

# Professor Rob Dover

The impacts of technology on growth

# A word about the region...

- Hull and East Yorkshire faces a *dual reality*: significant structural challenges **and high-potential platforms to build upon.**
- Great connectivity, relatively low living costs, geographically delivered advantages. Lots of growth potential.



# AI and the future of work

- Full adoption of AI could save almost 25% of workforce time – equivalent to the output of 6 million UK workers\*
- Up to **30% of existing jobs could see tasks automated by 2030**, with routine cognitive work (e.g. admin, some HR, basic accounting etc) especially exposed to agentic AI.
- (\*apply caution to futurology)



## AI futures 2

- **-ve view: job displacement, wider inequality, and lost investment.**
- AI is a powerful general-purpose technology that simultaneously can create **prosperity and/or exacerbate s/e divides.**
- **‘Megatrend’ convergence:** ubiquitous high-speed connectivity, growing Internet of Things (IoT), robotics, and data analytics = “smart” infrastructure possible in every sector.

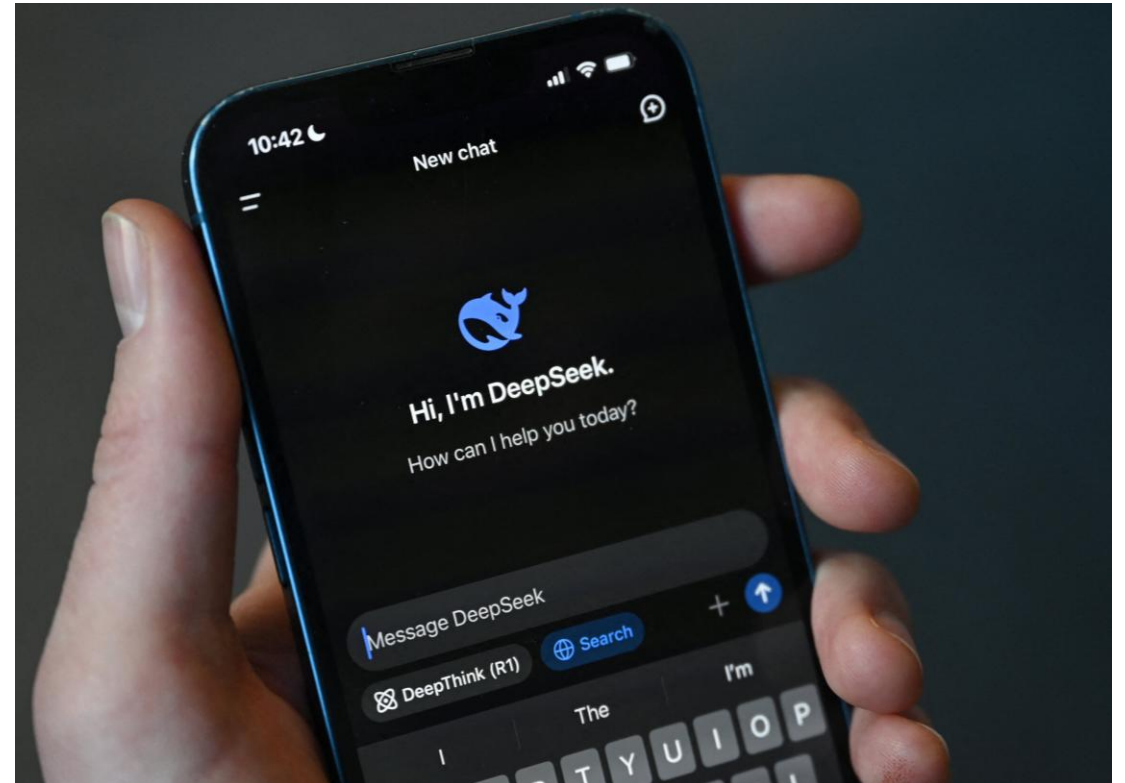


- There is a climate and energy revolution.
- **Decarbonisation** is changing the definition of industries:
- So, automotive companies are becoming software firms (with a car hosting their tech),
- **Ports and energy utilities** are becoming data-centric companies.
- *Regions that can find a way of innovating and adapting will thrive. HEY = well placed.*



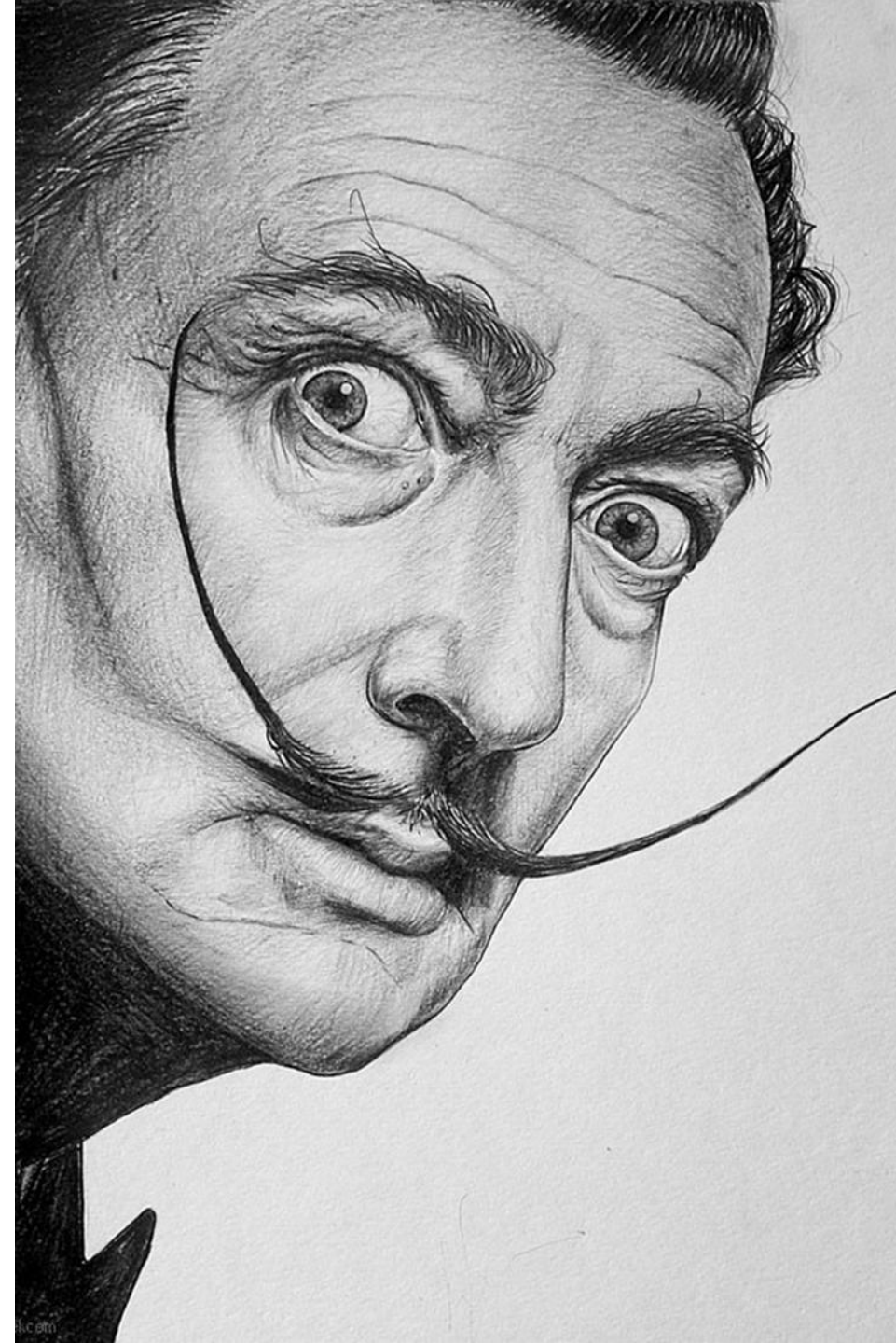
# AI Futures... It's all geopolitical

- US vs China.
- DeepSeek – scarcity as the engine room of innovation.
- Data soak – US vs China (Russia interested but multi-modality – and we should note our windfarms)
- Warfighting increasingly cyber premised.
- And don't mention deepfakes and disinformation.



# Bilbao – ‘think big and long-term’

- Port city – unemployment spiked at 25%
- **‘Holistic transformation’** – advanced manufacturing, services and culture.
- Transformation was measured in decades, addressed quality of life, and shared values.
- **Innovation campuses** and a **cultural draw** eg the Guggenheim – world famous.



# Pittsburgh – ‘Roboburgh’

- 1980s – steel industry collapsed leading to 17% unemployment and depopulation.
- **Strategically opted for tech and advanced industry campuses**
- 1) Investment in education and R&D,
- 2) Public-private partnerships;
- 3) Unified identity = ‘making things’;
- 4) External investment.
- Some overlaps with HEY with the foundational building blocks.



# Malmo – from shipbuilding to tech/creative

- Has reinvented itself as a tech and creative hub. Invested in education – so that population remains ahead of the technology curve.
- **Focused on connectivity (digital and physical)**
- Focused on **quality of life**
- = both aim to attract innovative people who want to start and grow businesses.



# Unifying themes from the case studies

- All responded to economic shocks and change.
- All had brave (and patient) local leaders
- All had a level of strategic investment (aligned to the mission)
- All embraced change, but ensured that those negatively impacted by it were brought along (this will be important for AI, more generally).



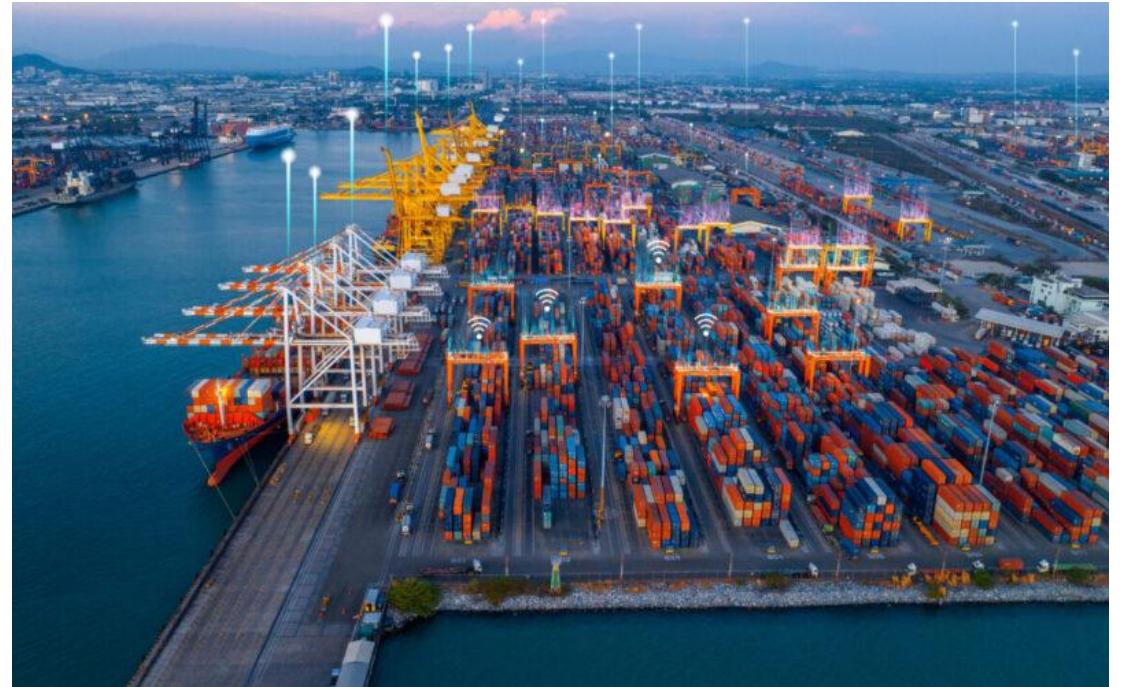
# Idea 1: Smart Ports and Logistics: The Humber High-Tech Trade Hub

- **The port complex as leader in logistics and maritime technology.**
- **AI and automated/IoT Port Community System** across the four port areas (Hull Goole, Grimsby, Immingham). Automated movements, predictive maintenance.
- **Testbed for autonomous vessels and drones** on the basis of the unique growth potential from optimising the port. Innovation Zone <> freeport.
- Logistics hub for maritime, rail, road – premised on AI optimisation.
- Creating the **Humber High-Tech Trade Hub**.



# Humber High Tech Trade Hub

- **AI algorithms manage logistics flows:** analysing years of shipping data and real-time conditions to predict surges in container volume, AI can dynamically allocate cranes, schedule transport and dockers, and minimise vessel wait times.
- **Digital twinning project** – real-time digital replica to simulate for improvements.
- Comparator case study: Rotterdam.



## Idea 2: From Energy Estuary to AI Estuary

- (North Lincs slightly ahead with Tech Park).
- **AI data centres follow the power..**  
Different dynamic.
- AI super-computing and data centres powered by sustainable energy (and cooled by our water, with byproduct energy in community heating?). Taps into KCOM infrastructure and could be leveraged to attract inward investment.
- ‘Cutting emissions while fuelling a new digital economy in the region.’



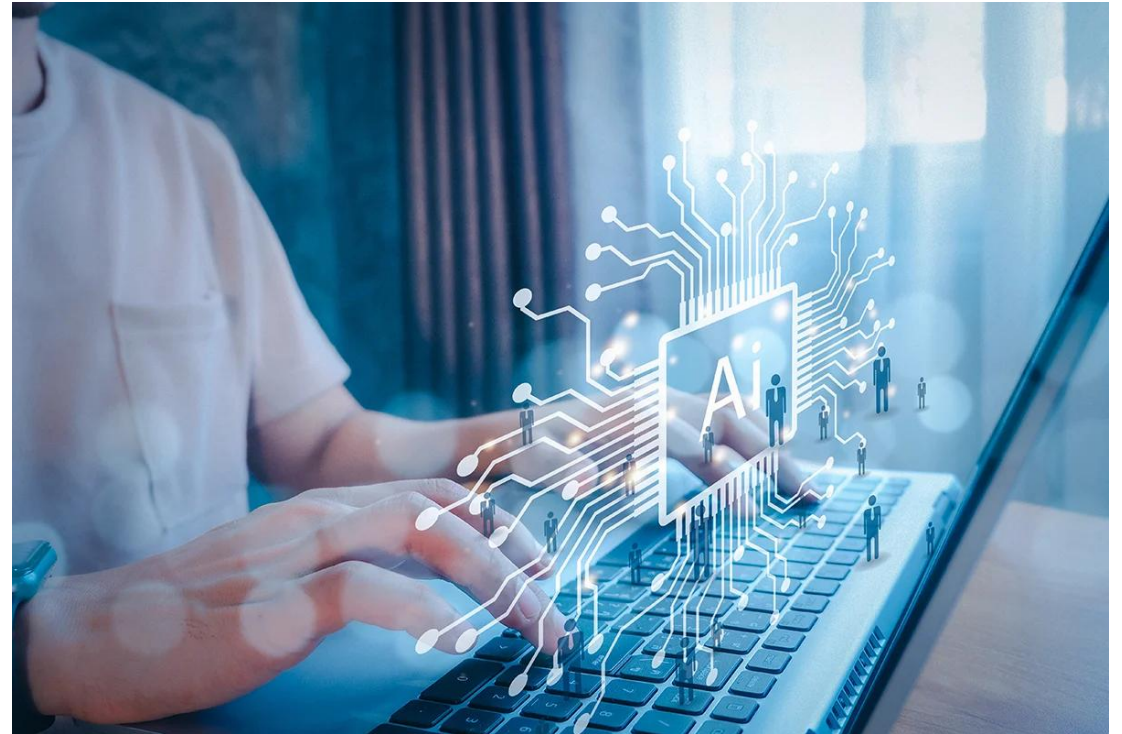
# 4<sup>th</sup> generation manufacturing

- Upgrading industry to remain competitive.
- To amplify the effect = a virtuous circle of securing investment, facilitating innovation (R&D, training facilities, university linkages).
- Clusters or hubs: eg mobility with Siemens, with caution Pensana for rare earths, AI for industry, Med-Tech, Digital Creative. (Inc SMEs in ecosystem).



# HEY's Future Ready Workforce

- **Reskilling** of those sectors that phase out or decline.
- **Pull-through skilling in a strategically aligned education system from primary to university**, as a pipeline of future ready workers. (Coordination role).
- Small thought: **AI enabled skills and job matching (identifying where reskilling is needed, and then placing that requirement in the aligned education system).**



## Mindset of Opportunity.

- **Lead where we have strength:** in offshore wind and green energy: making the Humber a world leader in how to integrate renewable power with industry and AI.
- Lead in demonstrating new technologies (be it smart port systems or 5G logistics): innovation hubs.
- Virtuous circle: leading will attract investment and talent.
- Flexibility and continuous learning should become hallmarks of the Humber high-tech workforce.
- **Collaborate to mitigate gaps:** reach outward – to national government for support (e.g. funding major R&D, improving transport links), form a Northern alliance on innovation) and internationally.
- **Public-private collaboration** is essential: so, companies, councils, universities, and communities must co-create solutions.



# Mindset of Opportunity

- What if Hull and East Yorkshire could become not just a follower, but a pioneer in this new era?
- What if, in ten years, other regions are coming to study “**the Humber model**” of green, inclusive tech-driven growth?
- The raw ingredients are present.
- Will require urgency and disruptive zeal in regional policy making.



# | Thank you

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# Exercise 2

Local Growth Plan priorities



# LGP priorities

1. Choose either the **OPPORTUNITIES** or the **CHALLENGES** conversation
2. Work through facilitated stages
3. Feedback the priorities you identify
4. Some real-time ranking and discussion



# What do we think?

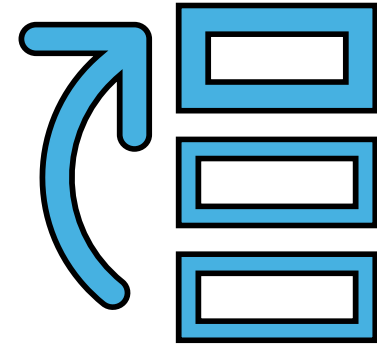
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Most significant for HEY?

Most significant for HEYCA?



# Re-cap and next steps

Crowdsourcing day two

# Crowdsourcing day two

1. Tell us what more you'd like to talk about tomorrow
2. Tell us how you're feeling after today 😊



# Kersten England

Leadership in devolved systems



**THANK YOU!**