"The future is in these surgical,

specialized AI applications that solve billion-dollar problems in the physical world..

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Predict.
Simulate.
Transform.

It's time to move beyond AI hype and
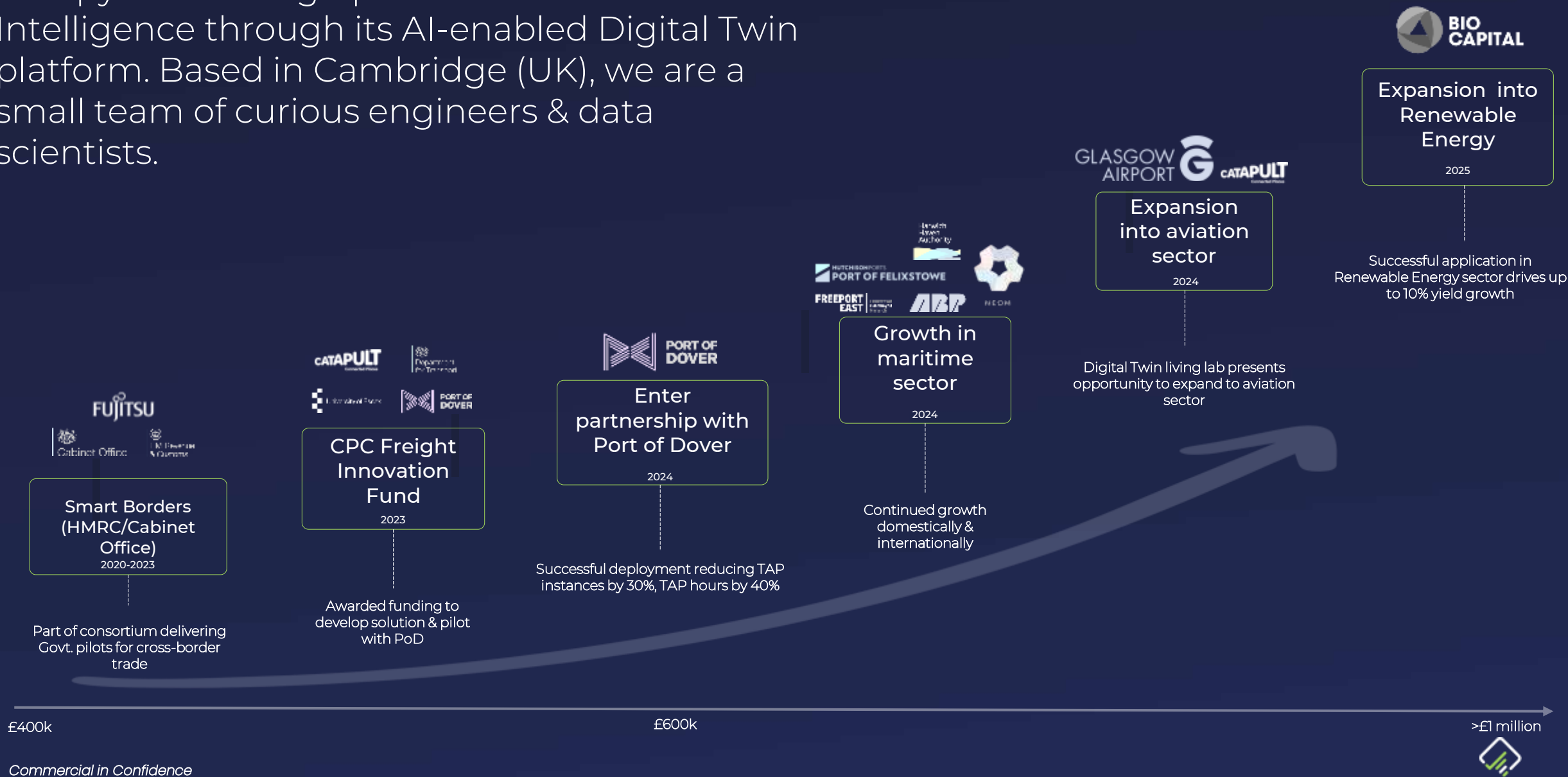**unlock real-world decision intelligence.**

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About Entopy.

- Technology company based in Newmarket.
- Specialising in Artificial Intelligence & Digital Twin.
- Critical infrastructure: transport systems & energy.
- Various proprietary techniques to overcome key challenges and deliver effective intelligence.
- Ontology, micromodels, synthetic data, agent
- Port of Dover, Port of Felixstowe, Department for Transport, Glasgow Airport, Biocapital...

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Entopy delivers high precision Decision Intelligence through its AI-enabled Digital Twin platform. Based in Cambridge (UK), we are a small team of curious engineers & data scientists.

Expansion into Renewable Energy

2025

Successful application in Renewable Energy sector drives up to 10% yield growth

Expansion into aviation sector

2024

Digital Twin living lab presents opportunity to expand to aviation sector

Growth in maritime sector

2024

Continued growth domestically & internationally

Enter partnership with Port of Dover

2024

Successful deployment reducing TAP instances by 30%, TAP hours by 40%

CPC Freight Innovation Fund

2023

Awarded funding to develop solution & pilot with PoD

Smart Borders (HMRC/Cabinet Office)

2020-2023

Part of consortium delivering Govt. pilots for cross-border trade

£400k

£600k

>£1 million

We deliver surgical precision Decision Intelligence across critical infrastructure.

AI-enabled Digital Twin.

What is Digital Twin?

- The ability to leverage data and Artificial Intelligence (AI) is becoming a key differentiator and competitive advantage
- But doing so in real world, operational environments is complex
- Digital Twins use available data to model operational environments
- Data is structured, given meaning and context and updates in real time
- Enabling insights to be derived, intelligence to be garnered and the next wave of AI to be realised

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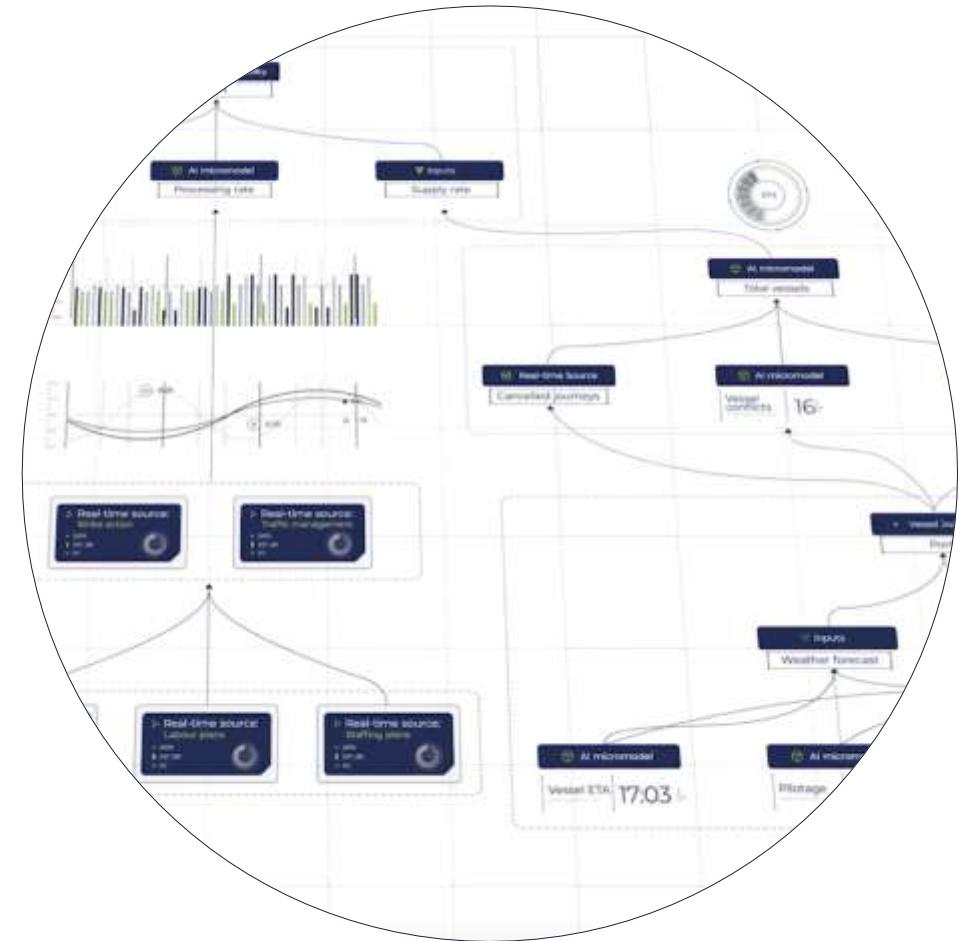
Our secret sauce?

The Entopy Ontology

At the heart of the Digital Twin is the Entopy ontology. This is how we connect disparate data sources across an organisation or environment. Our ontology has been developed over many years, can be deployed in weeks and offers the flexibility to expand over time.

Click to learn more >>

AI Micromodels

Our foundational software enables a novel approach to Artificial Intelligence, creating a **network of multiple targeted models**, combined with real-time event-based data to deliver dynamic predictive intelligence.

Click to learn more >>

AI Toolbox

Entopy has multiple tools within its internal technology stack that enable it to overcome key challenges such as data availability, data interoperability, validation, formatting and segmentation.

Click to learn more >>

Where Entopy can help

Entopy's AI-enabled Digital Twin platform helps operators across critical infrastructure to make informed operational decisions.

Using a network of AI micromodels integrated into an overall Digital Twin and combining with real-time data, **Entopy's software delivers accurate and dynamic predictive intelligence in advance as well as supporting simulation capabilities to test future scenarios**.

Our intuitive dashboards enable seamless integration with the derived intelligence, providing heads-up display showing predictive insights as well as offering the ability to drill down into the performance of predictive models and the overall ecosystem and network.

Current Use Cases

Traffic management - Entopy's AI-enabled Digital Twin platform helps operators across critical infrastructure to manage traffic flows. Using a network of AI micromodels integrated into an overall Digital Twin and combining with real-time data, Entopy's software delivers accurate and dynamic predictive intelligence as far as 4 weeks in advance in 15-minute intervals as well as supporting simulation capabilities to test future scenarios.

Read Use Case

Intelligent Port Operations- Entopy's AI-enabled Digital Twin platform supports intelligence port operations. By deploying a holistic Digital Twin, data sources across the various stakeholders can be integrated, delivering shared intelligence through data and AI.

Read Use Case

Current Use Cases cont.

Passenger movement – Entopy's AI-enabled Digital Twin platform delivers holistic intelligence across the entire passenger movement through Airports, from arrival by various transportation modes, to the terminal, through check-in and security

Read Use Case

Renewable energy - Entopy's AI-enabled Digital Twin platform helps operators of waste to renewable energy plantations to optimise feedstock and biogas yields. Application of AI micromodels across various stages of the planation processes helps to predict future yields based on current inputs as well as identify optimisations which can support significant increases in revenue.

Read Use Case

Note –

Each of the previous slides are based on lived experience with existing use cases.

The Entopy platform is a design and build proposition built in collaboration with its partners to suit their respective needs. It is the suite of proprietary technology (outlined in slide 6) that underpins the applications for our Decision Intelligence platform, and we can define and refine our Proof of Concept to suit the needs of TIM.

You guide us on how you believe Decision Intelligence can be deployed in your environment, we make that a reality...

AI Agent.

Entopy's AI Agent offers an intuitive interface that sits above the Digital Twin, transforming data into action with speed and precision. The Agent offers a range of powerful tools designed to empower both strategic and operational teams.

By combining the spatial and temporal awareness of the Digital Twin with advanced AI reasoning, Entopy's AI Agent becomes an intelligent co-pilot for your operations. Whether you're asking complex questions, running investigative workflows, or monitoring key metrics behind the scenes, the AI Agent delivers fast, contextual, and actionable intelligence.

Chatbot: offers a natural language question/answer interface as well as the production of graphs/charts to support analysis.

Deep analysis: provides an analysis and scenario testing capability powered by ReAct for multi-step reasoning.

Background monitoring: enables users to set monitoring tasks for the AI Agent to watch and flag anomalies and insights in real time.

Entopy AI Agent.

See the AI Agent in action –
Image Linked - Shared at 7.16

Read More here

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Our trial (deployment plan)

A trial will deliver a full model across the chosen environment, rolled out to a controlled group of stakeholders

Phase one	Phase two	Phase three	Phase four
Discovery	**Mobilisation & dev**	**Controlled release**	**Next steps** (beyond pilot)
Identify key challenges & ambition, aligning use case	Deploy dedicated instance of Entopy platform (AWS)	Identify key stakeholder working group	Collaborative roll-out plan including user onboarding
Discussion with key stakeholders to refine	Develop new AI micromodels across your environment	Create user accounts for key stakeholder-controlled release	Agreed timelines & commercials to support full roll-out
Develop logical workflow (model) & build trial plan	Develop baseline Digital Twin workflow & ontology	Stand up workshops (feedback/refinement)	Execution of partnership agreement
Systems & data assessment against workflow requirement	Integrate real-time data and AI micromodel outputs	Continued model testing & refinement against validation data	Full release
Review & refine following trial submission & site visit	Mobilise dashboard applications, alerting & simulation capabilities for workflow	Develop & test simulation capability with key stakeholder group	
	Testing & refinement against validation dataset		

Solving the hardest challenges in the most critical sectors.

Now, what's your question?

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