

# ENTIRE EDIH

**Helmut Simonis**

## UCC's Skills Development Program

# AI Literacy and the AI Act



- From AI, to Ethics, to Regulation
- One day course run by B. O'Sullivan
- First iteration ran in November 24
- Hybrid event format

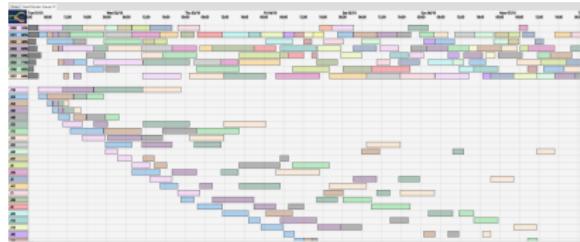


- Evaluation of AI systems
- Ethics for AI
- An overview of the AI Act
- Assessment List for Trustworthy AI

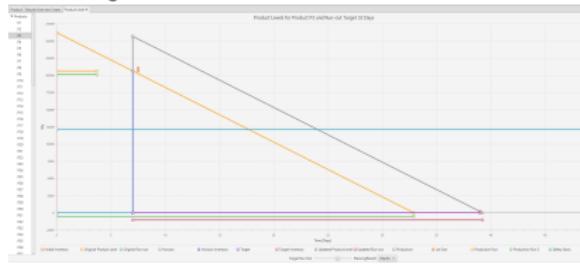
# AI Fundamentals: Constraint Based Production Scheduling



- Second iteration runs next week
- In person event
- Presentation of problem constraints
- A generic scheduling tool
- Visualization techniques
- Industrial case studies
- Future iterations on demand



Scheduling Tool: Machine and Job Gantt Chart

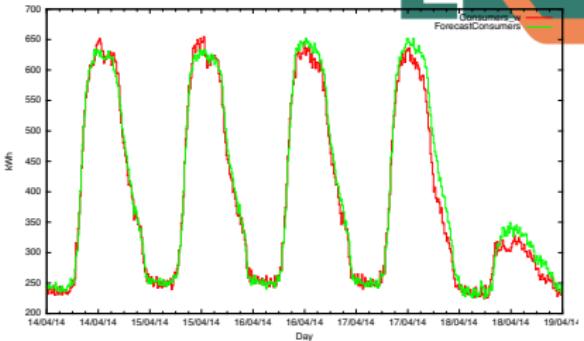


Production Planning Example

# Energy Cost Management



- One day event in May
- In person
- How to exploit time variable energy prices
- Using energy storage
- Predicting production, demand and prices
- Case studies



Predicting UCC Campus Electricity Demand  
Hourly Irish Wholesale Electricity Price



Time Variable Electricity Price

# AQuA - Any Questions Answered

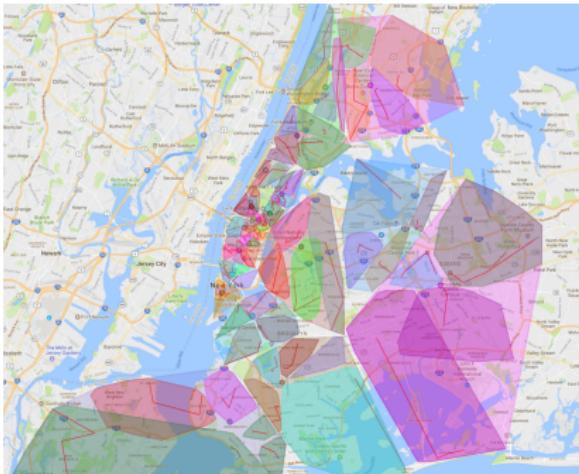


- One hour sessions on specific topics
- In planning
- One session per month
- In person, online or hybrid
- Reacting to demand of SME/PSO

# Transportation and Distribution



- Problem types
  - Tour limited
  - Capacity limited
  - On-line problems
- Predicting travel times
- Industrial case studies
  - Scheduling maintenance visits
  - Car transport in Ireland



Elevator Maintenance Planning in NYC

# Rostering and Personnel Assignment



- Problem types
  - Rostering
  - Timetabling
  - Capacity planning
- Solution methods
- Case studies



Outpatient Capacity Planning Dashboard