

7 Key In/Foresights: The World by 2030

THE PURPOSE OF LOOKING AT THE FUTURE IS NOT
PREDICTION – IT IS TO BE BETTER PREPARED!



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Gerd Leonhard, Futurist
& CEO The Futures Agency

APR
03
2025

DOING
DIGITAL
FORUM

DVIN HALL | YEREVAN

Gerd



Gerd Leonhard San Francisco, CA, Waymo Autonomous Taxi Trip March 24, 2025



#1 2025–2030: 4 Simultaneous Revolutions

- Geopolitics: **Unipolar**»**Multipolar** (new world order)
- Digital: **AI / AGI**, Quantum, Synthetic Biology++++
- **Climate Emergency**: Energy, Sustainability ++++
- Human/Purpose: A **New Economic Logic: Beyond GDP**

GEOPOLITICAL REVOLUTION

DIGITAL REVOLUTION

SUSTAINABILITY REVOLUTION

PURPOSE REVOLUTION

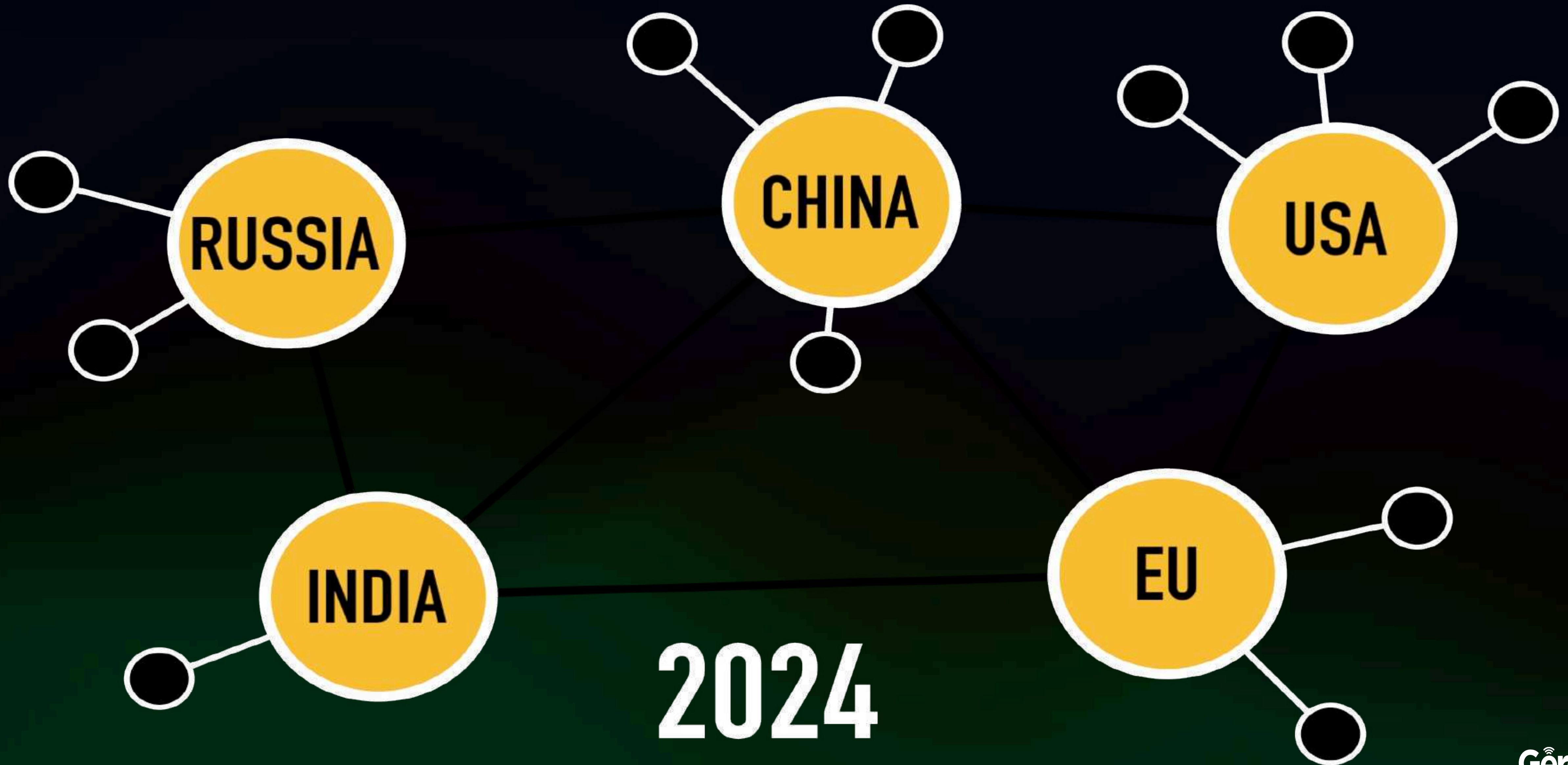


BiPolar » Unipolar » MULTIPOLAR



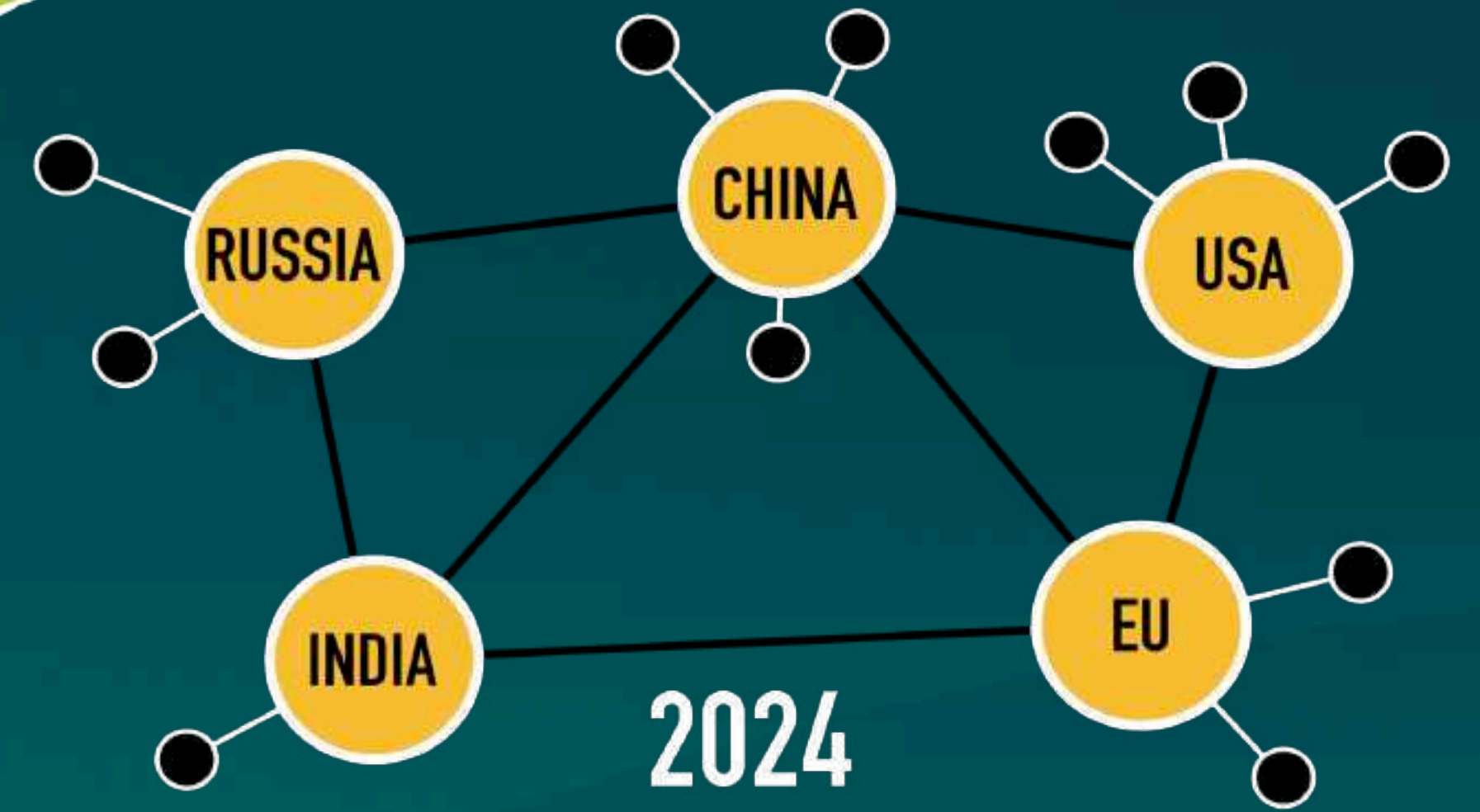
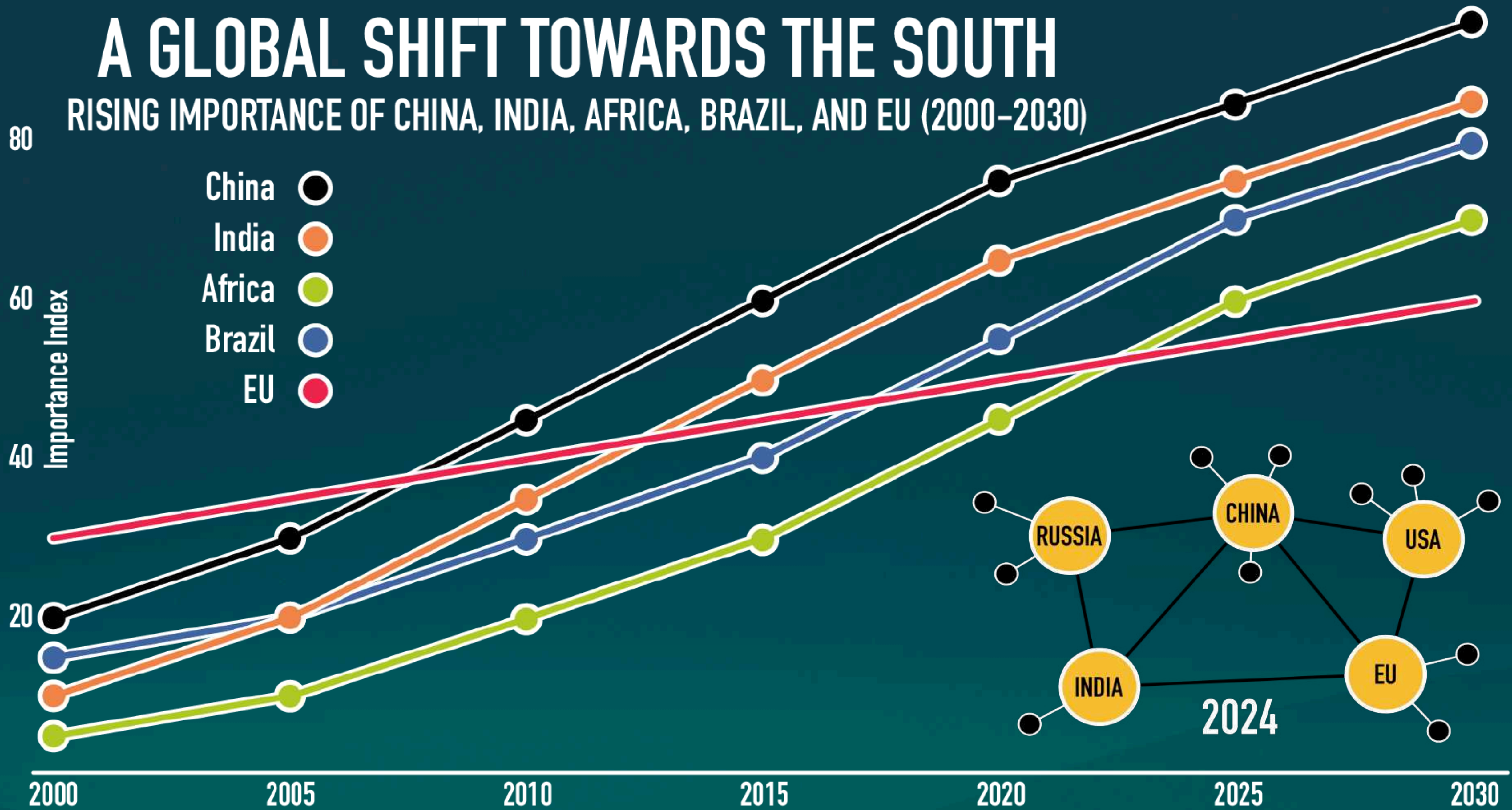
1947

»» MULTIPOLAR



A GLOBAL SHIFT TOWARDS THE SOUTH

RIISING IMPORTANCE OF CHINA, INDIA, AFRICA, BRAZIL, AND EU (2000-2030)





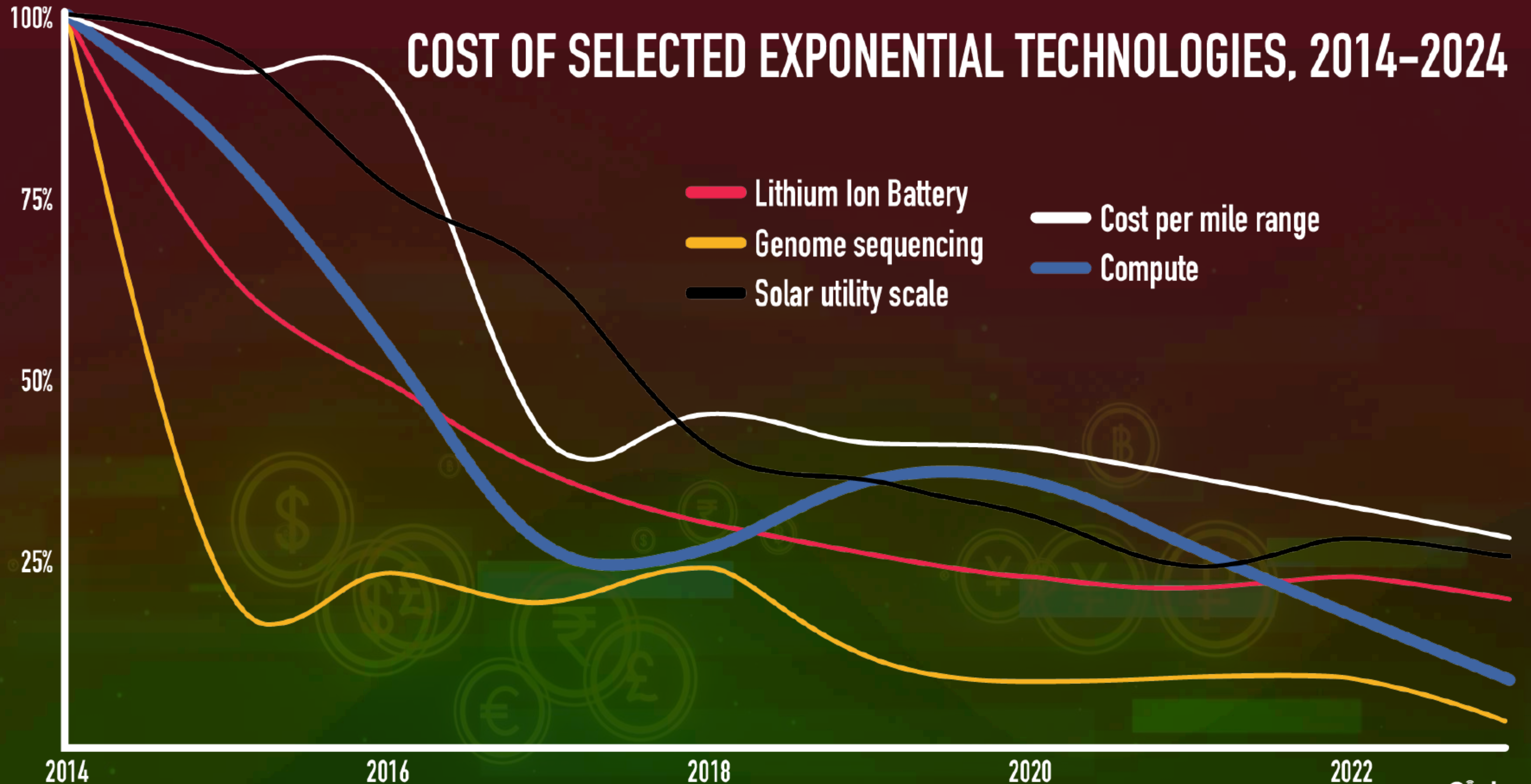
UNITED STATES OF EUROPE



**Could a metro system link
the whole of Europe by
2040?**

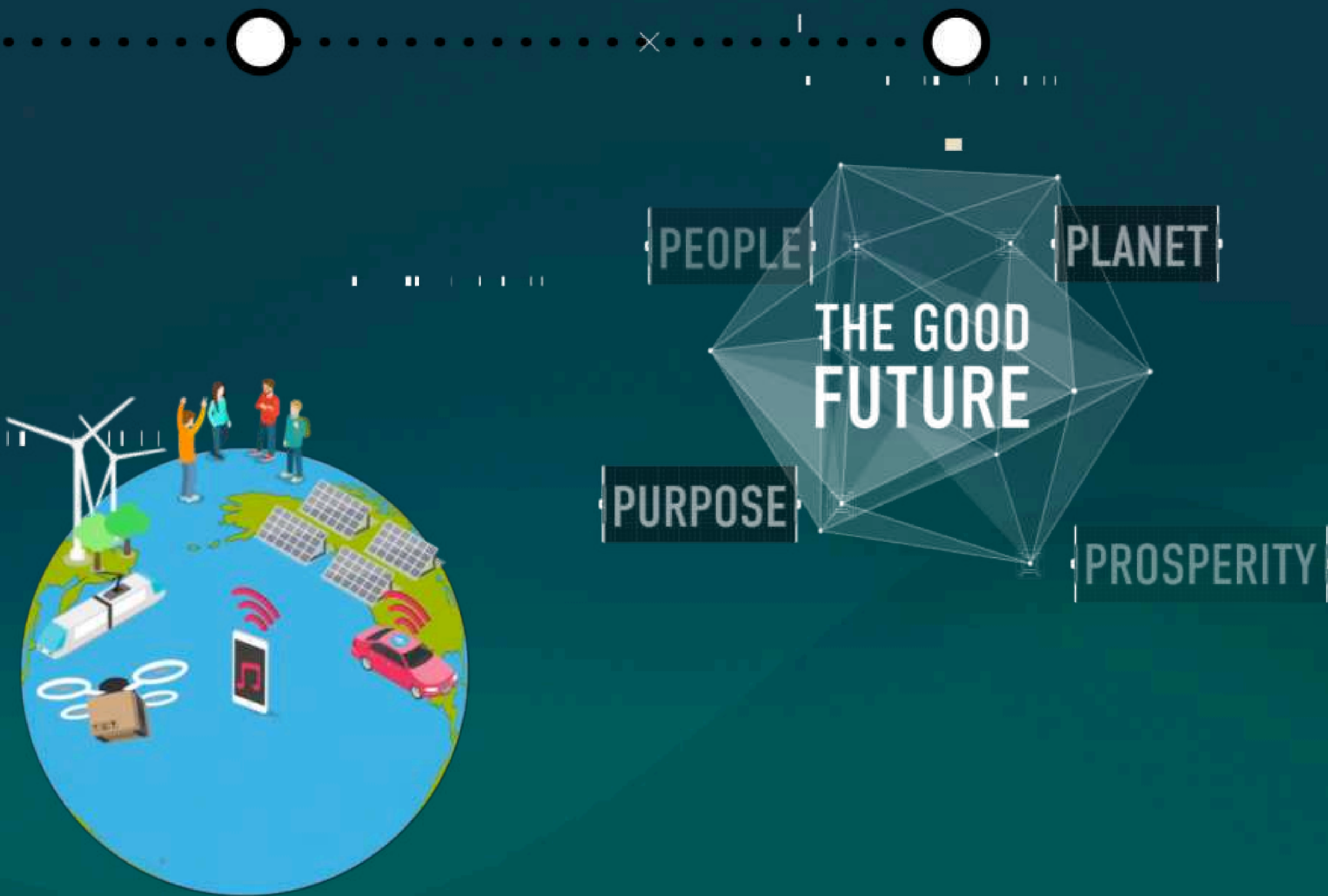
Digital Revolution(s): **Exponential** Change

COST OF SELECTED EXPONENTIAL TECHNOLOGIES, 2014-2024



SUSTAINABILITY REVOLUTION

PURPOSE REVOLUTION



Sustainability &
Purpose: The current
setbacks are **catalysts**
not show-stoppers!

PEOPLE

THE GOOD
FUTURE

PLANET

PURPOSE

PROSPERITY

 Tesla

 Take down



GEOLOGICAL
REVOLUTION

DIGITAL
REVOLUTION

SUSTAINABILITY
REVOLUTION

PURPOSE
REVOLUTION

World Maturity

The old world
is dying...

You Are Here

...and the new one
struggles to be born



#2 LOGIC OF THE PAST

LOGIC OF THE FUTURE

Logic of the Past

Anthropocentrism

National sovereignty

Primacy of national interest

Great power dominance

Imperialism, racism, and patriarchy

Neo-liberal economics

Embrace of new technologies without restraint

Logic of the Future

Respect for the full community of life

Collaborative sovereignty and human sovereignty


Focus on the global commons

Equitable distribution of power

Equity and cosmopolitanism

Economics of human and planetary wellbeing

Selectivity, global norms, and regulation



"The greatest danger in times of turbulence is not the turbulence itself, but to act with yesterday's logic" (Peter Drucker)

Old Logic

National sovereignty

Primacy of national interest

Great power dominance

Imperialism, racism, and patriarchy

Neo-liberal economics

New Logic

Collaborative sovereignty and human sovereignty

Focus on the global commons

Equitable distribution of power

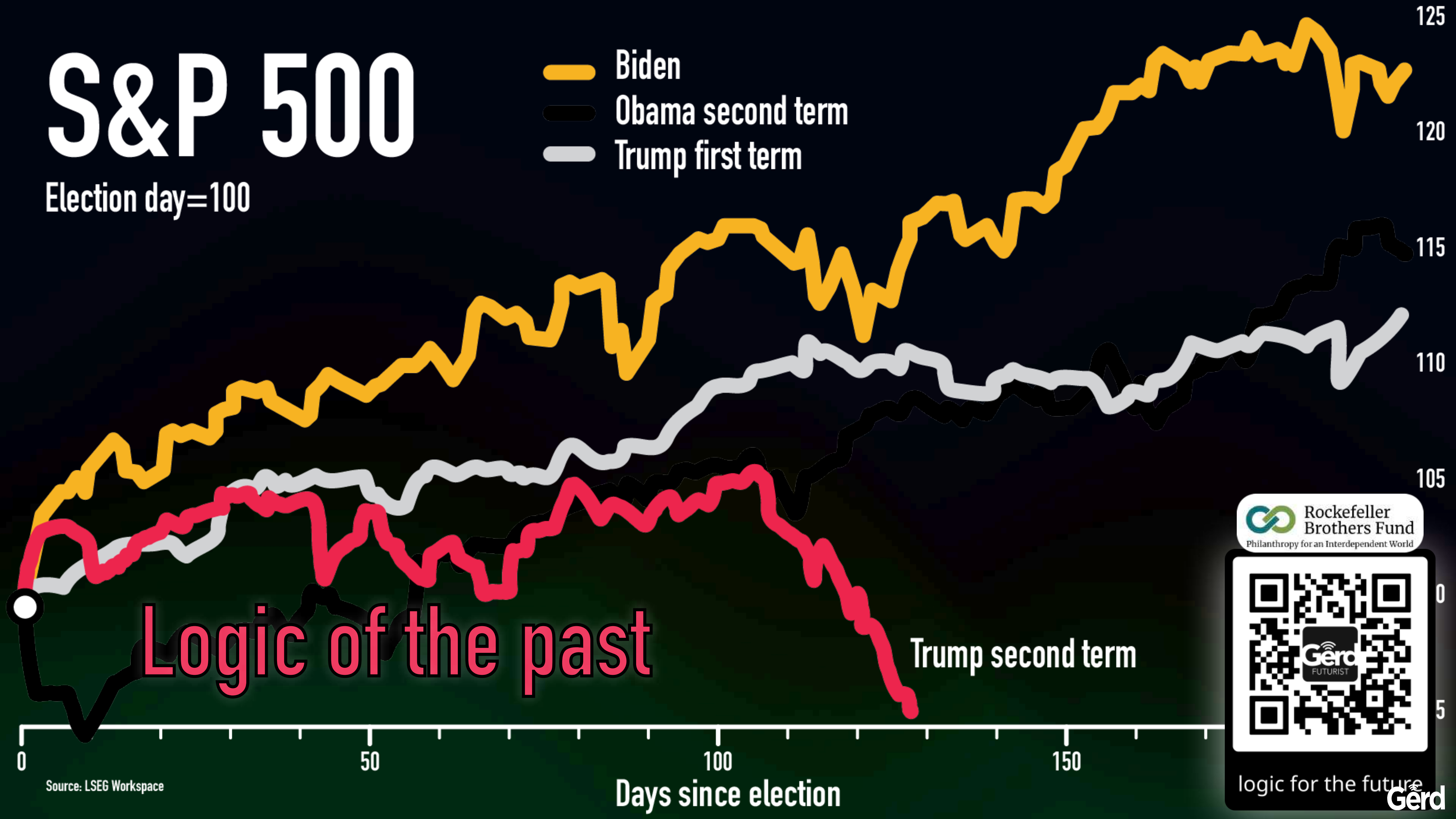
Equity and cosmopolitanism

Economics of human and planetary wellbeing

S&P 500

Election day=100

- Biden
- Obama second term
- Trump first term



Logic of the past

Trump second term

Rockefeller Brothers Fund
Philanthropy for an Interdependent World



logic for the future

Gerd

Yesterday's logic versus new logic: Huge Impact on the Financial Sectors

MEGA-CHALLENGE

Economy → **Climate**

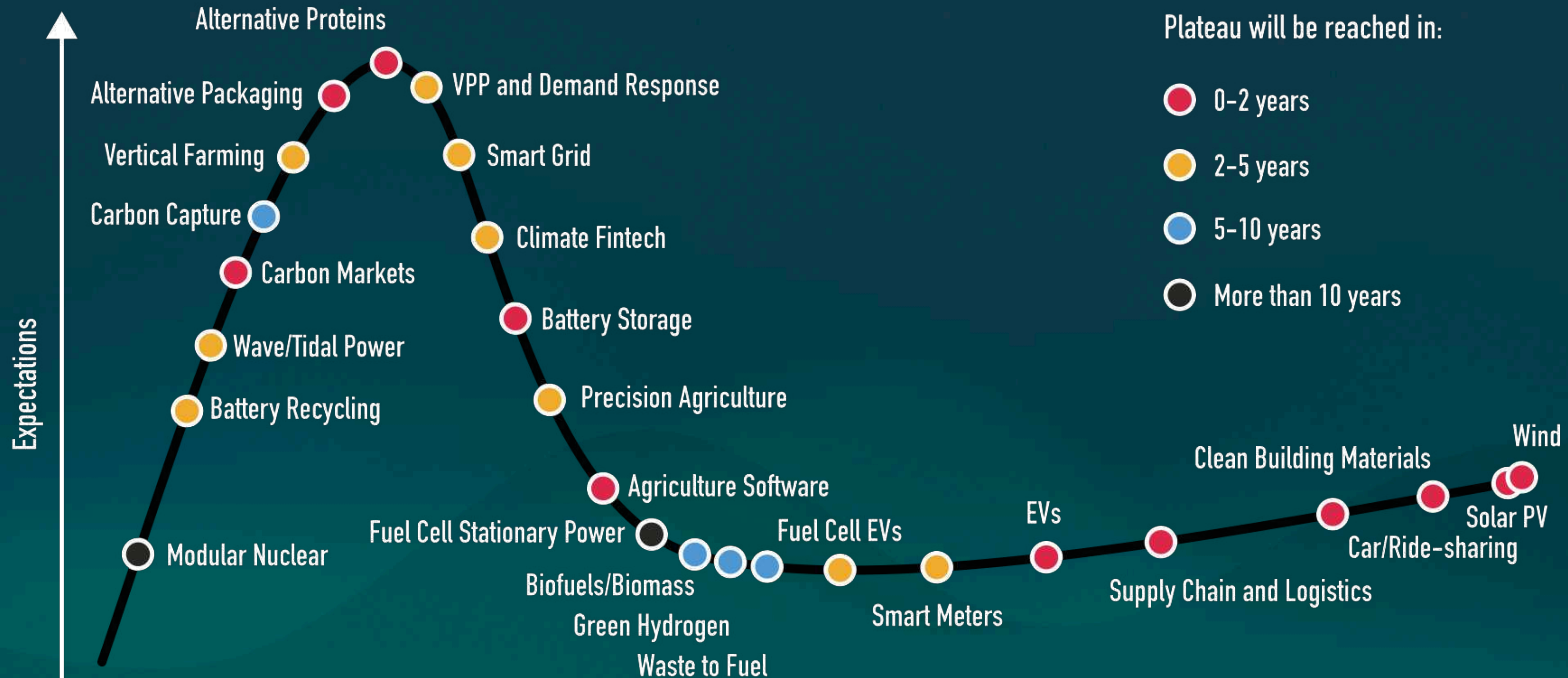
CULTURE

Boomer-centric → **Millennial-centric**

Economy

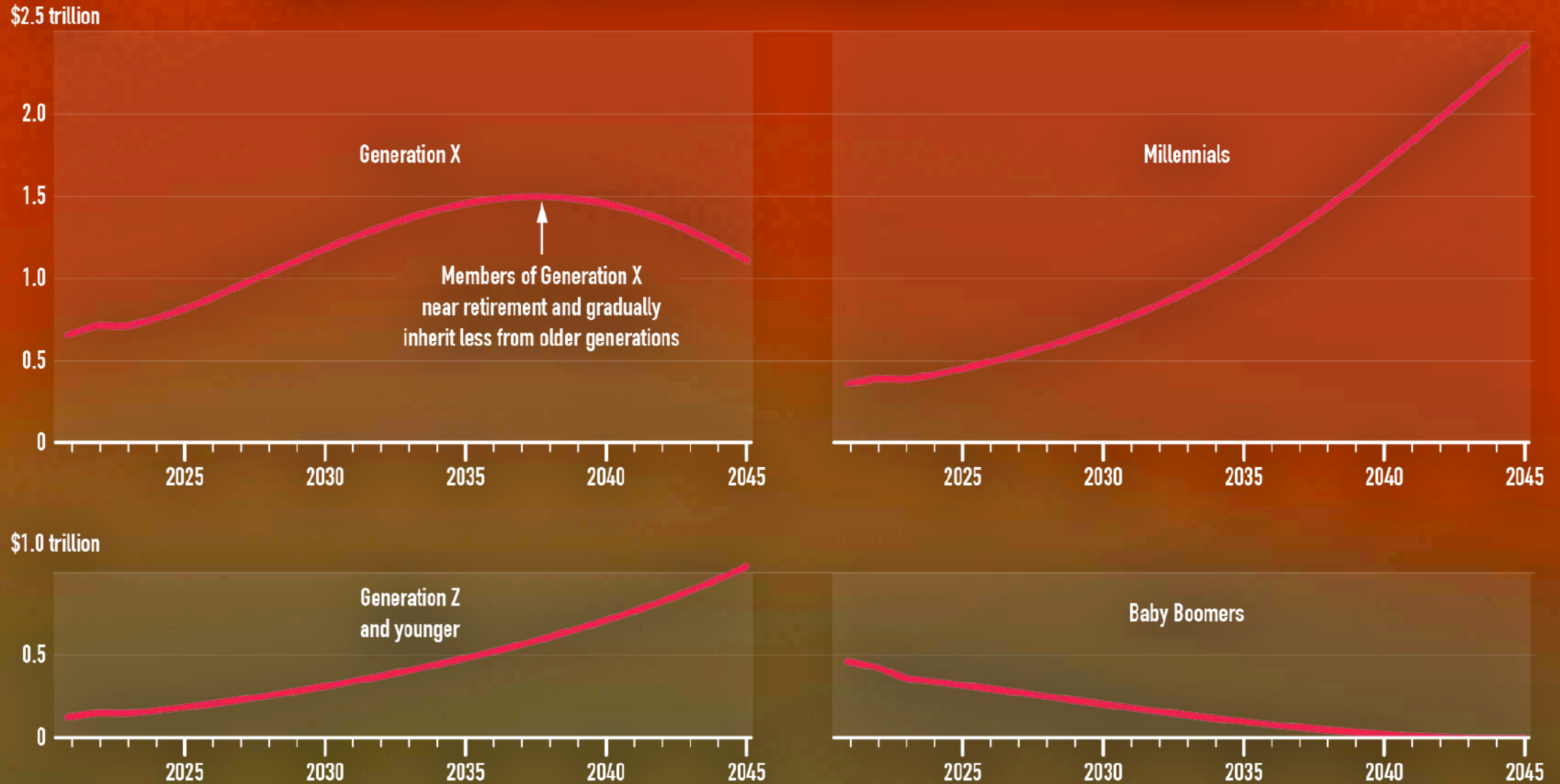


Climate



Boomer-centric Millennial-centric

ANNUAL WEALTH PROJECTED TO BE INHERITED BY EACH GENERATION



#3 MACHINES (AI, ROBOTS...) **ARE NO LONGER STUPID**

PROGRESS TO THE SINGULARITY IN AI

MEASURED USING TIME TO EDIT IN MACHINE TRANSLATION

- TTE* perfect translations
- TTE* machine translations
- Trend

*TTE = Time to edit, the average time per word taken by a professional to correct a translation. A perfect translation's TTE is 1 second.

2015

2016

2017

2018

2019

2020

2021

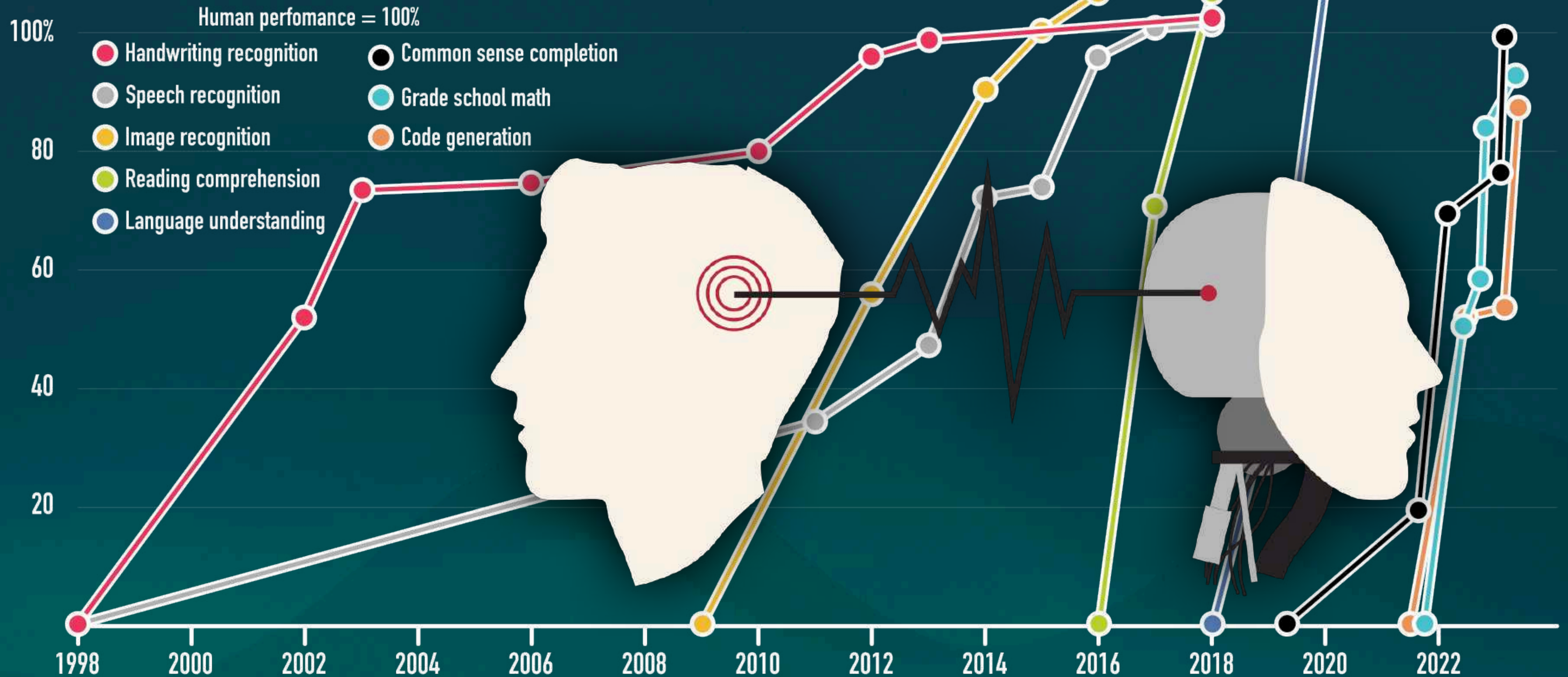
2022

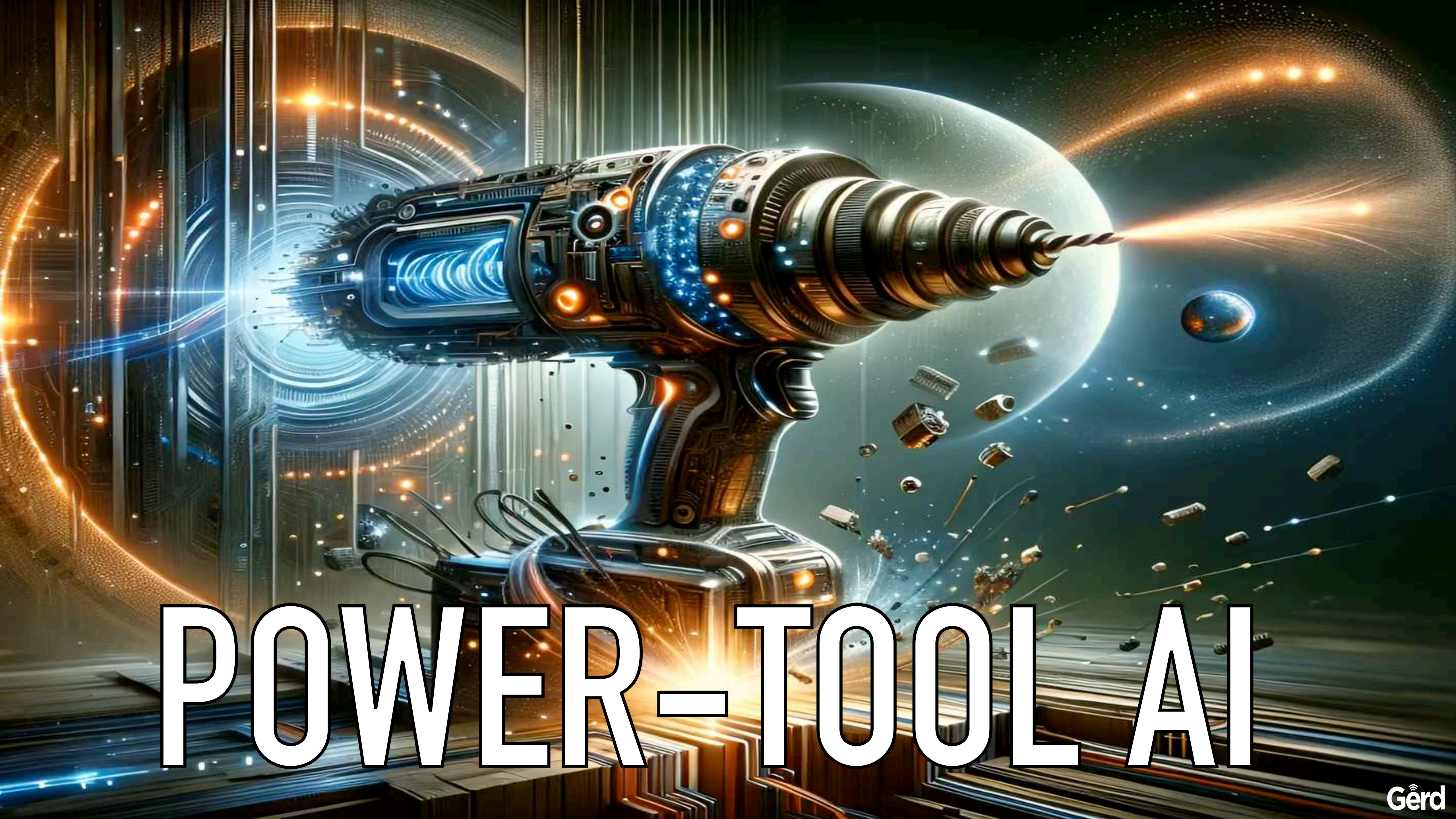
2023

2024

2025

STATE-OF-THE-ART AI PERFORMANCE RELATIVE TO HUMAN PERFORMANCE





POWER-TOOL AI



Sources



+ Add source

Select all sources



AI in Education in 2024: Mixed Feelings on The Tech's Future | EdTech Maga...



Artificial intelligence in education: How will it impact K-12 teachers | McKinsey



Future of Education Technology in 2025: Trends in Ed-Tech and Opinions of ...



How Innovation is Transforming the Future of Education | BCG



How technology is reinventing K-12 education | Stanford Report



Q&A: How UNESCO is driving digital learning and the transformation of edu...



The Future of EdTech: Are We Ready?



The Future of Education: 2035 Trends



The Future of Education: Balancing AI and Human Ingenuity



The Future of K-12 Tech for the Connected Classroom - Nomadix



The Impact of Technology on Education



These are the 5 key trends shaping the EdTech ecosystem | World Economic...



What Is Ed Tech (Educational Technology)? | EdTech Magazine



[Taejee Future Education Forum 2023] AI and the future of K-12 public educ...



apple education 2024-Impact-Report.pdf



https://www.youtube.com/watch?v=vknQSc070vs



Chat



future of education impact of technology

16 sources

This blog post and podcast by futurist Morris Miesel discusses the impact of artificial intelligence (AI) on education. Miesel argues that while AI tools present challenges, such as plagiarism, they also offer opportunities for personalised learning and administrative assistance for teachers. He advocates for a shift towards fostering creativity and critical thinking in education, balancing technological advancements with traditional teaching values to prepare students for a rapidly changing future job market. The author's past writings on the topic are also referenced, highlighting his long-standing interest in the subject. Ultimately, the piece promotes a future where AI enhances, rather than replaces, human educators.

Save to note



Add note

Audio Overview

Briefing doc

Start typing...

16 sources



How will technology reshape future learning methodologies?

How can AI enhance, not replace, human teaching?

What skills



NotebookLM can be inaccurate; please double-check its responses.

Studio



Audio Overview



Deep Dive conversation

Two hosts (English only)

Customise

Generate

Notes



+ Add note

Study guide

Briefing doc

FAQ

Timeline



Saved notes will appear here

Save a chat message to create a new note or click Add note above.

Sources

+ Add source

Select all sources

AI in Education in 2024: Mixed Feelings on The Tech's Future | EdTech Maga...

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[Taejae Future Education Forum 2023] AI and the future of K-12 public educ...

apple education 2024-Impact-Report.pdf

Chat

Refresh

simulations 4 . They can also create their own interactive 360-degree scenarios 12 . AI integration into these simulations will allow students to ask questions and receive answers 14 .

- **Gamification:** Learning activities will increasingly incorporate game-like elements 14 . This can motivate students through rewards, though educators should be mindful that rewards tied to specific activities may not generalise to other learning contexts 14 . Educators are encouraged to use play patterns that reward students for rethinking approaches and adapting strategies, rather than just quick, correct responses 15 .
- **Shift in Teaching Roles:** Teachers' roles will evolve from instructors to facilitators and coaches 16 Technology will automate some administrative and preparatory tasks, freeing up teachers to focus on direct instruction, coaching and mentoring, and building relationships 17 This includes using technology to assess student understanding and provide feedback 21 Teachers will be able to use AI to simplify lesson planning and automate menial tasks 24 .
- **Focus on 21st-Century Skills:** Future learning will emphasise critical thinking, problem-solving, collaboration, and digital literacy 7 Collaborative learning, where students work in small groups on complex tasks, will also be prioritised 27 Students will learn to question, critique, and understand the development and use of AI 30
- **Increased Access and Equity:** Digital tools and platforms can break down geographical barriers, providing access to educational resources for all students, regardless of their socioeconomic status or location 32 Technology can also support diverse learners by offering features such as translation and speech-to-text 23 . It can provide more flexibility in learning, accommodating different schedules and preferences 34 .
- **Data-Driven Insights:** Technology allows for the collection of detailed data on student learning activities 15 This data can reveal areas of struggle and learning opportunities 15 . Educators need to be able to access and analyse this data to make informed decisions about instruction 35 .
- **Lifelong Learning:** Continuous education and upskilling will be essential 4 Learning will need to be flexible and adaptable to different life phases and job demands 36
- **Hybrid models** combining in-person instruction with online learning are likely to become more common 38 .
- **AI as a tool, not a replacement:** The sources emphasise that technology, including AI, is a tool to support and enhance education, not replace teachers or human interaction 39
- **Importance of Teacher Training:** To effectively integrate technology, teachers will need training and support 16 This includes training on new technologies, pedagogical approaches, and how to adapt to new teaching methods 16
- **Ethical Considerations:** Privacy and cybersecurity will be important concerns as schools collect and use student data 33 Schools will need to establish guidelines for the ethical use of technology 52 .
- **Emphasis on Practical Application:** Learning should be experiential, interdisciplinary, and focused on real-world problem solving 18 This includes hands-on projects and collaborative tasks 53 .
- **Community Engagement:** Learning environments should foster a sense of community and belonging 54 Technology can be used to connect with families and communities 47
- **Focus on 'why' and 'how':** When adopting new technologies, it's essential to focus on the pedagogical value, and not simply the "wow" factor 57 .

It is important to note that effective integration of technology into education requires careful planning, teacher training, and a focus on pedagogy, not just the technology itself 16 There should be an emphasis on ethical considerations, including data privacy and equitable access 33

Save to note

Studio

Audio Overview

Generate

Thumbnail

Notes



ROUTINE

WORK

Humans
Doing Routines

Machines
Doing Routines

TOOL AI: COGNIFICATION | AUGMENTATION | VIRTUALISATION | AUTOMATION (CAVA)



AI Agenting



Life is full
of recurring
charges.



Your Annual Donations



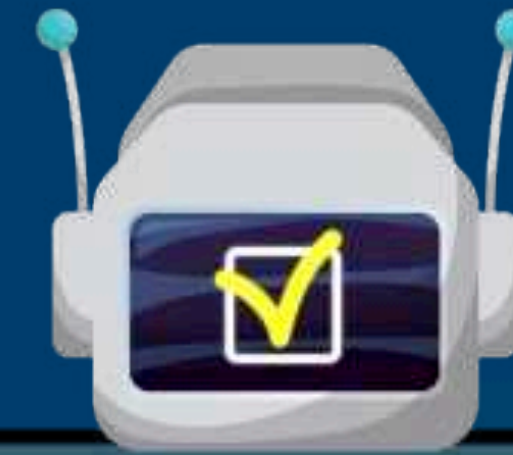
Organization	Amount	Date
My Brother's Keeper	\$229.06	7/25
Greater New Orleans Foundation	\$206.15	8/15
Year Up	\$183.25	12/3

But it can be hard to
track them down
for tax season

April
14

April
15

April
16



An artificial intelligence AGENT is a system or program that is capable of AUTONOMOUSLY PERFORMING TASKS ON BEHALF OF A USER OR ANOTHER SYSTEM by designing its workflow, using a variety of available tools.

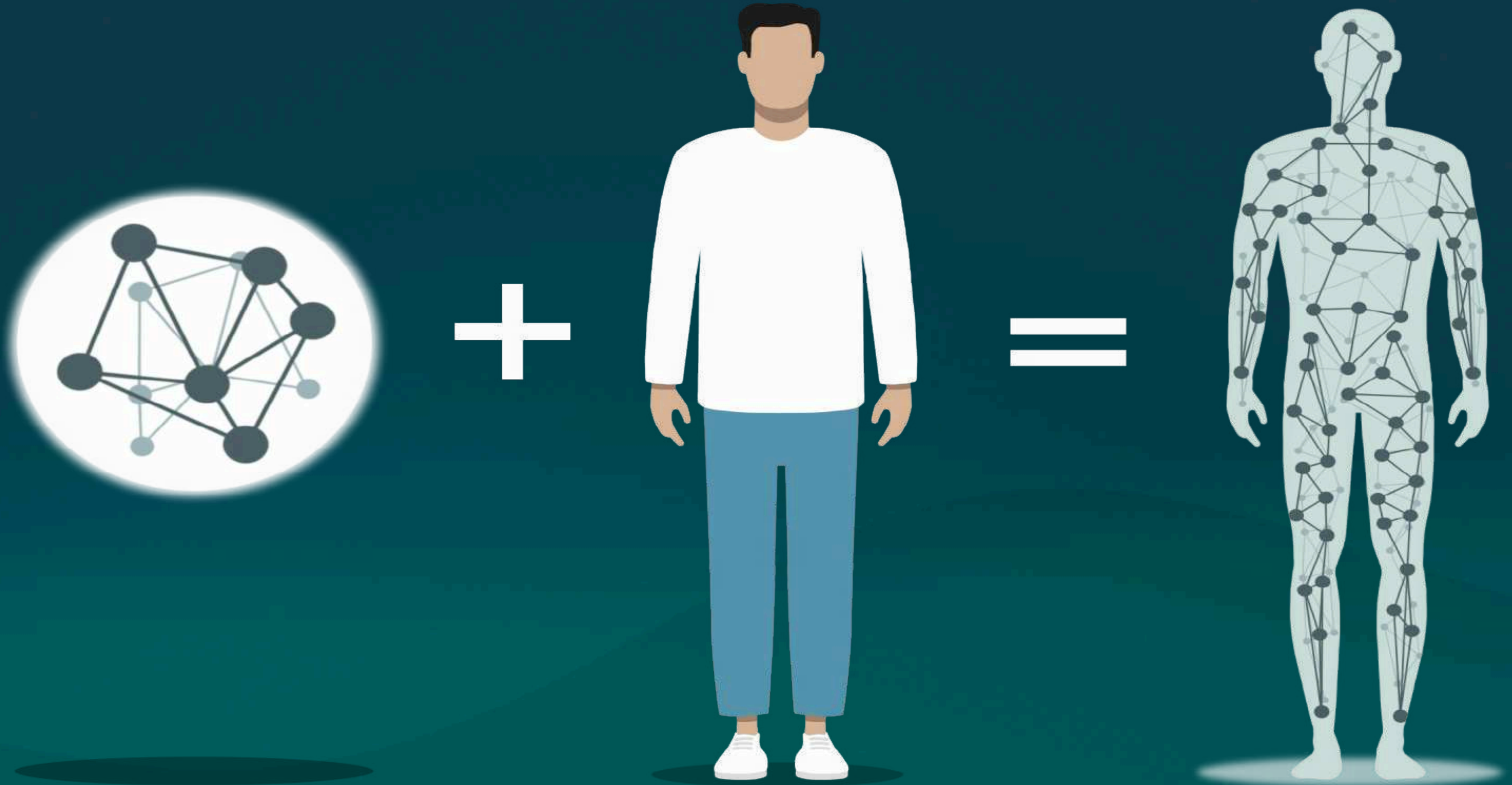


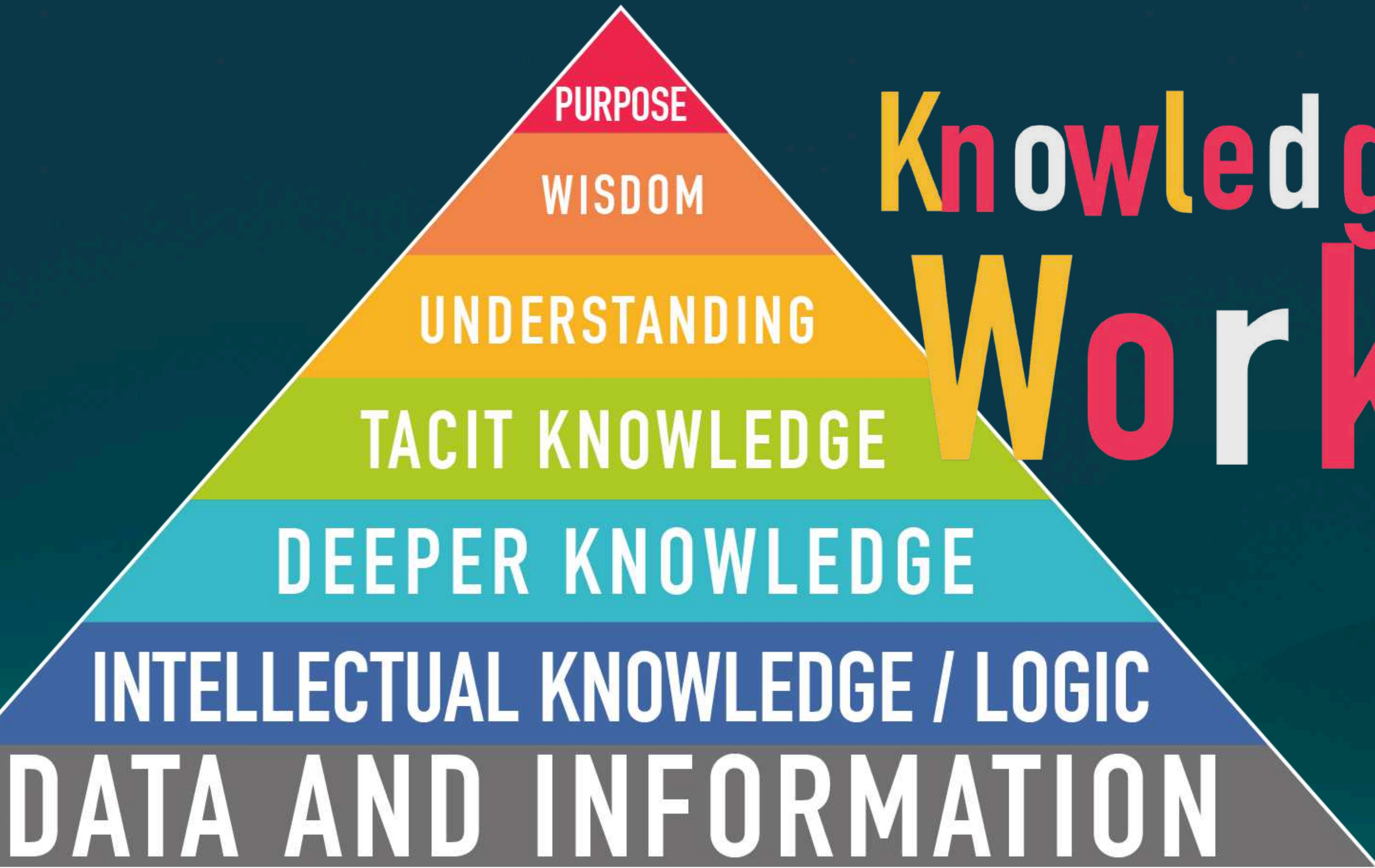
#4

Machines **will** do most of the routine work

– We must prepare to move up
to HUMAN-ONLY work

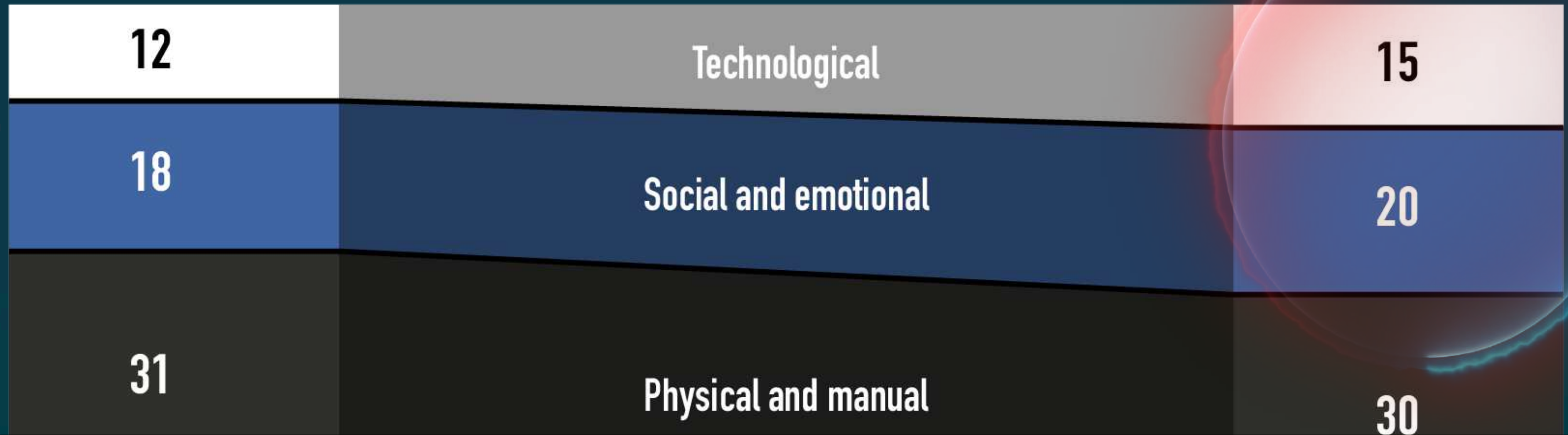
OK... but how far is too far? **How much technology is 'good for us'?**





Knowledge
Work

Skills mix in Europe, share of total hours, %



**“One machine can do the work of fifty ordinary (wo)men.
No machine can do the work of one extraordinary (wo)man”**

Elbert Hubbard (1901)



IF YOU WORK / LEARN / THINK LIKE A ROBOT...
A ROBOT WILL TAKE YOUR JOB



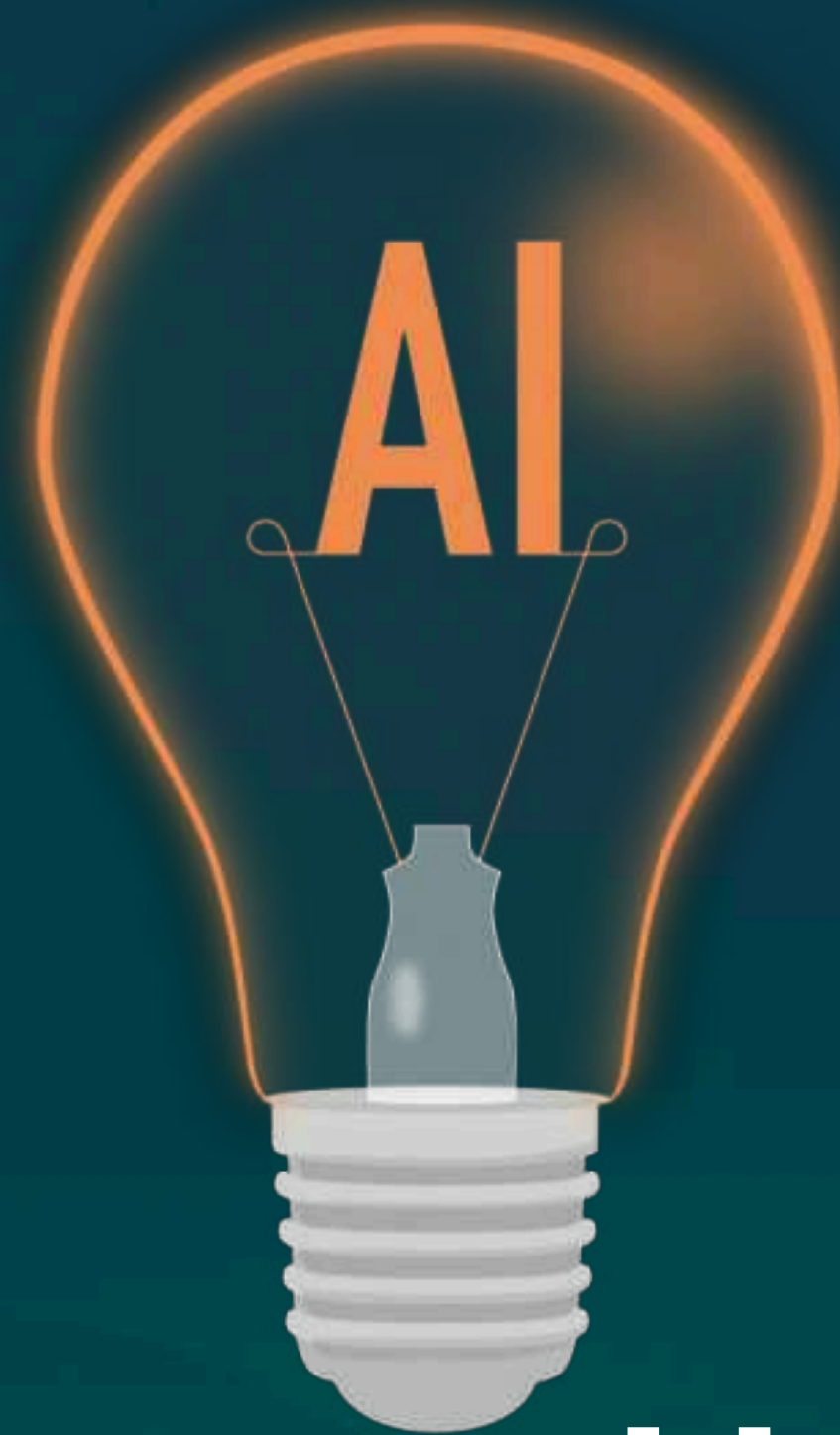
#5

AI Tools (servants) might be great*
but AI Masters (AGI)
will be detrimental

Innovative

Disruptive

Existential



Governable?

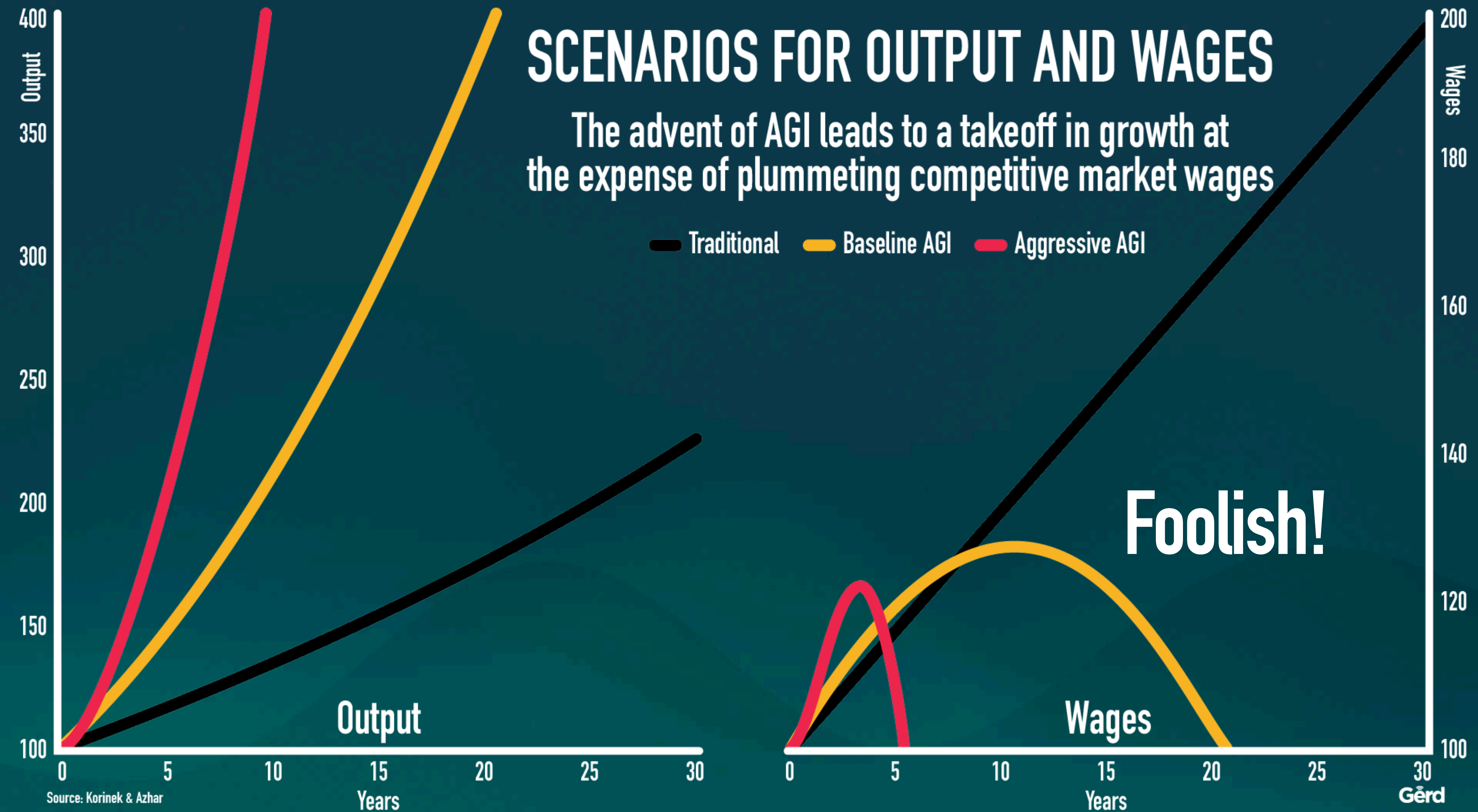
Foolish!



SCENARIOS FOR OUTPUT AND WAGES

The advent of AGI leads to a takeoff in growth at the expense of plummeting competitive market wages

Traditional Baseline AGI Aggressive AGI



Output

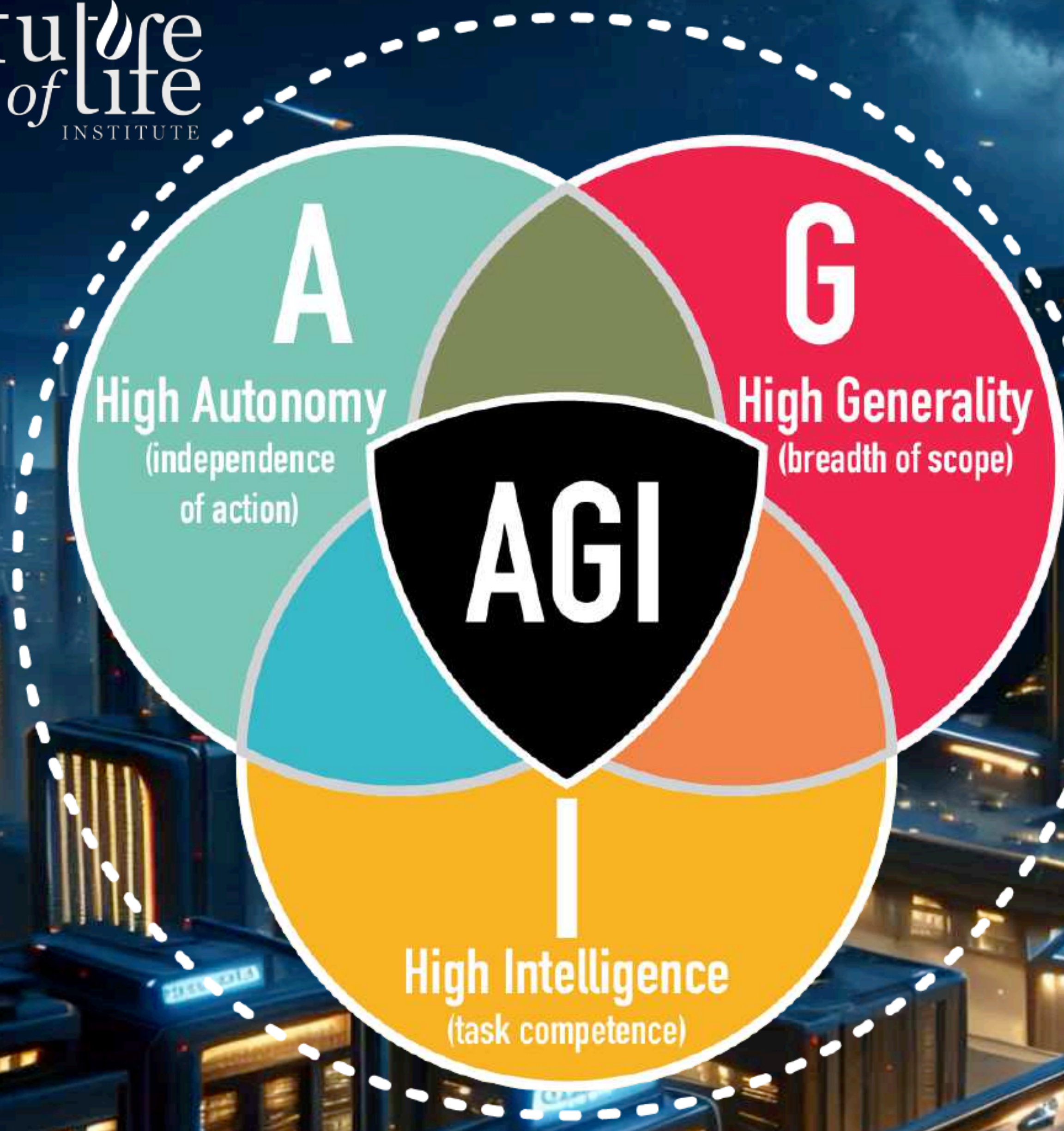
Wages

Foolish!

**AI AGENTS AUTONOMOUSLY
PERFORM TASKS ON BEHALF OF
A USER OR ANOTHER SYSTEM**



Jensen Huang CEO, Nvidia



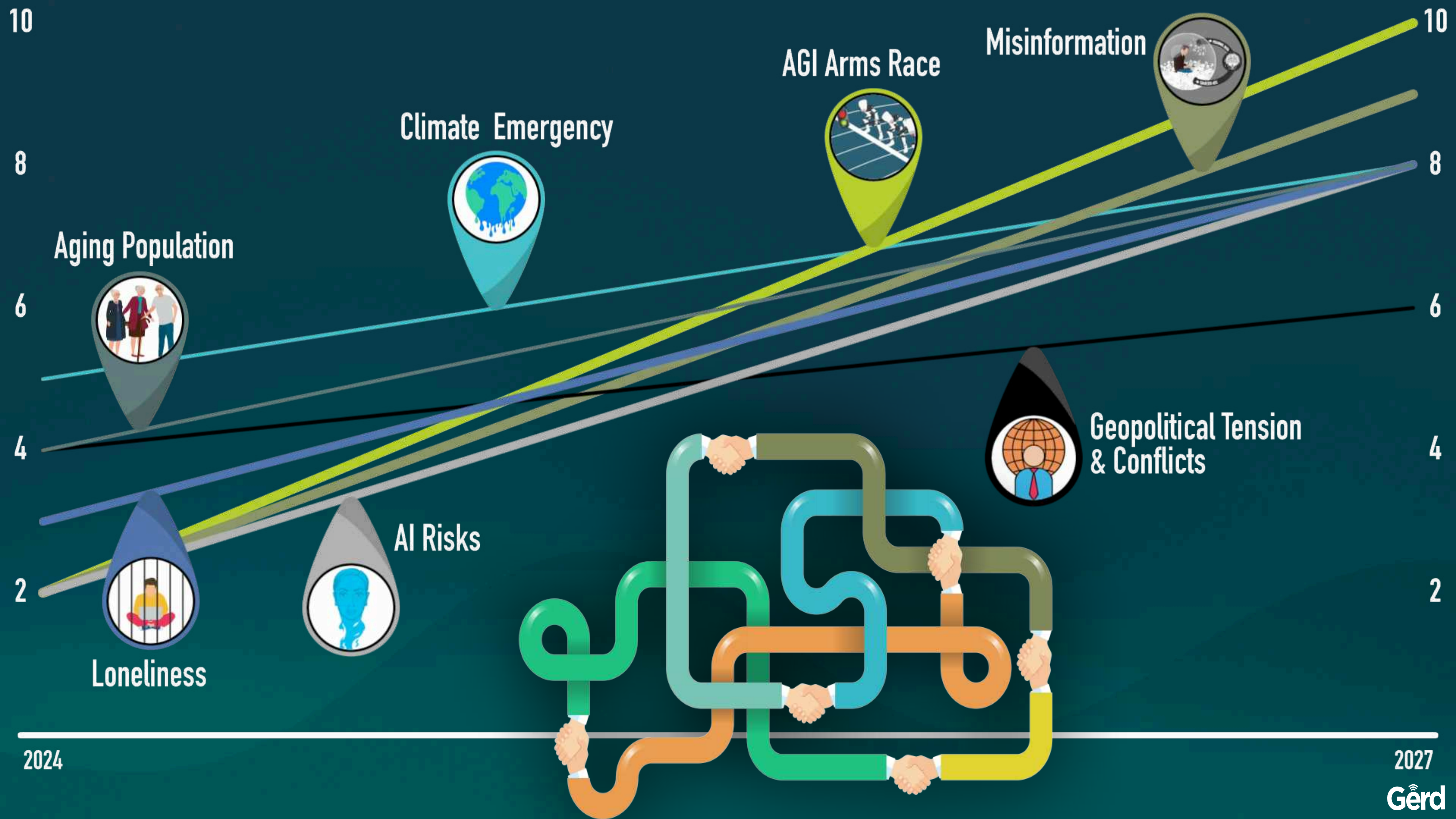
There are **no winners** in a race to AGI





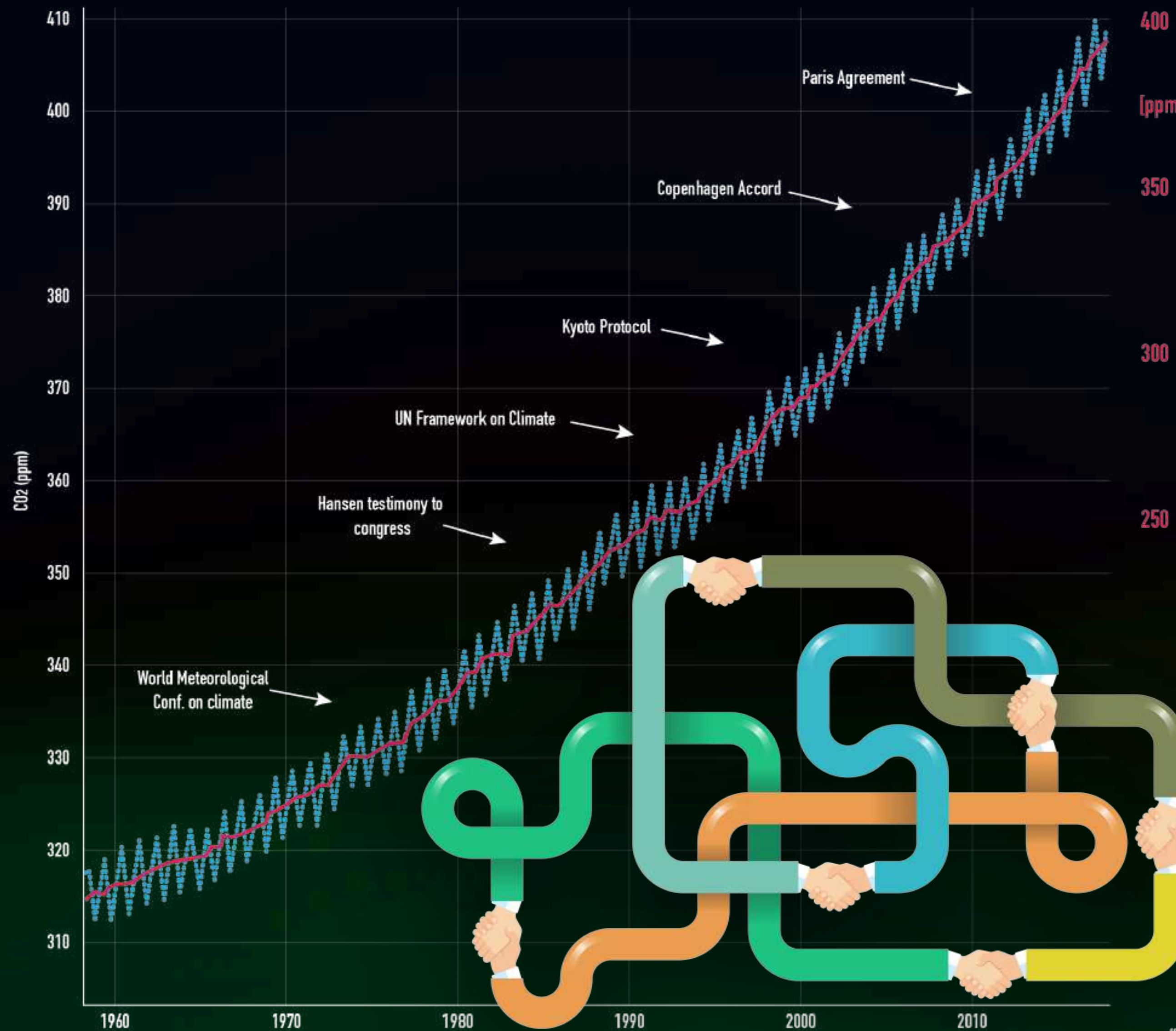
#6

Technology alone is **NOT ENOUGH**



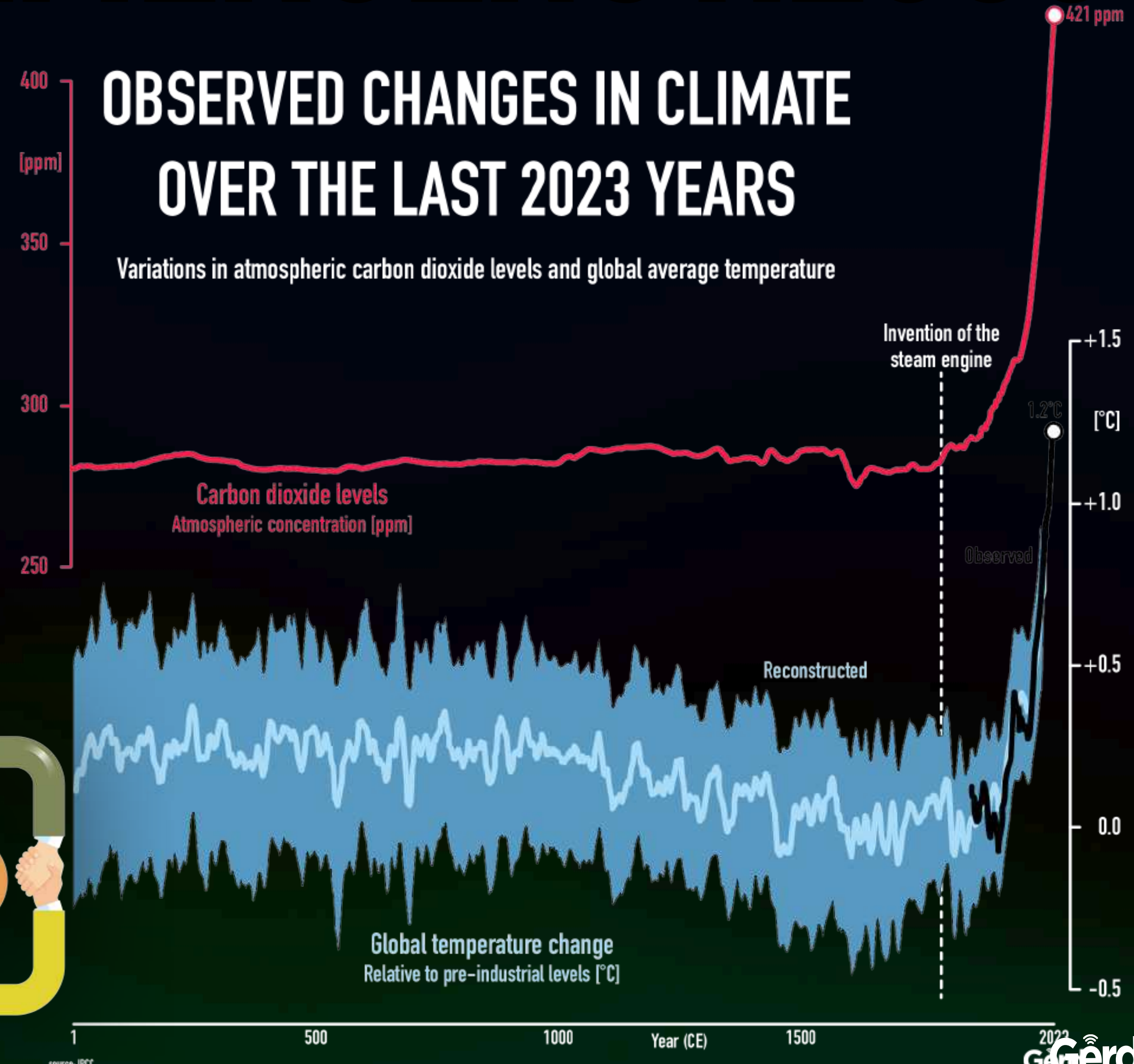
PEAK CLIMATE EMERGENCY: 2030

MAUNA LOA MONTHLY AVERAGES

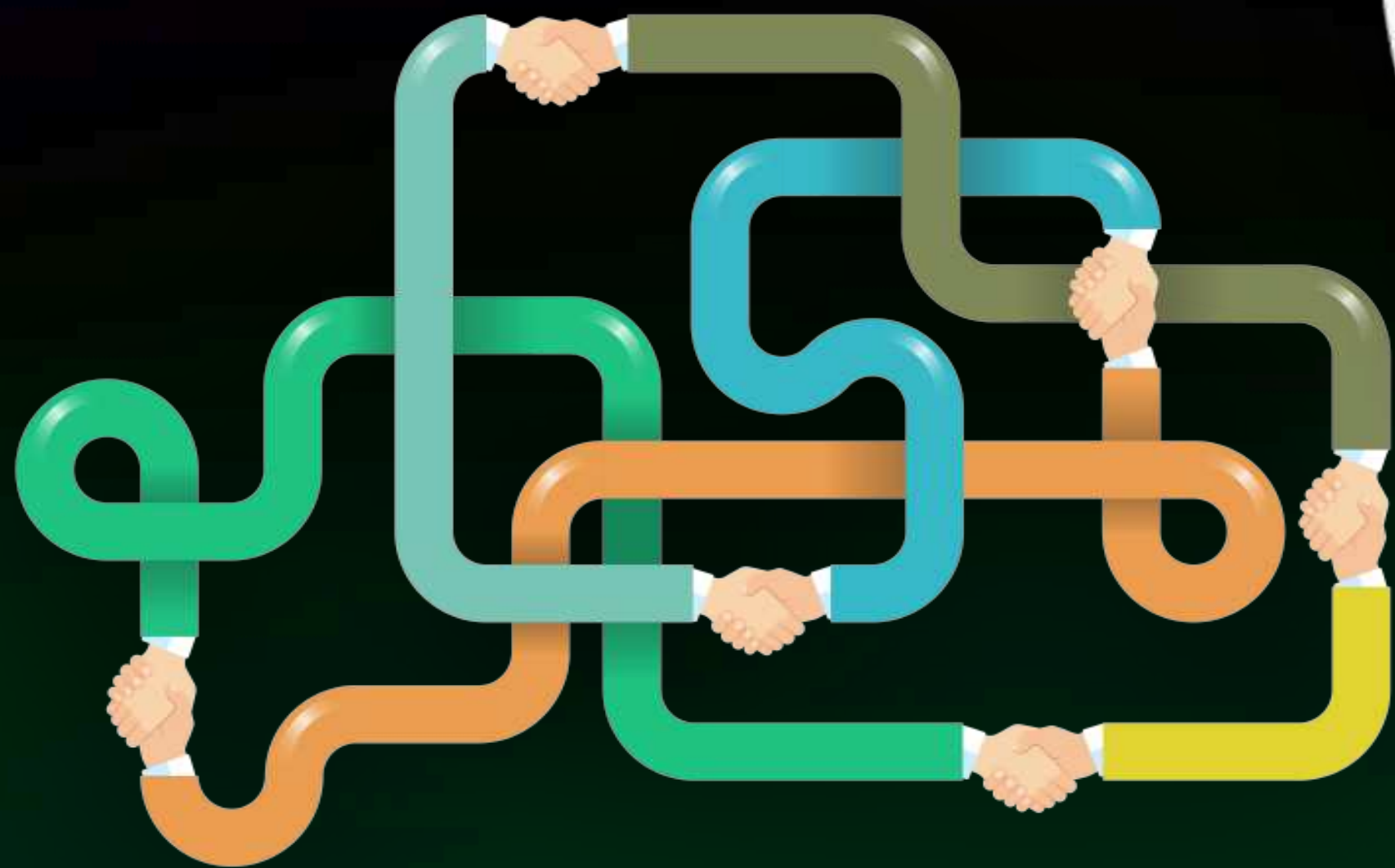


OBSERVED CHANGES IN CLIMATE OVER THE LAST 2023 YEARS

Variations in atmospheric carbon dioxide levels and global average temperature



PEAK CLIMATE EMERGENCY: 2030



By 2050, climate change could put **\$26 trillion** in global financial assets at risk, forcing central banks to integrate climate risk into monetary policy.

(IMF)

YOUR MINDSET CONTAINS YOUR FUTURE



THE GOOD
FUTURE

Intelligence \neq Consciousness

Machines **DON'T** 'Think' or 'Feel'

Machines **DON'T** have hunches

Machines **DON'T** 'understand'

Machines **DON'T** imagine

Machines **DON'T** care

Humans \neq Machines



AI: Pursue Competence not Consciousness



Summary and suggested action items

- Act with tomorrow's logic, not with yesterday's logic!
- Understand the 4 Revolutions: geopolitics, digital, sustainability, purpose / human
- Stay positive: "As you see the future, so you act; as you act so you become"
- Choose TheGoodFuture: "To do good is to generate happiness, to do evil is to generate pain"
- When rolling out AI products: a) pursue competence not consciousness b) keep the humans-in-the-loop (HitL) at all times c) Reminder: Too much of a good thing can be a very bad thing

**GEOPOLITICAL
REVOLUTION**

**DIGITAL
REVOLUTION**

**SUSTAINABILITY
REVOLUTION**

**PURPOSE
REVOLUTION**

Thanks for your time and attention!

“We are to be architects of the future, not its victims”
(Buckminster Fuller)



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Gerd Leonhard, Futurist
& CEO The Futures Agency



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