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— Bogor Indonesia —

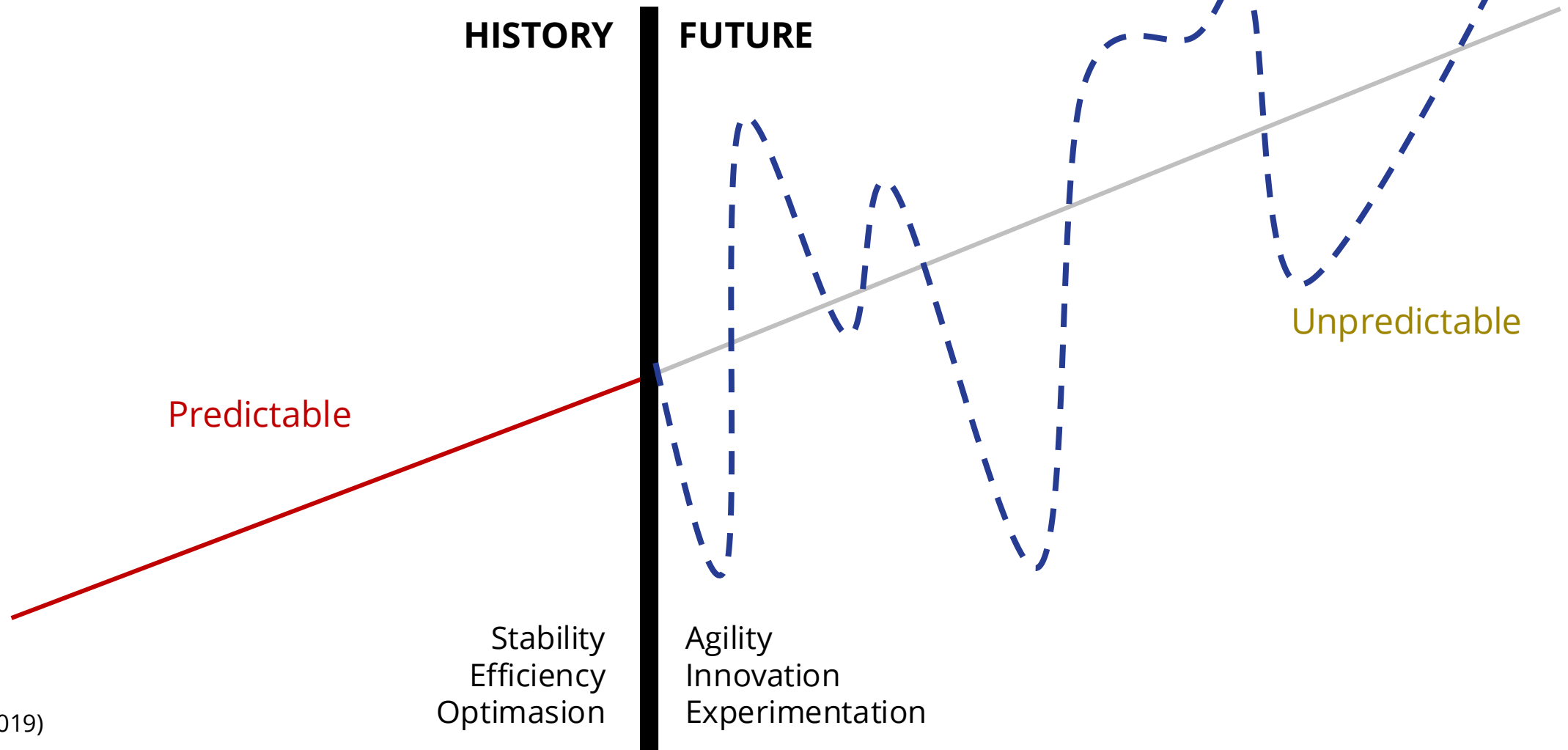


***FUTURE SKILLS* DI ERA KETERBUKAAN INFORMASI**



Alfian Helmi
IPB University

The Future is (always) unpredictable



(Pater Fisks, 2019)



In the **future is not** about the
competition of knowledge,

it's a *competition of creativity,*
competition of imagination,
competition of learning, competition of
independent thinking

- Jack Ma -





Tiga Gelombang Disrupsi

DISRUPSI POLA PEMBELAJARAN

Revolusi Industri 4.0 telah mengubah **pola belajar dan pola pikir**

DISRUPSI TEKNOLOGI

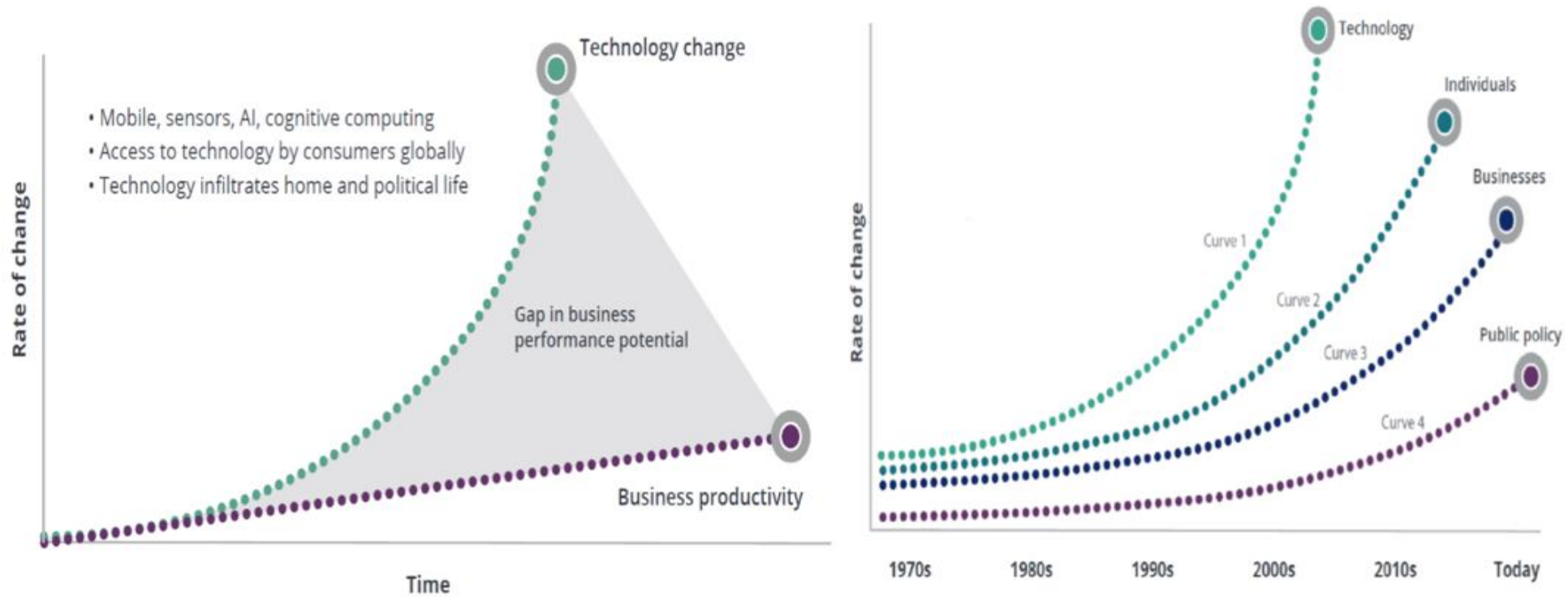
Learning Channel terbuka lebar, proses pembelajaran tidak menjadi monopoli institusi pendidikan, dosen/guru tidak hanya yang ada di kelas tetapi termasuk “dosen/guru” yang diperankan oleh AI atau AR/VR. ***Learning is anytime, anywhere, any platform, device***

DISRUPSI KOMPETENSI

Skills Set abad 21 mendisrupsi kompetensi lama, machine learning banyak menggantikan berbagai pekerjaan juga profesi yang bersifat repetitif

Plus Soft Skills: *Seven Survival Skills for 21st Century – critical thinking dan problem solving, collaboration, agility & adaptability, initiative & enterprneurship, assessing & analysing information, communication, curiosity, & imagination*

Perkembangan **Teknologi** Lebih Cepat dibanding Bidang Lain



New Skills into the workforce

Digital skills



Top 5 digital skills **growing** in 5 years



Cloud computing



AI & machine learning



Web, application and chatbot development



Data science & analytics



Security & compliance



Top 5 digital skills **declining** in 5 years



Programming languages & frameworks



Enterprise software & CRM



Data & database management



Testing, monitoring & automation tools



Graphics, multimedia & design software

Source: Global Skill Report, 2025



New Skills into the workforce

Artificial Intelligence (AI) skills



The 5 AI skills **growing** in relevancy in last 5 years

1. Machine learning tools
2. Data science, analytics & data visualisation
3. Natural language processing & chatbot development
4. Cloud computing, encryption & infrastructure
5. Data engineering. Big data tools & data modeling



The 5 AI skills **declining** in relevancy in last 5 years

1. Legacy AI & machine learning libraries
2. Legacy NLP & voice recognition tools
3. Older cloud & computing platforms
4. Statistical and data analysis tools & knowledge-based system
5. Human-machine interface software & robotics






Source: Global Skill Report, 2025



New Skills into the workforce

Green skills

Top 5 green skills **growing** in 5 years

-  Environmental science, conservation & climate change mitigation
-  Agriculture, agroforestry & soil ecology
-  Water & hydrology management
-  Renewable energy, geothermal heating & carbon management
-  Wildlife & biodiversity conservation

Top 5 green skills **declining** in 5 years

-  Legacy environmental tools & software
-  Agricultural & crop management practices
-  Garden design & ecological practices
-  Solar architecture & energy efficiency tools
-  Animal control & livestock management

Source: Global Skill Report, 2025



FUTURE OF JOBS 2025

(World Economic Forum, WEF)

Top 10 Core skills in 2025



1. Analytical Thinking



2. Resilience, flexibility, and agility



3. Leadership and social influence



4. Creative Thinking



5. Motivation and self-awareness



6. Technological Literacy



7. Empathy and active listening



8. Curiosity and lifelong learning



9. Talent Management



10. Service orientation and customer service



Cognitive skills



Self-efficacy



Management
skills



Technology skills



Working with
others









Engagement skills

Source: World Economic Forum, Future of Jobs Survey 2024

Note:

The Future of Jobs Survey uses the World Economic Forum's Global Skills Taxonomy

Kodak 	 Digital Camera
NOKIA	 ANDROID  APPLE
YAHOO!	Google
 POS INDONESIA	   SICEPAT EKSPRES
 Telkom Indonesia	        
 	    
CNN BBC	 YouTube
  HONDA YAMAHA	 TESLA BYD

 **ChatGPT**
 **Claude**
 **Meta**
 **NotebookLM**
 **Gamma**
Gemini
 **Grok**
?????

Perubahan Peta Kompetisi

Platform yang dulu berjaya, sekarang tersisih oleh platform lain yang lebih kompetitif.

Misal: Kodak digantikan Kamera Digital, Nokia digantikan HP Android dan IOS Apple.



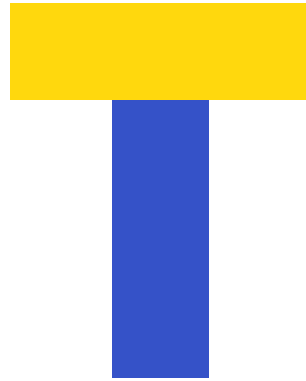
Kombinasi Kemampuan Individu

I-T-V-M Shape



I-Shaped

Fokus spesialisasi, punya skill mendalam di satu bidang.



T-Shaped

Punya skill mendalam di satu bidang dan pengetahuan yang luas di berbagai bidang.



V-Shaped

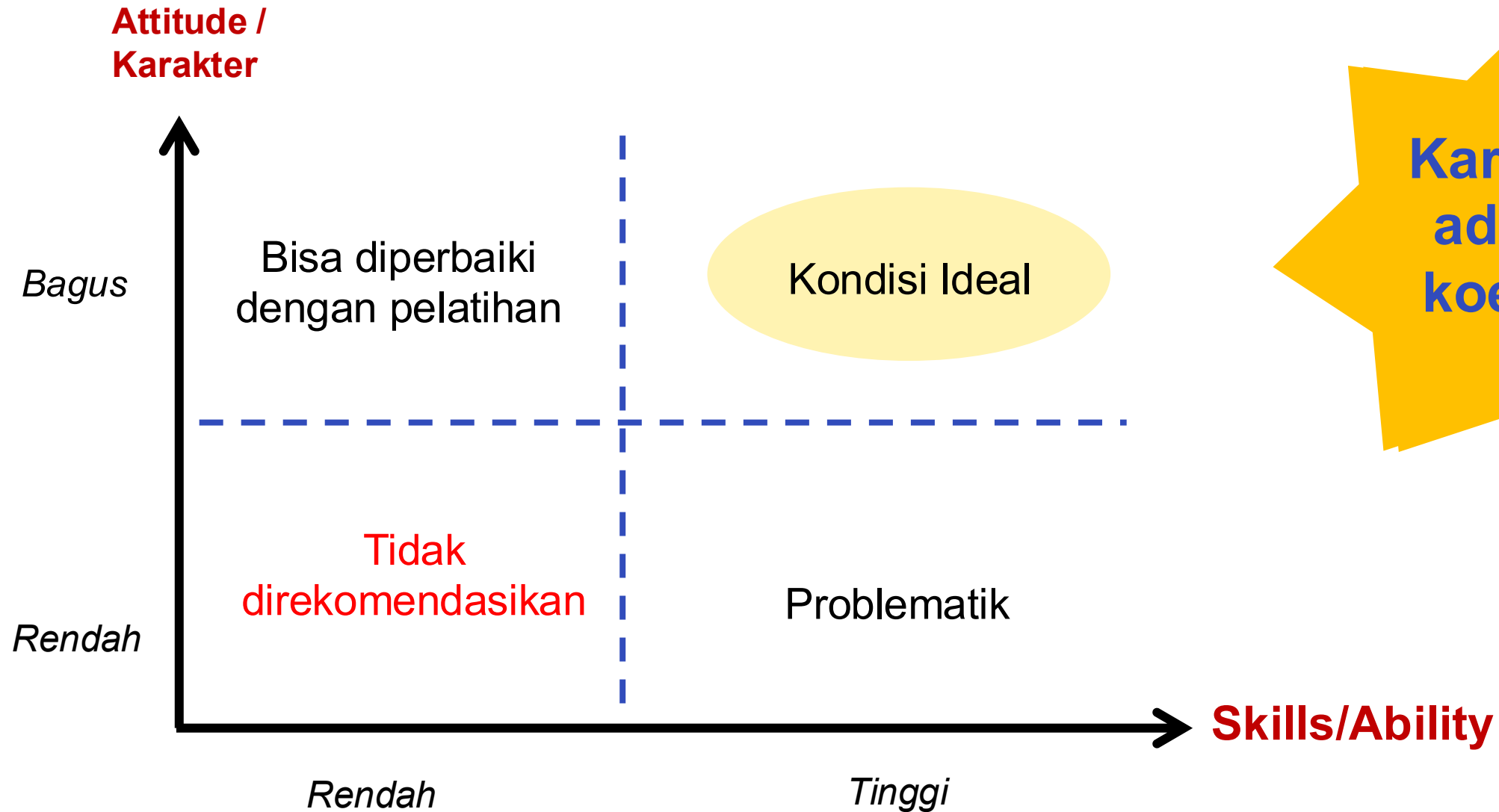
Punya skill di 2 bidang yang saling terkait.



M-Shaped

Punya skill mendalam di beberapa bidang yang berbeda.

Tapi, skill aja tidak cukup!



**Karakter
adalah
koentji!**



Stay on top: Character



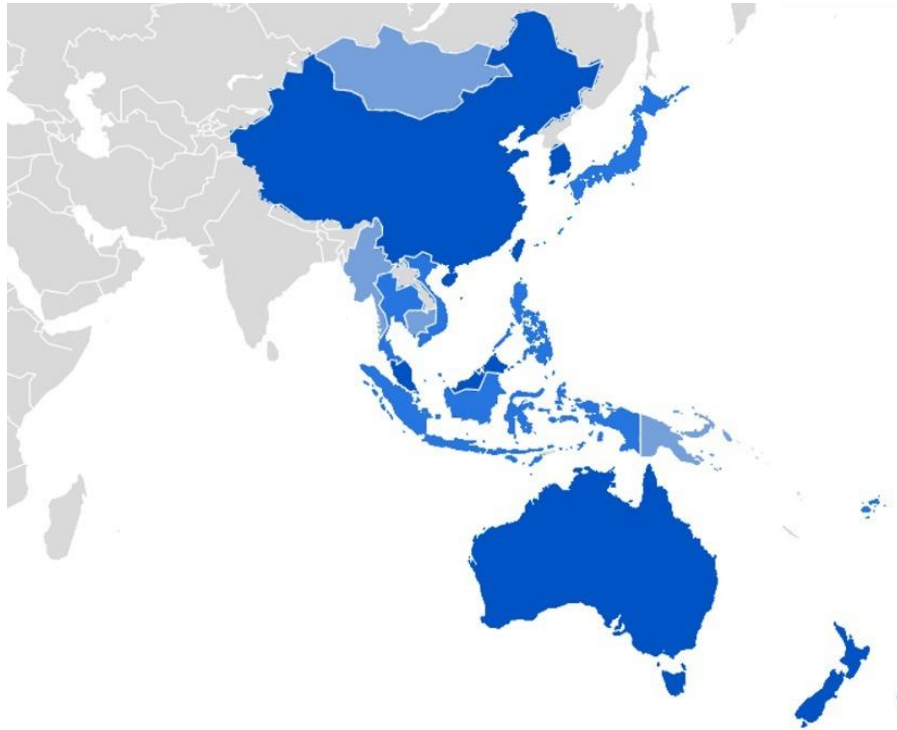
*“Ability may take you to the top. But It takes character to keep you there”
(John Wooden)*

Tantangan di Era Post-Truth



- Setiap orang bisa dengan bebas **menyuarakan opini**
- Digiring dengan pendekatan **emosional dan kepercayaan**
- “Kebenaran” ditentukan oleh **opini publik**

Digital Skills: Global Rankings for Digital Skills



Global Rankings for Digital Skills

Rank	Negara	Score
1	Singapore	7.8
2	Malaysia	7.2
3	Brunei Darussalam	6.1
4	Indonesia	5.2
5	Philippines	5.1
6	Vietnam	5.0
7	Thailand	4.5
8	Myanmar	3.0
9	Cambodia	2.8

Higher bound of each score range, e.g., 10 refers to 8-10 range

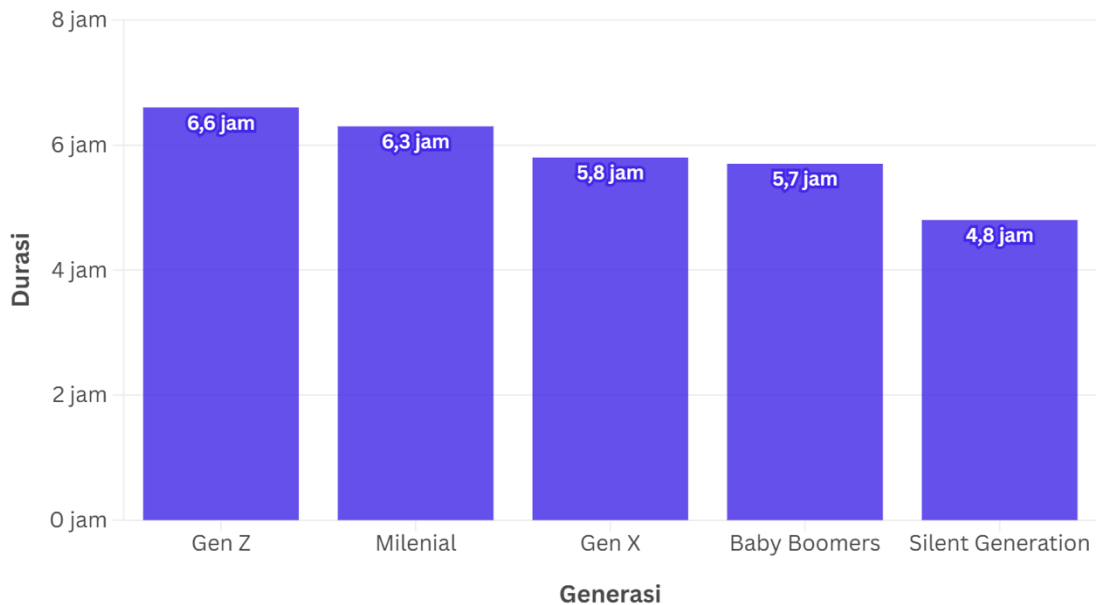


Sumber : [Wiley Gap Index](#)

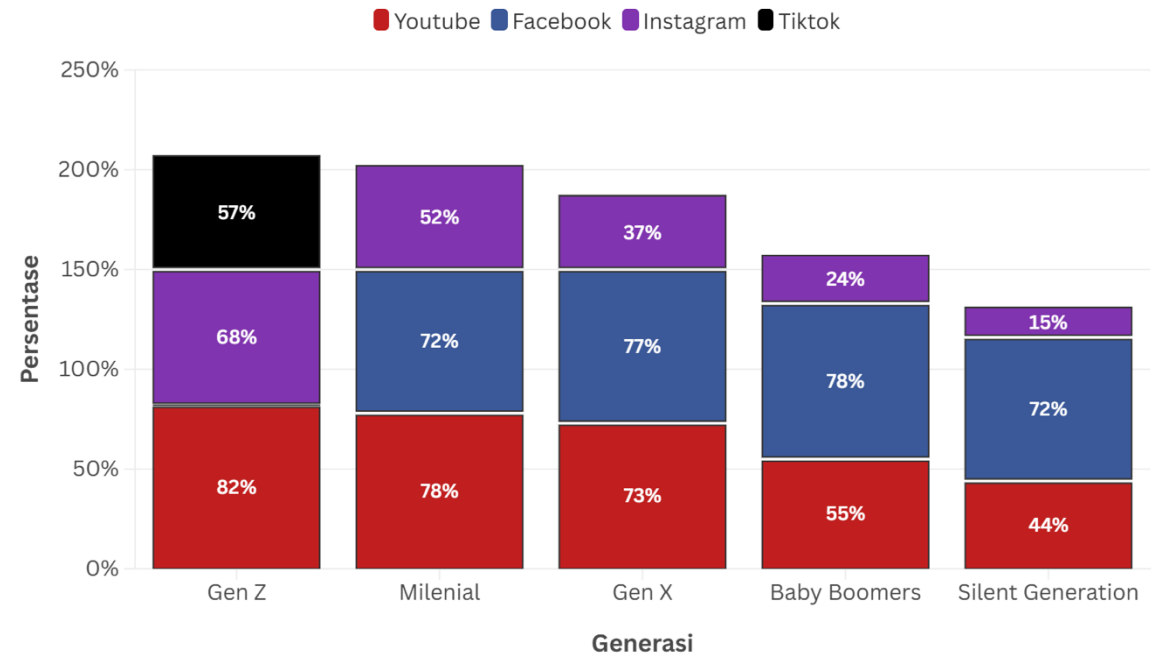


Konsumsi Media Setiap Generasi

Durasi Harian dalam Mengonsumsi Media Menurut Generasi
Tahun 2024

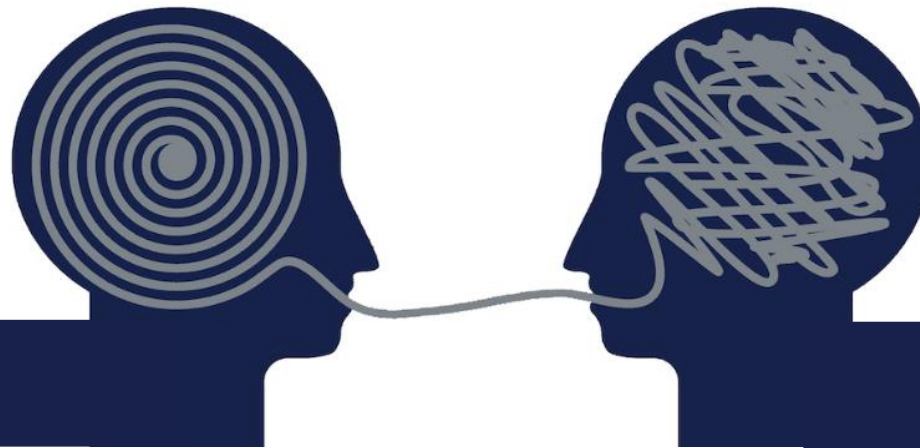


3 Media Sosial Utama Menurut Generasi
Tahun 2024



Gen Z Jawaranya Konsumsi Media

Format 'Short-Content' Menjadi Andalan Gen Z



Critical thinking

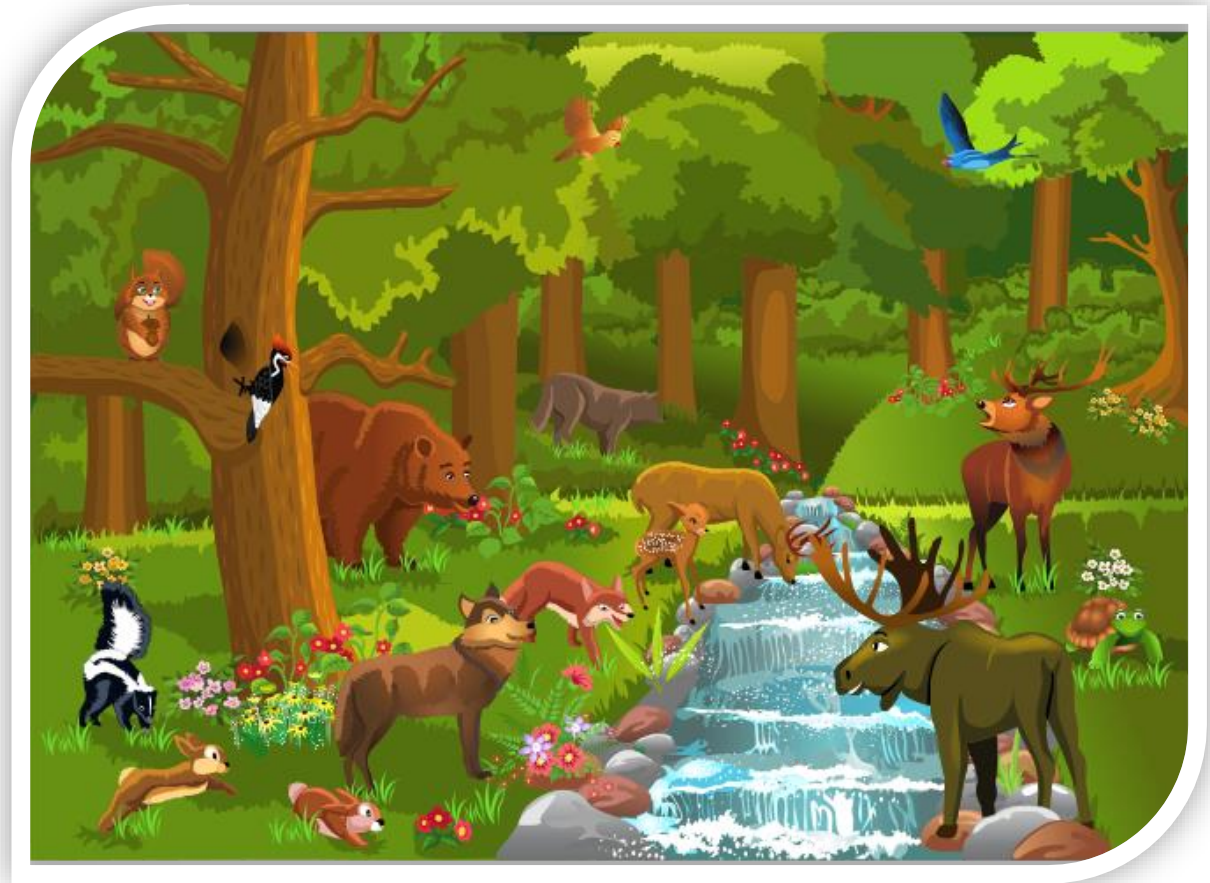
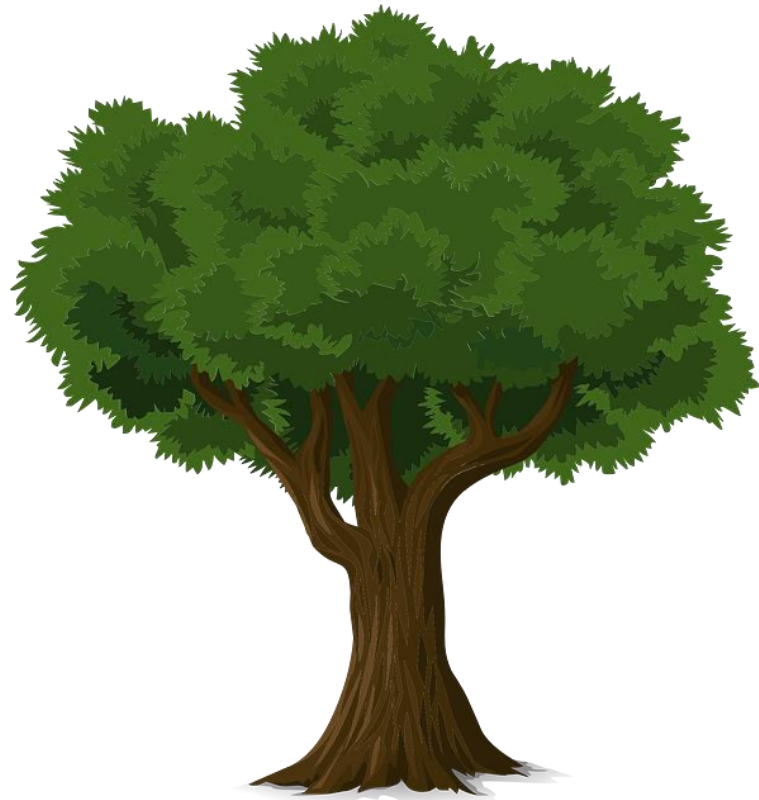
1. Mission-driven
2. Driven by team purpose
3. Selfless, team is important
4. Rational, thoughtful
5. Logical
6. Open-minded
7. Data-driven, objective analysis & evaluation
8. Empathy-based
9. Solution-focused

Judging

1. Ego-driven
2. Self-preservation
3. Self is important, others matter less
4. Feelings-motivated
5. Fear-based
6. Close-minded
7. Irrational, biased
8. Based on personal significance
9. Problem-focused



Pohon dan Hutan



PEMBELAJAR SEJATI

“Setiap orang adalah guru
Setiap rumah adalah sekolah”

-Ki Hajar Dewantara-



Sumber: edukasi.kompas.com



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TERIMA KASIH

