Evaluating UDPP Concepts through Computational Behavioural Economics

Flight prioritization under demand-capacity imbalances

- Which flight prioritization mechanism provides the best performance?

Evaluation of flight prioritization mechanisms through CBE

**Scenarios**
- Network
  - Airports
  - Sectorization
  - Capacity
- Demand
  - Passenger Connectivity
  - Flight Schedules
- Mechanisms
  - SESAR UDPP: Step 1 & Step 2
  - Monetary Auctions
  - Non-Monetary: Flexible Credits

**Agent Based Model**
- Agents
  - Network Manager
  - Airlines
- Behaviour
  - Behavioural Economics: Prospect Theory
  - Bounded Rationality
  - Hyperbolic Discounting

**Performance Framework**
- KPIs
  - Capacity
  - Predictability
  - Punctuality
  - Cost Efficiency
  - Flexibility
  - Access and Equity
  - Environment
  - Robustness

**Simulation experiments**

Example: SESAR UDPP Selective Flight Protection (SFP) Workflow

**Founders**

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