Presentation Notes

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Impact of AI Adoption and Innovation on EU Global Competitiveness

Introduction

Artificial Intelligence (AI) is rapidly becoming the decisive layer of industrial, defence and societal competitiveness. Europe faces a dual challenge: converting its scientific and research excellence into market-scale applications and doing so while safeguarding fundamental rights and democratic values.

Where the EU Stands Today

- Only about 13 % of EU firms currently deploy AI, a share that is rising but still trails the United States and China.
- Private capital is shifting: investment in European AI start-ups surged by more than 50 % year-on-year in early 2025.
- Five EU/EEA countries sit in the top-ten of the IMD World Digital Competitiveness ranking (Denmark, Sweden, Netherlands, Finland, Germany), yet Europe as a bloc still lags the U.S. on scale.
- The Global AI Index places France and the UK in the global top-five, showing that when capital, compute and talent converge, Europe can climb fast.

  Key Companies on Data and Artificial Intelligence: Mistral (France), Hugging Face (France), Aleph Alpha (Germany), Siemens (Germany)
  Key Alliances on Data and Artificial Intelligence: European AI Alliance, AI4EU Platform, Big Data Value Association (BDVA)

Structural Strengths & Gaps

Strengths

- World-class research output: Roughly one-third of the world's top-cited AI papers originate in Europe.
- Regulatory first-mover advantage: The EU AI Act has established the global benchmark for trustworthy AI.
- Major public-finance push: the European Investment Bank's new €70 billion "Tech EU" window (2025-27) targets super-computing, AI and deep-tech scale-ups.
- **AI Gigafactories Initiative:** The EU is kick-starting large-scale "AI gigafactories" for advanced chips, sovereign cloud, and model-training capacity, leveraging the Chips Act and IPCEI funds to anchor key hardware and compute infrastructure in Europe.

Gaps

- Scale-up capital "valley of death": half of late-stage equity still comes from outside the EU.
- Compute shortfall: The EU hosts under 10 % of global high-end GPU capacity.
- Fragmented data spaces and a persistent talent leak, about 12 % of EU AI PhDs relocate to the U.S. within five years.

EuroStack – Building a Sovereign AI Technology Stack

- **What it is:** EuroStack is the emerging end-to-end European technology stack, namely hardware, firmware, operating systems, middleware and open-source frameworks, optimised for AI workloads and compliant with EU standards.
- **Strategic goals:**
  - Reduce dependence on extra-EU cloud and chip supply chains.
  - Guarantee data-protection-by-design and interoperability across sectors and borders.
  - Provide predictable, standardised interfaces so SMEs can plug-and-play advanced AI services without vendor lock-in.
- **How it helps AI competitiveness:** By marrying sovereign compute, trusted data spaces and reusable model libraries, EuroStack lowers the cost of experimentation, accelerates time-to-market for start-ups, and ensures that AI innovations scale under European values and cybersecurity standards.

Employment & Skills Implications

- Gen-AI could lift EU labour productivity by 11-17 % by 2030, but tasks, not whole jobs, will disappear first.
- Only 56 % of Europeans have basic digital skills; ICT specialists constitute just 5 % of employment, well short of the EU's target of 20 million specialists by 2030.
- Deployment must be paired with large-scale re- and upskilling programs, new-generation training programmes, and social dialogue mechanisms, such as negotiated algorithmic-transparency clauses and human-machine teaming programmes.

Policy Recommendations – Five Levers

1. **Implement the AI Act pragmatically**: provide early guidance and regulatory sandboxes so innovators can comply without stalling innovation.
2. **Mobilise scale-up capital**: fully deploy the EIB Tech EU window and blend it with national sovereign funds and private limited-partner money to close the estimated €35 billion late-stage gap.
3. **Secure compute and data infrastructure**: expand Euro-HPC, create a European "AI compute commons" with carbon-neutral data centres and federate sectoral data spaces.
4. **Accelerate SME adoption**: upgrade Digital Innovation Hubs by providing hands-on support on AI innovation.
5. **Strengthen the talent pipeline**: fast-track Blue-Card visas for AI experts, incentivise industrial PhDs and embed AI modules across.

Conclusion

Europe already possesses the ingredients, namely science, cutting-edge research, values, and the single market. What it now needs is speed and scale. If we get adoption right, AI can add up to €1.3-1.8 trillion to EU GDP by 2030 while reinforcing Europe's distinctive model of human-centric technology. Let us move decisively to seize that opportunity. Overall, Europe commands world-class research, robust data protection and a vast single market, yet it still struggles to convert scientific excellence into scale, trailing the U.S. and China in private capital, compute, and unicorn valuations. Regulatory leadership via the AI Act positions the EU as the global standard-setter for trustworthy AI, but speed of deployment and risk-friendly financing remain critical gaps. The emerging EuroStack, AI gigafactories and Tech EU window can narrow the divide if executed swiftly. Yet, success hinges on scaling start-ups into world champions, securing sovereign compute, treating data as a common good, and aligning skills with rapid market demand to meet citizens' expectations and competitiveness.