

Polish Digital Resilience Agenda 2040

a model of strategic preparedness
for the antinomies of digitalisation.

Scenario: The Polish paradox

**strategic area: Economy and business
competitiveness**

Scenario for the transformation of the economy and business competitiveness until 2040

Technology creates pseudo-work

"Technological progress, which was supposed to eliminate unnecessary work, is generating an avalanche of jobs with zero productive value."

EXPECTATIONS:

- AI eliminates routine tasks
- Automation brings prosperity
- Digitalisation drives innovation

REALITY:

- Regulations create pseudo-jobs
- The middle class shrinks from 55% to 25%
- Poland is weighed down by regulations

Three pseudo-work engines:

GDPR, AI Act, CSRD

Every EU regulation creates thousands of new compliance roles

The growth of bureaucracy

250 regulated professions (target: 60)

Concentration of capital

Large tech corporations are absorbing R&D; small businesses don't stand a chance

The EU's regulatory trap costs €2-4 trillion per year by 2040 through overregulation.

Three mechanisms of the erosion of the middle class

Automation eliminates the middleman

- Accounting, data analysis and process management replaced by AI
- Mid-skilled jobs are the first to disappear — polarisation: only the top and the bottom

Platformisation is displacing local intermediaries

- Small retail and logistics firms → replaced by platforms
- Local agencies, shops, brokerage firms: Amazon, Allegro, Booking

The concentration of technological potential by corporations is killing the local economy

- Global corporations can recoup R&D costs across millions of customers
- Polish companies operate on a fraction of that scale and cannot compete on equal terms

Poland's four
unique
endogenous
advantages

ADVANTAGE	CURRENT STATUS	POTENTIAL 2040
Gamedev	CD Projekt Red, Techland - global brands	Center for the creative digital economy
An engineering tradition	Competencies in automation and mechanics	The foundation of Industry 4.0 and robotics
Business services (BPO/SSC)	Mature infrastructure	CEE region hub for AI- enhanced services
Agriculture and bioeconomics	Untapped potential	Precision agriculture, agri-tech export

Strategic vision: Poland as the "Hyperintelligent Bridge of Eurasia"

"Geographical location and digitalisation - a strategic advantage of the 22nd century."

Goal: handling 20-25% of EU-Asia land trade

Added value: EUR 15-20 billion per year

Three infrastructure pillars:

CPK (Central Transport Hub)

A world-class air and rail hub by 2032

Euroterminal Sławków

Handling over 500,000 TEU/year – expansion by 2030

Via Baltica and Via Carpatia

Baltic–Adriatic–Black Sea road corridors – by 2035

Key multiplier - AI in logistics:

- predictive optimization of supply chains,
- autonomous distribution centers,
- digital twins of ports and terminals.

New raw materials and unconventional resources

Local resources

- all forms of uniqueness: historical, natural, product-related
- new business models creating new segments of the global market

Geothermal energy

- 100 geothermal power plants → 500 MW by 2035 based on existing boreholes
- covering 10% of the country's energy demand

Micro-hydro power plants

- 5,000 potential locations in Poland
- A distributed, stable energy resource

Computing power as an export

- data centres powered by renewable energy → export of 'computing power'
- data and computations as the new strategic raw material of the 21st century

Urban mining

- recovery of rare metals from urban infrastructure and electronic waste
- export of established standards and technologies

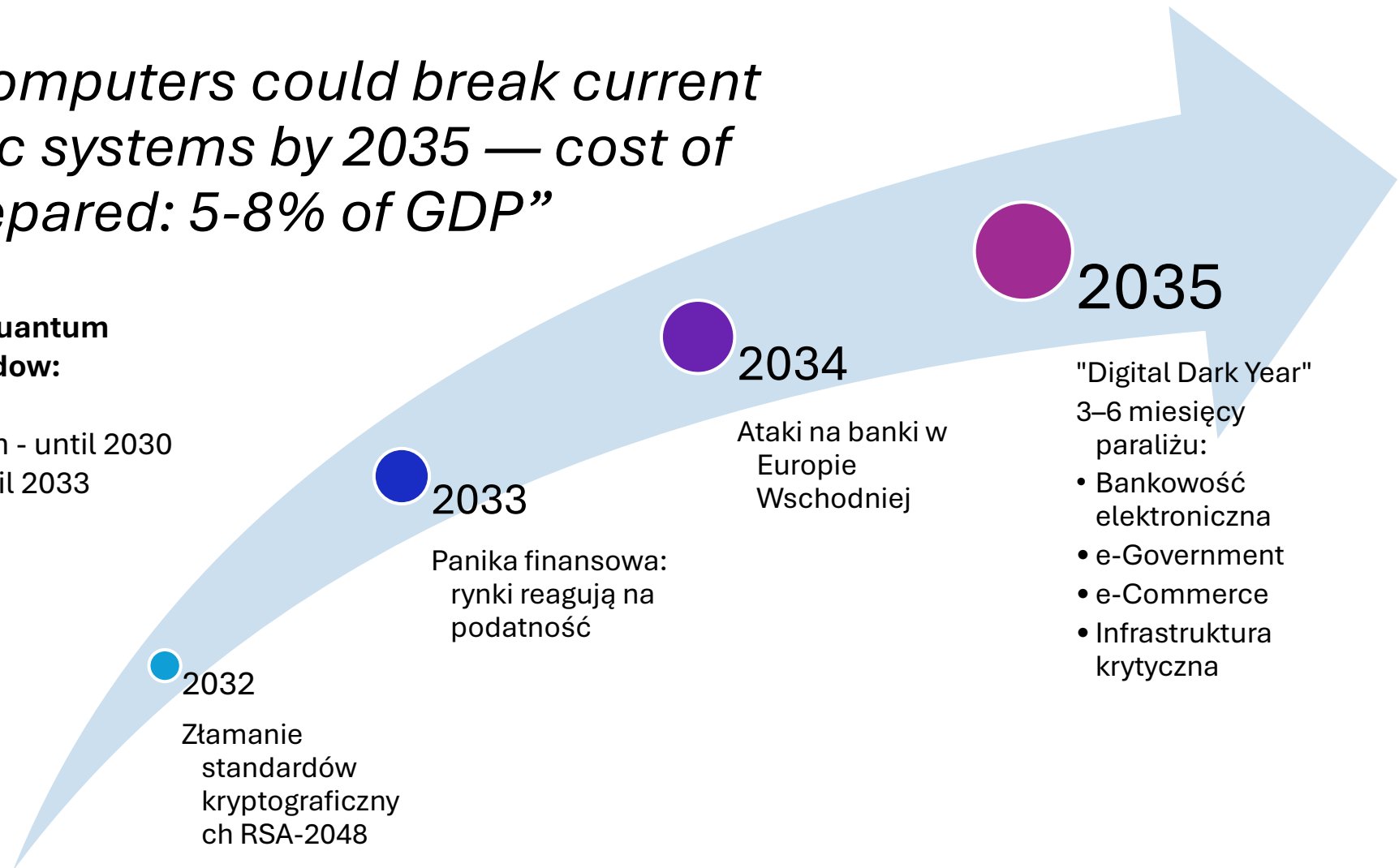
"Digital Dark Year 2035": quantum threat

“Quantum computers could break current cryptographic systems by 2035 — cost of not being prepared: 5-8% of GDP”

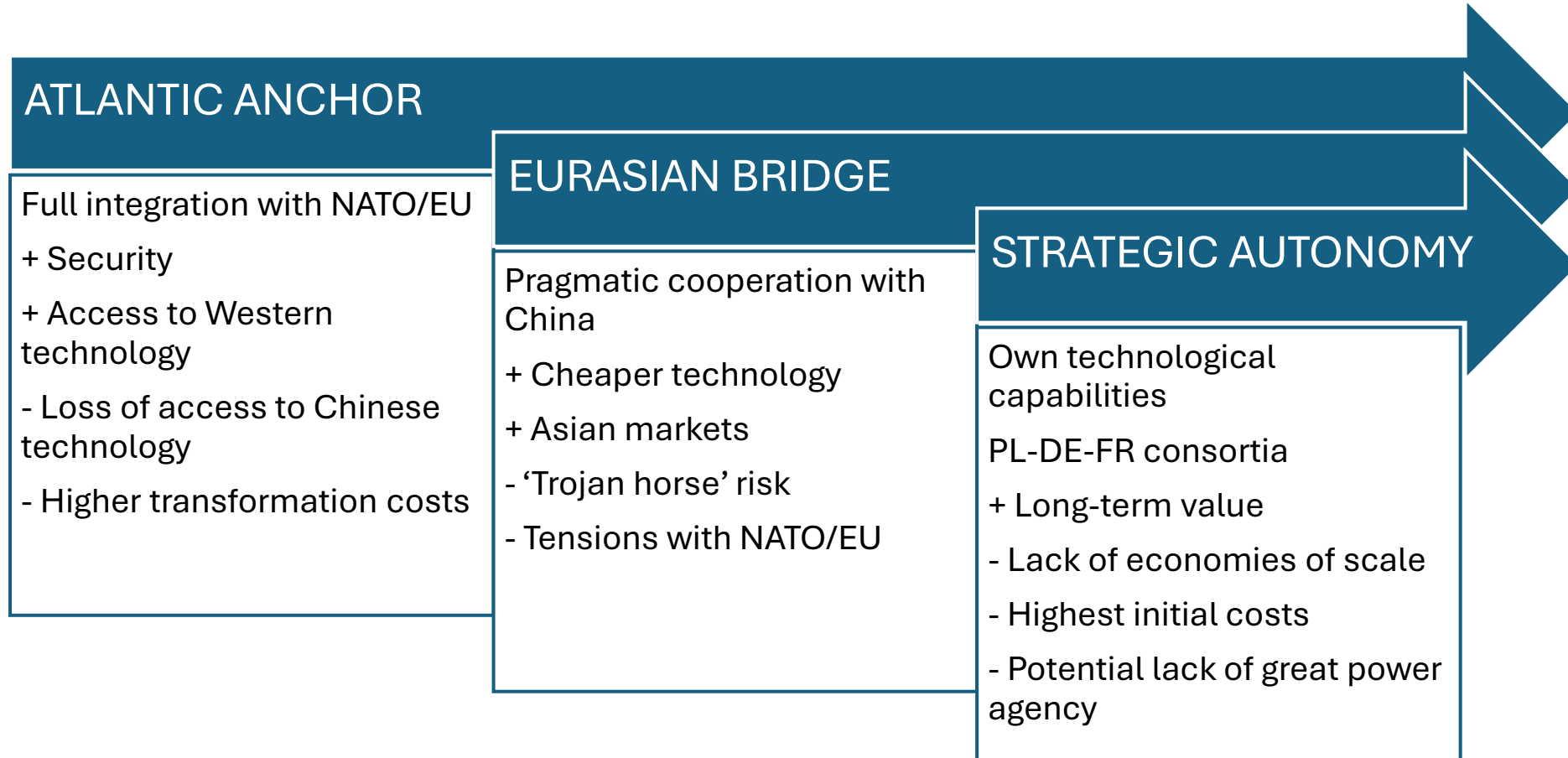
Strategic Response - Post-Quantum Cryptography Adoption Window:

- banking - until 2027
- government administration - until 2030
- critical infrastructure - until 2033

Pilots are already underway, but scaling is too slow



Three roads or a geopolitical dilemma



Three phases of transformation

PHASE I: FOUNDATION (2025–2030)

- Selective deregulation: reduction of regulated professions from 250 to 60
- Retraining of 500,000 people per year
- Regulatory start-ups: sandboxes for AI, fintech, insurtech
- Pilot scheme for post-quantum cryptography in banking by 2027
- Construction of the Central Airport (target: 2032), expansion of the Sławków Euroterminal

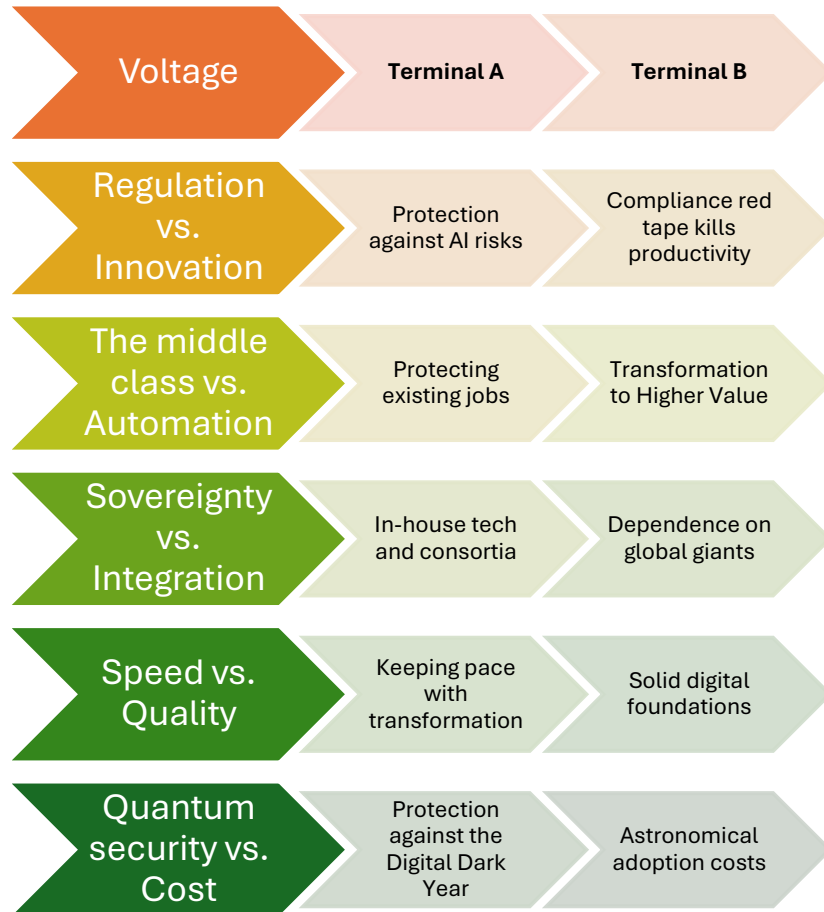
PHASE II: ACCELERATION (2030–2035)

- Polish AI Logistics Hub fully operational
- 500 MW of geothermal energy — 100 power stations
- Insurance against technological unemployment — protection for the middle class
- Post-quantum cryptography in government by 2030

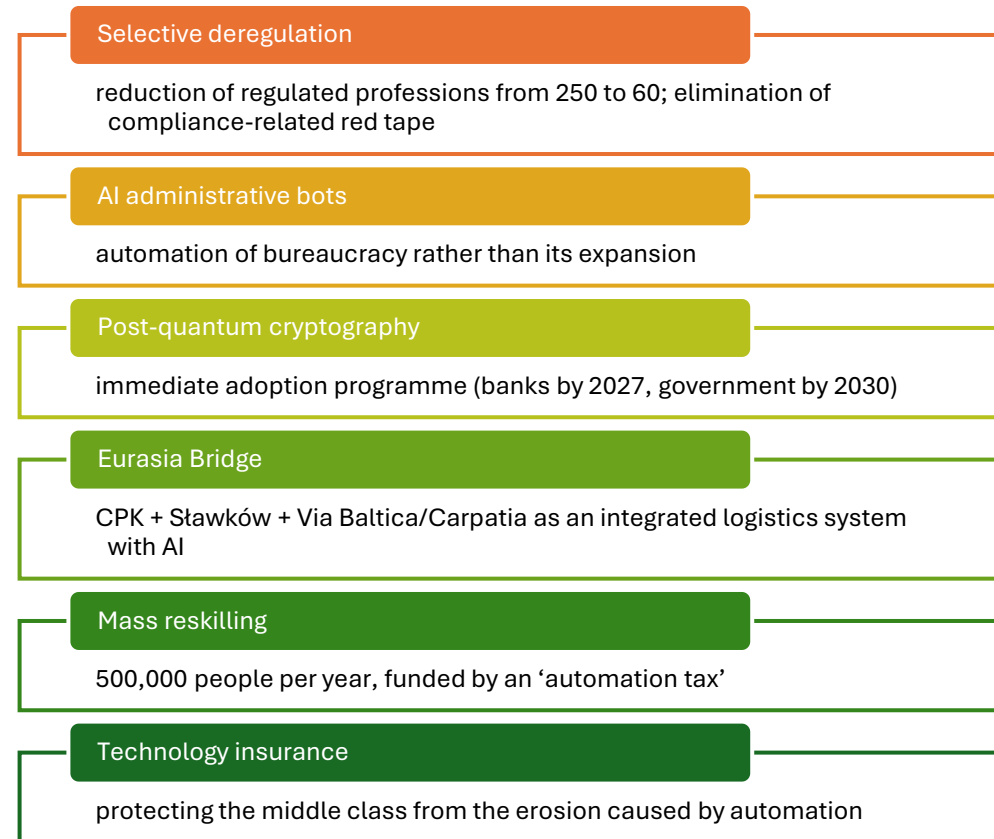
PHASE III: CONSOLIDATION (2035–2040)

- Technological autonomy — PL-DE-FR consortia
- 32-hour working week as the new standard
- Experiments with UBI (Unconditional Basic Income)
- Export of logistics and energy technologies to the CEE region

Key tensions and dilemmas



Strategic recommendations



Conclusion: paradox as opportunity

*"A paradox is not a verdict - it is an invitation
to an unobvious choice."*

Poland has three futures to choose from:

The pseudo-work trap

regulatory overreach + erosion of the middle class +
failure to address the quantum threat

Dynamic equilibrium

partial transformation, protection of the middle class,
Eurasian Bridge

Civilisational leap

full exploitation of endogenous advantages, strategic
autonomy, technology exports



Ministerstwo Nauki
i Szkolnictwa Wyższego



Polish Digital Society

<http://cyfryzacja.org>

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Postscript: one-page script

This is a paradoxical scenario at the heart of Poland's digital transformation. Technology that was supposed to free work from the yoke of routine is generating an avalanche of unproductive work. Automation, which was supposed to increase the prosperity of the middle class, threatens to disintegrate it. Poland, which could be Europe's digital tiger, may get stuck in the middle-income trap.

The central paradox is precise: even though AI and robotization are eliminating routine jobs, the EU's regulatory pressure (GDPR, AI Act, CSRD) and the bureaucratic growth of the state are generating an avalanche of "pseudo-work" — jobs with minimal productive value that push capital and talent away from truly value-creating sectors. Instead of growing through innovation, Poland can grow by administering innovation.

At the same time, Poland has four unique advantages that the world will not take away from it: geographical position between the EU and Asia, engineering tradition, dynamic gamedev and untapped agro-bioeconomic potential. The key question is: Will we have time to turn them into economic levers before the middle class shrinks from 55-60% of the population to 25-30% of the population?

A dramatic test will be the year 2035 - the "Digital Dark Year": the window in which quantum computers can break RSA cryptography, paralyzing banking, e-commerce and critical infrastructure for 3-6 months. Poland is unprepared. Cost of unpreparedness: 5-8% of GDP.

The geopolitical choice will close the narrative: Poland must decide whether it is an Atlantic Anchor, a Eurasian Bridge, or a Strategic Autonomy - each path has a different price and a different future.