

The Future of Artificial Intelligence: What to Expect in the Next 5 Years? (Future European Institutions)

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AI in Paland, Europe and World

- AI as horizontal technology
 - Education
 - Research
 - Innovation
- 4th Generation Academic Institutes
 - Ideas Institute
- Future of AI
 - Education
 - Research
 - Innovation

AI as Disruptive Technology


Meaning of **disruptive technology** in English



disruptive technology

noun [C] • WORKPLACE

UK  US 

Add to word list 

a new technology that completely changes the way things are done:

- *A disruptive technology overturns a traditional business model, which makes it much harder for an established firm to embrace.*
- *He contends that so many new and disruptive technologies have emerged in the last few years that no company is immune to competition.*

This site quizzes 9 Verbal & 4 Vision AIs every week | Last Updated: 11:08AM EDT on September 14, 2024

IQ Test Results

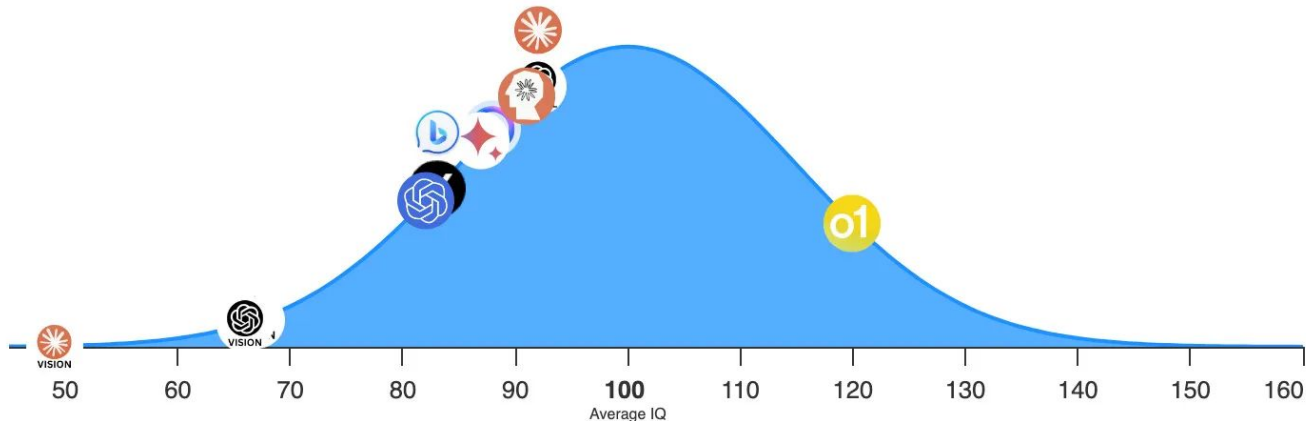
Reset

Show Offline Test

Show Mensa Norway



Score reflects average of last 7 tests given



OpenAI o1 preview	Llama-3.1	Grok-2
Gemini Advanced (Vision)	Gemini Advanced	GPT4 Omni (Vision)
GPT4 Omni	ChatGPT-4	Bing Copilot
Claude-3.5 Sonnet	Claude-3 Opus	Claude-3 Opus (Vision)



Wojciech Zaremba ✓

@woj_zaremba



I like how the blog bounded-regret.ghost.io/what-will-gpt-... gives a quantitative feel for how the agi will be. Here is a picture if you don't have time to read the blog.

[Przetłumacz wpis](#)



5:23 AM · 15 lis 2024 · **66,4 tys.** Wyświetlenia



24



40



352



187



x.com/woj_zaremba

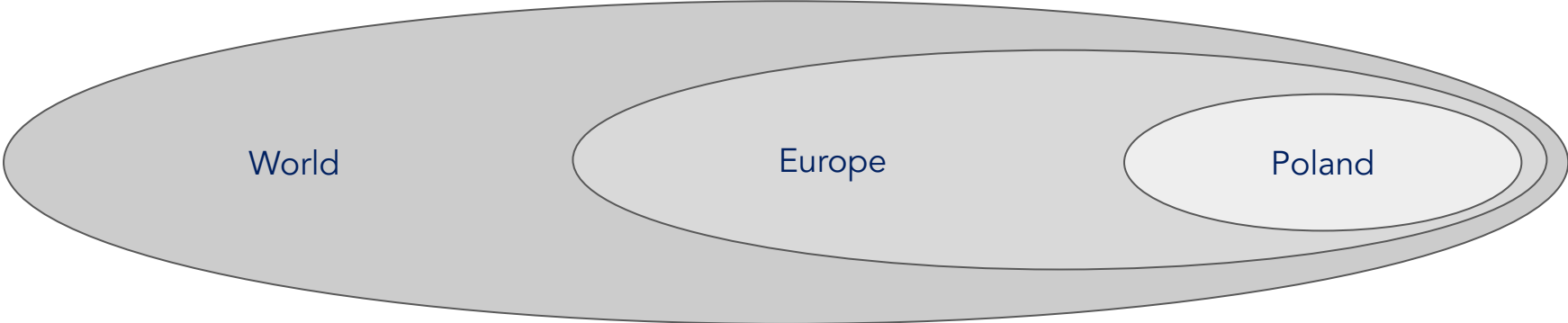
AI as Disruptive Technology

AI will change education and research.

Investments in AI will speed up progress in all technologies.

In the same time technology stack of AI is very shallow.

Poland, Europe, World

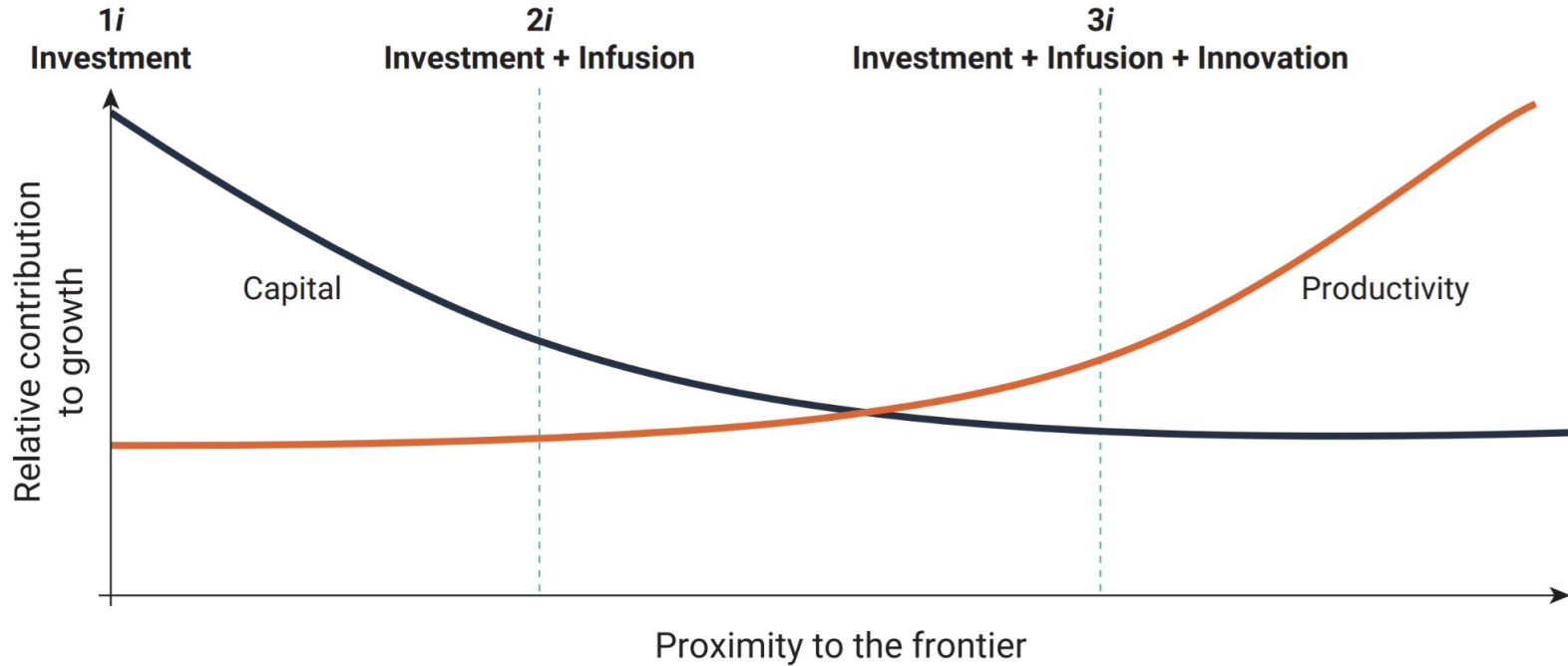


Poland, Europe, World



According to World Bank Poland shall switch gears from 2i to 3i and do global innovations.

World Development Report by World Bank



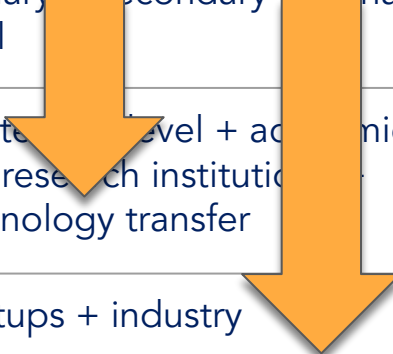
World Development Report 2024 by World Bank

Education, Research, Innovation

	Definition	World Development Report
Education	Primary + secondary + tertiary level	2i → Invest + Infuse
Research	Quaternary level + academic and research institutions + technology transfer	3i → Innovate
Innovation	Startups + industry	3i → Innovate

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Good fundamental skills are key for innovation.

AI Ecosystem: Poland, Europe, World

	Poland	Europe	World
Education	The World's Best Education	Very good Education	Very Good Education
Research	Mediocre Performance	Good Performance	Very Good Performance
Innovation	Mediocre Performance	Good Performance	Very Good Performance

We need institutions that create global innovations while training local talent.

AI Ecosystem: Poland, Europe, World

	Poland	Europe	World
Education	The World's Best Education	Very good Education	Very Good Education
Research	Mediocre Performance	Good Performance	Very Good Performance
Innovation	Mediocre Performance	Good Performance	Very Good Performance

We need institutions that create global innovations while training local talent.

4th Generation Academic Institutions

4th generation academic institutions by addressing global challenges, support local development.

Institute IDEAS has ambition of becoming 4th generation institution.

Institute IDEAS

Research

- Country wide PhD program in AI to keep world top talent locally.
- Publish in flagship venues in AI while doing globally relevant innovations.
- Dual-use technology.

Innovation

- Bring top-notch world experts to share their knowledge.
- Support local start-up ecosystem, and build network with VC firms.
- Bring global innovations into our defence.

Meeting with Sam Altman in Warsaw in May 2023



"Everyone is here."

What shall we do?

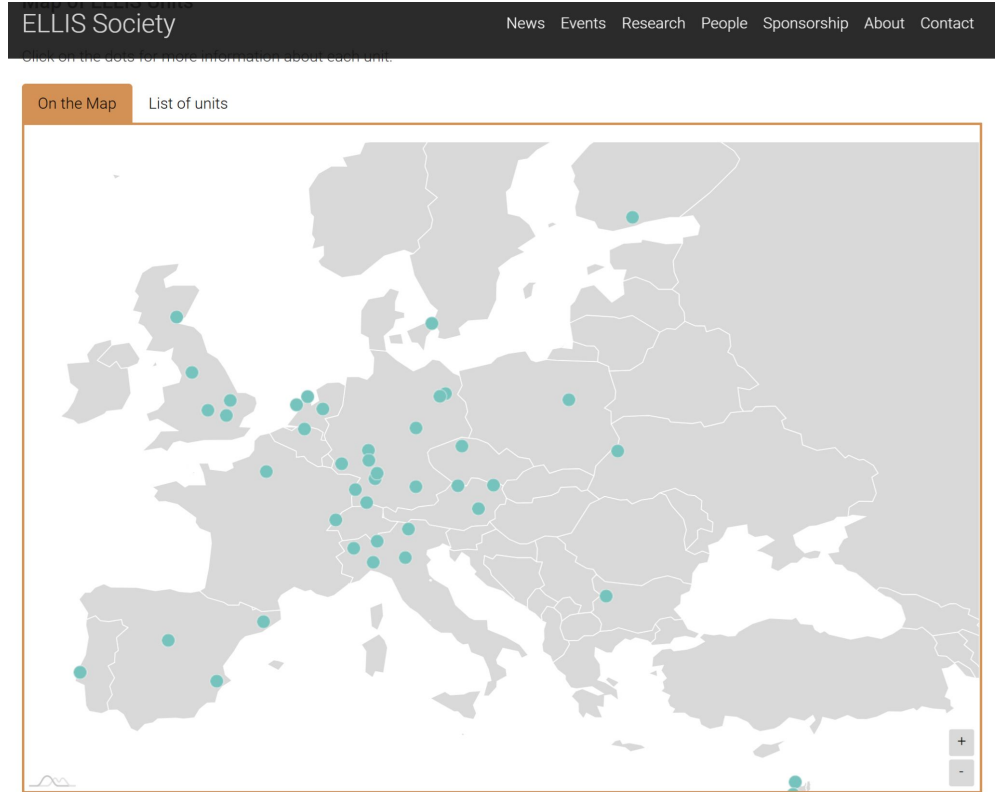
AI is a chance for Poland for global race:

- We have the world's best CS education!
- It is still shallow technology, so we can catch up with the leaders quickly!
- Will support all innovation!
- It happens exactly when we need to transition from 2i to 3i!
- Europe - the AI continent - MEP Virkkunen!

ELLIS Society

European Laboratory
for Learning and
Intelligent Systems
(ELLIS) is a
pan-European AI
network of excellence.

ELLIS Unit Warsaw
created 2023.



What shall we do for education?

Invest & Infuse

Keep up the good job we are doing, by supporting:

- existing CS master programs,
- informatics and AI olympiads,

Adam Gąsienica Samek took 2nd place on IOI!

- academic programming competitions,

The only finalists of ACM ICPC 30 times in a row.

What shall we do for research?

Improve our system by:

- Training maximal number of PhDs,
- Support participation in flagship conferences in AI.

According to Google Scholar

Publication	h5-index	h5-median
1. Nature	<u>488</u>	745
2. IEEE/CVF Conference on Computer Vision and Pattern Recognition	<u>440</u>	689
3. The New England Journal of Medicine	<u>434</u>	897
4. Science	<u>409</u>	633
5. Nature Communications	<u>375</u>	492
6. The Lancet	<u>368</u>	678
7. Neural Information Processing Systems	<u>337</u>	614
8. Advanced Materials	<u>327</u>	420
9. Cell	<u>320</u>	482
10. International Conference on Learning Representations	<u>304</u>	584

What shall we do for innovation?

Improve our system by:

- Training maximal number of PhDs,
- Support their smooth transition into entrepreneurs,
- Find specializations.

According to European Innovation Scoreboard

Innovate

Poland is an Emerging Innovator with performance at 65.9% of the EU average in 2024. Performance is above the average of the Emerging Innovators (48%). Performance is increasing more than the EU (+10%).

Performance change -2024	Performance change 2023-2024
13.0	3.3
16.8	16.2
0.0	11.6
26.9	27.5
31.6	9.2
18.6	-7.8
28.9	1.0
19.2	1.5
8.3	-41.8
11.1	1.1

Relative strengths

- Design applications
- Population with tertiary education
- Enterprises providing ICT training

Relative weaknesses

- Foreign doctorate students as a % of all doctorate students
- New doctorate graduates
- PCT patent applications

What shall we do for research & innovation?

Prospective topics in AI:

- Personalized education,
- Embodied systems,
- AI for science.



A man with grey hair, wearing a blue long-sleeved shirt, is taking a selfie in a room packed with hundreds of vintage desktop computers. The computers, including monitors, keyboards, and towers, are arranged on desks and shelves, filling the entire room. The lighting is dim, with a blueish tint, and the perspective is from a low angle, looking up at the man and the sea of computers.

AI is a huge chance for Polish economy!

Thank you!

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