Use Case



Airport passenger movement.

The DfT's 'central case model' indicates a 93% rise in aviation 'million passengers per annum' (mppa) between 2007 and 2030, rising from 241mppa to 465mppa (within the range of 415-500mppa). This is a significant rise in airport passenger movement and will increase burdens on Airport operations. Not only will the UK aviation sector have to increase air travel supply to accommodate growing demand, but it will also have to optimise infrastructure and implement smarter and data-driven operations to ensure the impact of this growing passenger volume on surrounding areas is minimised.

Entopy's Al-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. This joined up view enables more comprehensive understanding and alerting to pinch points, the ability to run root cause analyses with the full picture and to run detailed end to end simulations to test future scenarios and investment decisions.



Entopy features.

- Holistic intelligence: Entopy's software enables the entire passenger journey to be modelled and analysed, taking feeds from existing systems where possible. Using Entopy's ontology, data from respective systems can be unified into a single window.
- Al micromodels: Smaller, more focused Al micromodels are deployed and integrated into the overall Digital Twin using Entopy's core software. These models predict specific aspects of the passenger journey from arrivals, to car park utilisation, to check-in and security processing.
- Intuitive dashboards: Data from the Digital Twin can be interacted through simple and intuitive dashboards displaying all information in one place with the ability to drill down into specific activity and model performance.
- **Simulation:** Entopy's software provides the capability to test scenarios such as staffing, infrastructure changes, key events and activities, road closures and disaster response.
- Al Agent: Ask questions of the Digital Twin through Entopy's Al Agent, building analysis, charts/graphs, testing future scenarios and monitoring specific operational aspects.



Benefits.

- · Improved planning and staffing
- · Improved passenger experience
- · Ability to test future scenarios, events and investments
- Supports 'one-worker' operational staffing model