# AGENDA

- I. The Future of Work – Our Digital Transformation Journey
  - Stephanie Hung, CIO and DG, ITD
  
- II. Digital Transformation in the Age of AI: Insights for ADB
  - Mr. Mike Yeh, Regional Vice President, Corporate External and Legal Affairs, Asia
  
- III. Panel Discussion on Digital Transformation with AI and Big Data
  - Dr. David Hardoon, CEO, ADI and Chief Data & AI Officer, Union Bank Philippines
  - Mr. Nicolas Miravalls, Co-Founder and CEO, ORIS
  - Moderated by Stephanie

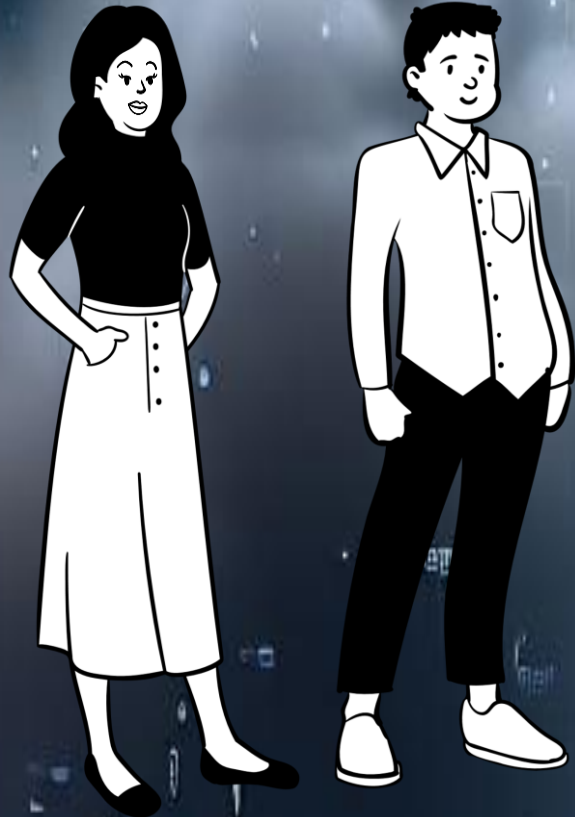
Our Digital Transformation  
Journey

Stephanie KC Hung  
CIO and Director General, ITD  
Digital x ADB Week  
19 September 2023

# THE FUTURE OF WORK



# Insight Driven World



Personal Data & Aggregate Data



Algorithm Leading Companies

**USER-BASED COLLABORATIVE FILTERING**

1.00	0.75	0.83	0.30	0.00	
0.75	1.00	0.51	0.00	0.34	
0.83	0.51	1.00	0.00	0.82	
0.30	0.00	0.00	1.00	0.44	
0.00	0.00	0.00	0.97	1.00	0.53
0.00	0.16	0.43	0.14	0.11	1.00

$$(0.7 \times \text{User 1}) + (0.6 \times \text{User 2}) = \text{already rated by user}$$

$$(0.7 \times 4 + 0.6 \times 5) / (0.7 + 0.6) = 4.5$$

$$(0.6 \times 3) / 0.6 = 3.0$$

**ITEM-BASED COLLABORATIVE FILTERING**

1.00	0.27	0.79	0.32	0.06	0.00
0.27	1.00	0.30	0.03	0.34	0.03
0.79	0.30	1.00	0.88	0.13	0.18
0.32	0.03	0.88	1.00	0.32	0.40
0.06	0.34	0.13	0.32	1.00	0.00
0.00	0.03	0.18	0.40	0.00	1.00

$$(4 \times \text{Item 1}) + (3 \times \text{Item 2}) + (5 \times \text{Item 3}) = \text{already rated by user}$$

$$(0.8 \times 4 + 0.7 \times 5) / (0.8 + 0.7) = 4.5$$

$$(0.7 \times 3) / 0.7 = 3.0$$

**CONTENT-BASED FILTERING**

1.00	0.00	0.50	0.00	0.62	0.58
0.00	1.00	0.00	0.00	0.00	0.00
0.50	0.00	1.00	0.00	0.18	0.79
0.00	0.00	0.00	1.00	0.00	0.00
0.62	0.00	0.18	0.00	1.00	0.58
0.58	0.00	0.79	0.00	0.58	1.00

$$(4 \times \text{Content 1}) + (3 \times \text{Content 2}) + (5 \times \text{Content 3}) = \text{already rated by user}$$

$$(0.4 \times 3) / 0.4 = 3.0$$

$$(0.6 \times 4 + 0.6 \times 5) / (0.6 + 0.6) = 4.5$$

**HYBRID**

$$0.4 \times \text{UB CF} + (0.3 \times \text{IB CF}) + (0.3 \times \text{CB}) = \text{already rated by user}$$

$$(0.4 \times 4.5 + 0.3 \times 4.5) / (0.4 + 0.3) = 4.5$$

$$(0.3 \times 3.0 + 0.3 \times 4.5) / (0.3 + 0.3) = 3.8$$

$$(0.4 \times 3.0 + 0.3 \times 3.0) / (0.4 + 0.3) = 3.0$$

**OUTPUTS**

Machine Learning





Our ADB's  
Digital Transformation  
Journey





**In progress .....**  
**(Special Capex)**

**WAVE 2: DIGITAL AGENDA**  
**STAGE 1 (DAS1 )**

**Mid-Term Review**  
**(Transition to 3YRC)**

**Digital capabilities**  
**uplifting &**  
**technological debt**  
**bridging**



**What's Next**  
**(3 YRC)**

**WAVE 3: DIGITAL**  
**TRANSFORMATION**  
**ACTION PLAN**



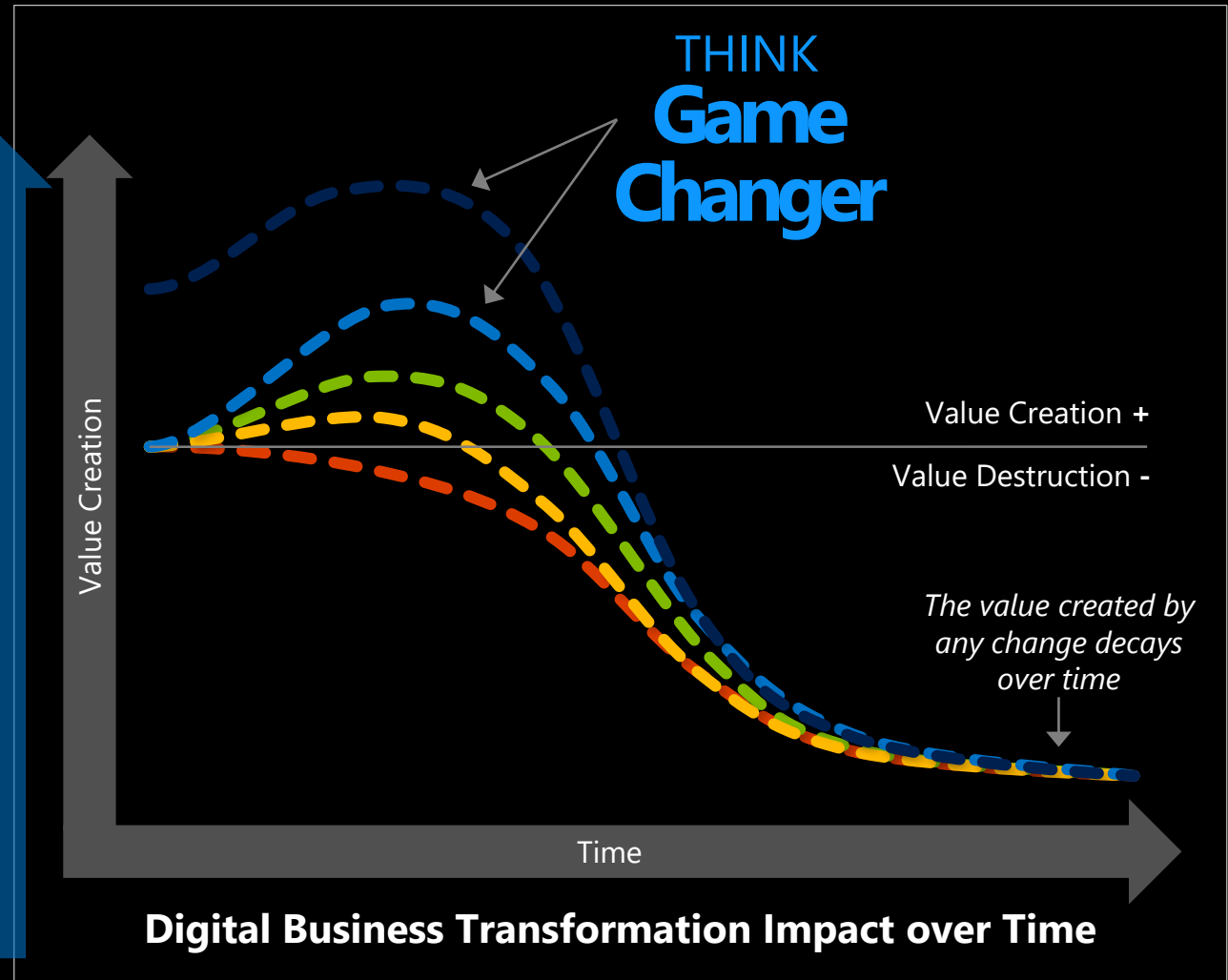
**COMPLETED!**  
**(Special Capex)**

**WAVE 1: REAL-TIME**  
**ADB IT REFORMS**

**Our ADB's**  
**Digital Transformation**  
**Journey**

# Value Creation through continuous digital transformation

Value Creation through	
Digital Transformation	New ways to create value with a digital business offering <b>new business model and new revenue streams.</b>
Digitalization Effectiveness	<b>Redesign</b> and digitalize business processes to achieved more desired outcomes such as <b>optimizing process flows and removing frictions.</b>
Digitalization Efficiencies	Digitize and automate existing processes to <b>reduce waste of time, effort and expense.</b>
Digitization	Digitize paper workflow and physical office to digital workplace; and mitigate risks of low <b>employer attractiveness and employee engagement.</b>
Doing the same	Value decreases over time as market forces and clients are changing. Potential risks of <b>market irrelevancy and loss of client stickiness.</b>



# Value Creation for ADB through continuous Digital Transformation Action Plan



**VALUE CREATION  
 FOR CLIENTS AND PARTNERS  
 THROUGH  
 DIGITALLY ENABLED BUSINESS  
 AND EMPOWERED EMPLOYEES**

**DIFFERENTIATING ADB'S UNIQUE STRENGTH**  
 Outcome: The ADB differentiator

**ENABLING ONE ADB**  
 Outcome: Ability to see ADB as a whole

**EMPOWERING NEW WAY OF WORKING**  
 Outcome: Productivity. Process efficiency. Risk and Capital

Climate + Private Sector Development	Economic Research	Safeguard, Financial Mgt, Procurement	Sector/Themes Knowledge Insight AI	Financial Reform / ESG	Governance ERP/Resource	Operations Automation	Collaboration/ Copilot Platform	HR Reform/ New Culture
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# ADB's game changers and areas of collaboration

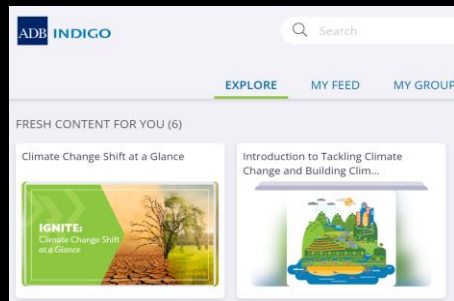
## Insight-Driven

Dashboards for Performance Monitoring and Realtime Corrections



## Digital Twins

Building Information Modeling (BIM) with AI for infrastructure comparative analysis for costs, carbon footprint, circularity, resilience and duality, and safety



One ADB – Enable digital shift of ADB's NOM shifts, and empower new ways of working and equip the digital capabilities.



Cybersecurity against digital disruptions – Strengthening cyber security and information protection against cyber threats

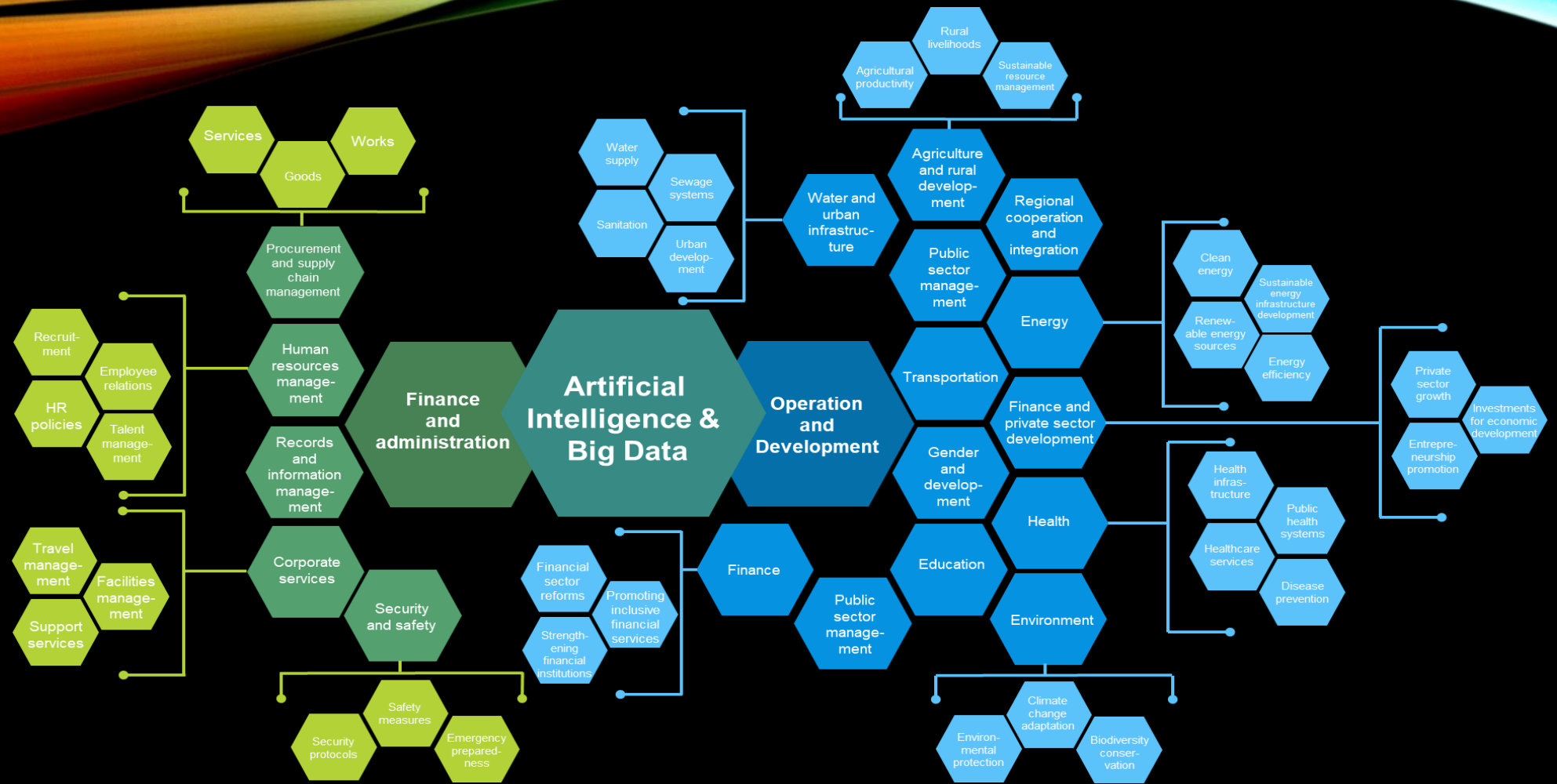
## Knowledge Insights – AI:ly

Augment advisors with Generative AI knowledge insights on projects evaluation and recommendations in different thematic groups and sectors



## Predictive Analytics

Building AI models with data collected, alternative and synthetic data to predict impact scenarios.



**AI and big data has the potential to bring about transformative changes and opportunities in ADB's development operations, sectors and thematic groups, and insight driven institution.**



Clear Selection

By Product Type ^

- AI Product
- Data Product
- ML Model

Country/Economy v

Sectors v

Sources ^

- ADB External
- ADB Internal
- Development Data and Statistics DDP
- External

Theme v

### Philippines - Barangay Level Administrative Boundaries

Asian Development Bank



### ADB Projects: Project Description

Asian Development Bank



### Description

### Recommendations from Completion and Evaluation ...

Asian Development Bank



### Estimated municipal-level population in the Philippine...

Asian Development Bank



# ADB BIG DATA EXCHANGE PLATFORM - LAUNCHING IN SEPTEMBER

### Imports from Rate of Asia and the Pacific

Asian Development Bank



### Annual global... Vision for a more inclusive and resilient Asia and the Pacific

Asian Development Bank



### ADB Sovereign Projects

Asian Development Bank



### Basic Statistics, Asia and the Pacific

Asian Development Bank



### ASOS AWOS METAR Weather Data

Asian Development Bank



### Asian Typhoon from 1951 - 2022

Asian Development Bank



### Climate Change: Earth Surface Temperature Data

Asian Development Bank

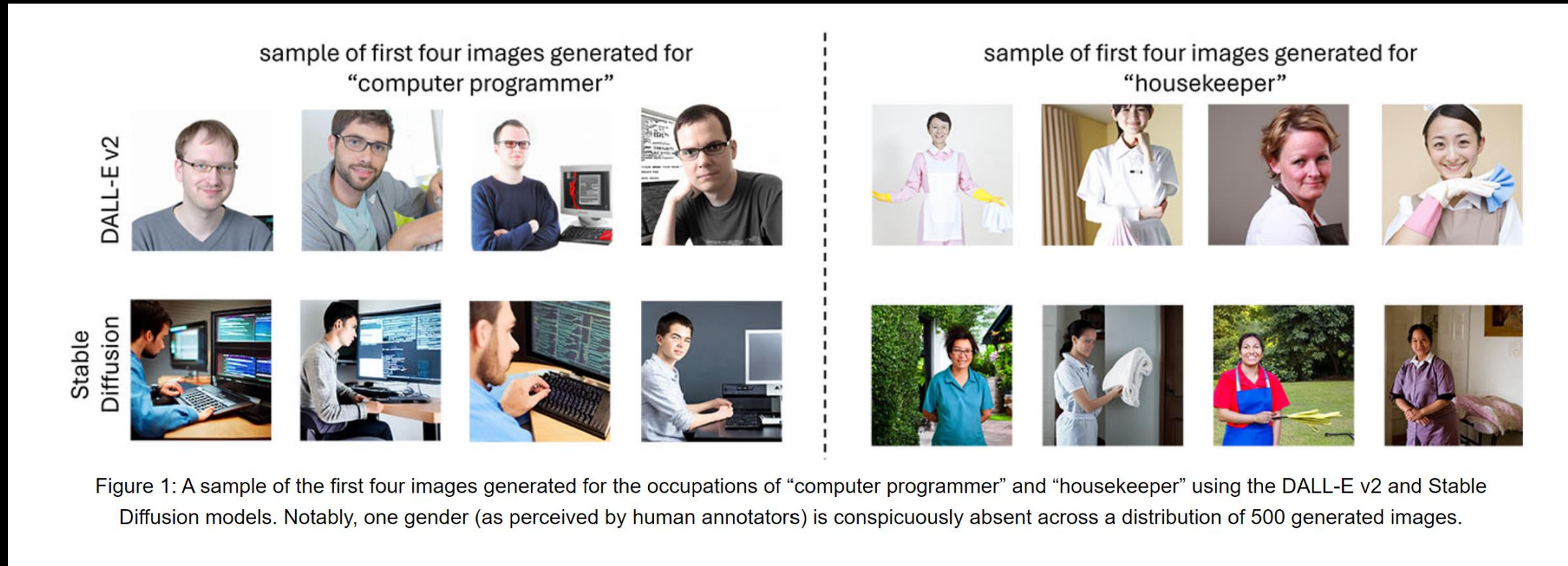


### Historical Weather Data

Asian Development Bank



# Beware AI could be biased; Don't automate biases.



Source: Microsoft Frontiers of multimodal learning: A responsible AI approach, Sept 2023

<https://www.microsoft.com/en-us/research/blog/frontiers-of-multimodal-learning-a-responsible-ai-approach/>



# Discern what you read and hear; Alternative Fact-check is required

**Bloomberg** US Edition

● Live Now **Markets** Economics Industries Tech AI Politics Wealth Pursuits Opinion Businessweek Equality Green

Markets  
The Big Take

## Deepfake Imposter Scams Are Driving a New Wave of Fraud

AI could turbocharge the cybertheft economy. The world's banking industry is scrambling to contain the risk.

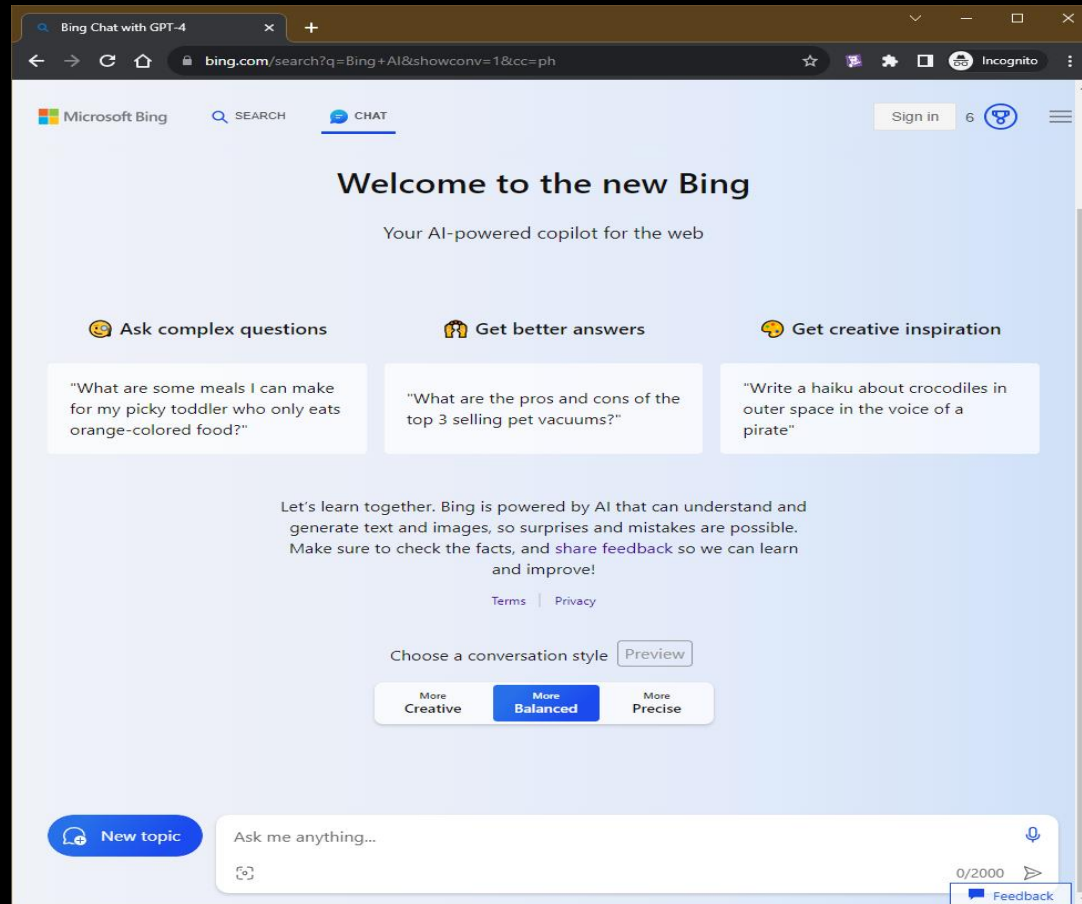
**Bloomberg Feed** @BloombergFeed

Large Explosion near The Pentagon Complex in Washington D.C. - Initial Report



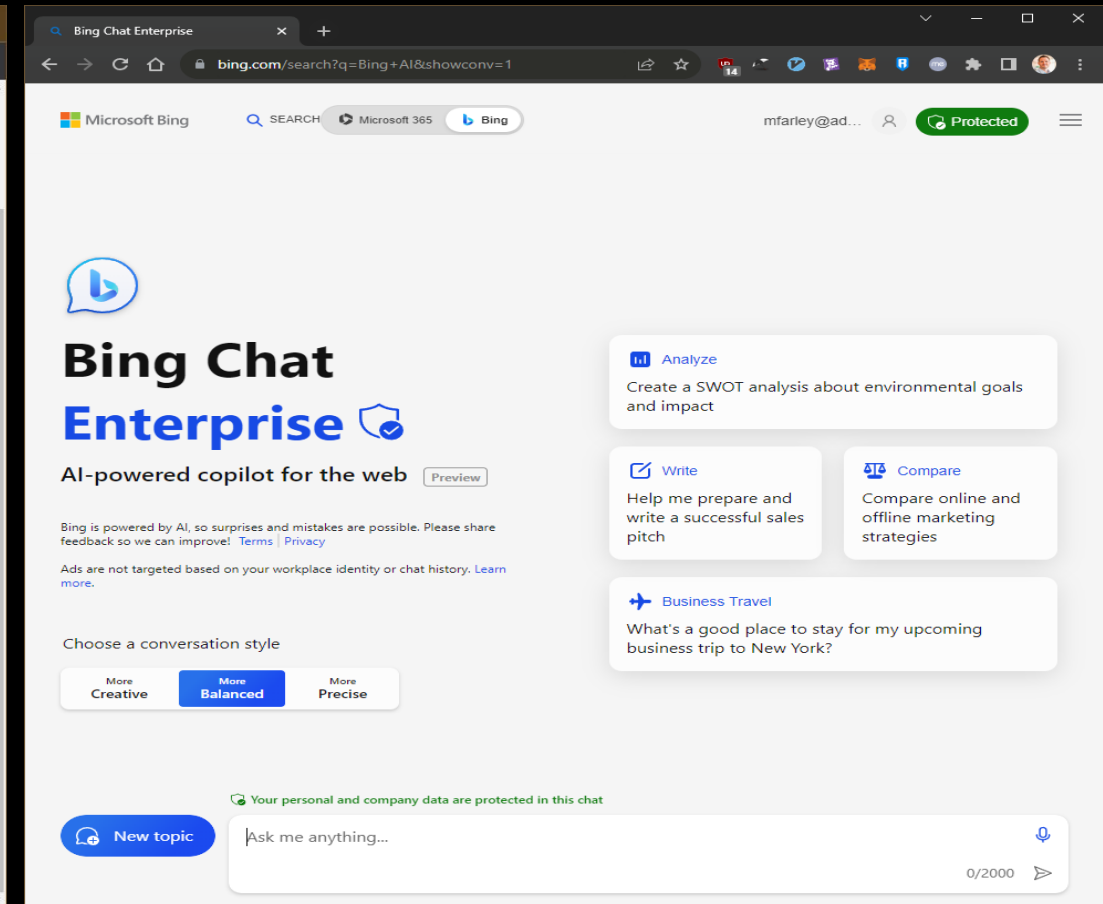
Source: [Deepfake Obama Video](#)

# Bing Chat and Bing Chat Enterprise



Non-ADB Account

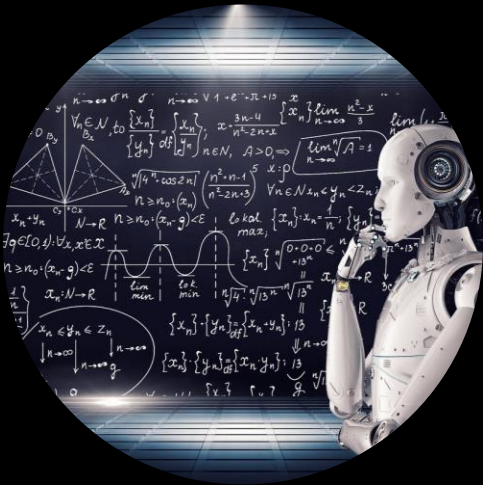
No guarantee of data privacy



ADB Account

"Your personal and company data are protected in this chat"

# Challenges and considerations



- Ethical Implications and Responsible AI Use



- IP, Copyrights, and Misuse (Misinformation)
- Deepfake (Disinformation)



- Data Protection and Security



- Skill Gap and Jobs Displacement; New Jobs Creation



# Automate and Elevate, some jobs displaced and more jobs created in the history of automobile



- ↓ Coachmen
- ↓ Stable hands and farriers
- ↓ Horse breeders and trainers



- ↑ Car engineers
- ↑ Car mechanics
- ↑ Car electricians
- ↑ Tire technicians
- ↑ Sales managers
- ↑ Rental agents
- ↑ Auto instructors
- ↑ Vehicle inspectors



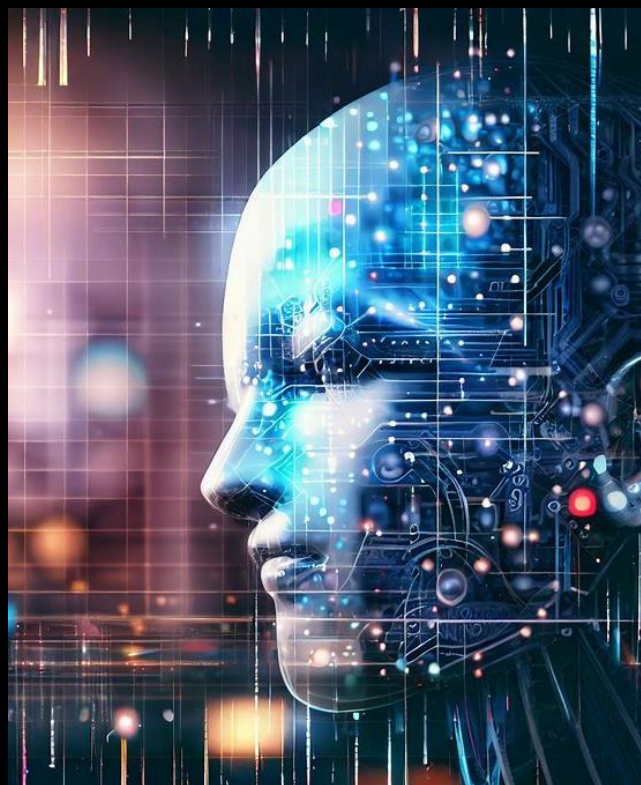
- ↑ Robot programming and maintenance engineers
- ↑ Automation engineers
- ↑ Auto designers and QA
- ↑ Data Scientists





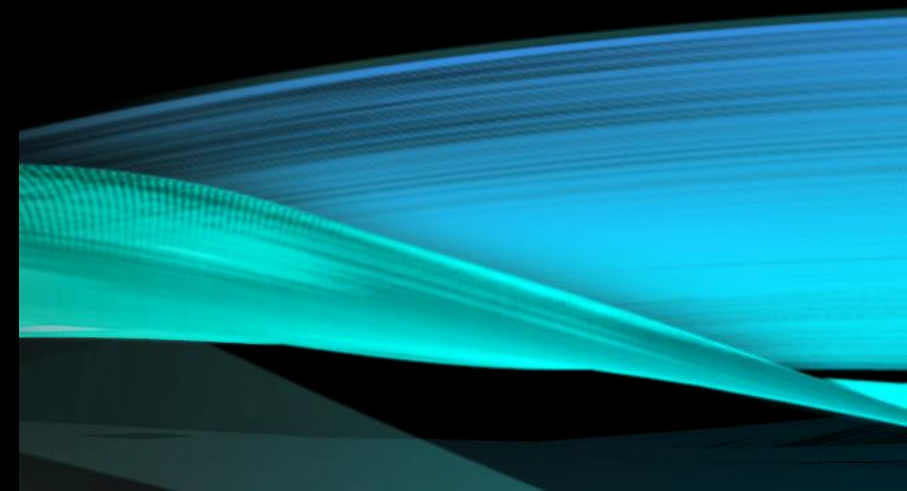
Digital  
Skills

Open  
Mindset



Digital is not just  
a capability but a  
mindset shift;

**ARE YOU READY ?**





# DIGITAL TRANSFORMATION IN THE AGE OF AI: INSIGHTS FOR ADB

Our Digital  
Transformation Journey

Mike Yeh

Regional Vice President

Corporate External and  
Legal Affairs, Asia

Microsoft



# PANEL SPEAKERS



Dr. David Hardoon  
CEO, ADI and  
Chief Data & AI Officer,  
Union Bank Philippines



Mr. Nicolas Miravalls,  
Co-Founder and CEO,  
ORIS



PANEL DISCUSSION:  
DIGITAL TRANSFORMATION WITH  
AI AND BIG DATA

