

Urban Logistics Innovation Day

26 September 2023, Brussels

Break-out Session I-A:
Digital Twins & what if
scenarios



#LEADFinalConference
#UrbanLogisticsInnovationDay

 www.leadproject.eu

 @lead-h2020

Peer-to-peer exchange

Policy & Advocacy

Research

Innovation

120 Cities, regions and related entities

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ANNUAL
CONFERENCE

2023

LEUVEN, BELGIUM • 29-30 NOVEMBER 2023



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Line-up

Live Demonstration of the LEAD Platform:

- Use of digital twin in urban logistics & how city can benefit from the LEAD project: *Ioanna Fergadiotou and Andreas Alexopoulos, INLECOM*

Presentations

- URBANE: Upscaling Innovative Green Urban Logistics Solutions, *Dimitris Rizopoulos, INLECOM*
- The LIAISON platform: LEAD Lyon and DISCO Copenhagen use cases, *Dimitra Politaki, IRT SYSTEMX*
- Digital Twins 4 Regions & Living-in.EU initiative, *Giacomo Lozzi, European Network of Living Labs*

Discussion with all

Wrap-up



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 861598



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Platform Demonstration

Ioanna Fergadiotou, Andreas Alexopoulos, Dimitris Rizopoulos
INLECOM - Technical & Innovation Manager



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Introduction

A screenshot of the LEAD login interface. It features the LEAD logo at the top, followed by an "Email *" input field with a small eye icon, a "Password *" input field, a "Forgot Password?" link, and a blue "Login" button.

<https://platform.leadproject.eu/>



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Documentation



A screenshot of the GitHub repository page for "Horizon-LEAD / lead-platform-doc". The page shows the repository name, a search bar, and navigation tabs for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. The main content area displays the README file, titled "LEAD Platform Documentation". The README includes a navigation menu, a screenshot of the LEAD platform interface, and sections for "Introduction" and "Basic Entities". The introduction text states: "The LEAD Platform has been developed to enable the execution of models assisting the stakeholders in the decision making process and the optimization of operations and cost." The right sidebar contains information about the repository, including "About", "Releases", and "Packages".

<https://github.com/Horizon-LEAD/lead-platform-doc>

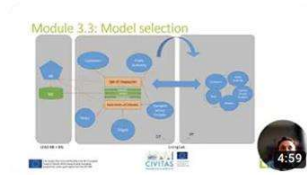


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Further Material



Unit 4 Summary
8 views • 3 months ago



Introduction to scenario planning deployment
11 views • 3 months ago



The LEAD Platform: Quick walkthrough
25 views • 3 months ago



LEAD Platform: User Registration
28 views • 3 months ago



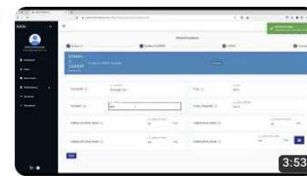
LEAD Platform: Model Integration
25 views • 3 months ago



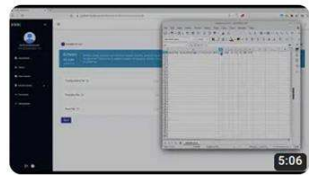
LEAD Platform: Scenario Builder
13 views • 3 months ago



LEAD Platform: Data Asset
18 views • 3 months ago



LEAD Platform Simulations
13 views • 3 months ago



LEAD Platform: Example 1
14 views • 3 months ago



LEAD Platform: Example 2
8 views • 3 months ago



LEAD Platform: Key Take aways
11 views • 3 months ago



Exchange Session - The LEAD Platform Walk-Through
45 views • 3 months ago

<https://www.youtube.com/@polisvideo/videos>



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Platform Walkthrough



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Dashboard



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Model Definition



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Models



Update Echelon v1-csv Model

Update EVCO2 Model

```

facilities.csv — KWrite
File Edit Selection View Go Tools Settings Help
New Open Save Save As Undo Redo
1 San Fernando;Avenida del Sistema Solar;27;San Fernando Henares;28830;40.450472;-3.494262;30;9:00;17:30
2 UCC Departure;San Felipe Neri;1;Madrid;28013;40.4161737;-3.7087409;30;9:00;17:30
3

vehicles.csv — KWrite
File Edit Selection View Go Tools Settings Help
New Open Save Save As Undo Redo
1 Van;161;1500;6.8;175;45;500
2 E-Trike;34;250;1.4;140;35;100
3
    
```

Model Type *
Analytical

registry.gitlab.com/inlecom/lead/models/evco2:late

on how the electricity was produced.

factors.xlsx - LibreOffice Calc

	A	B	C	D	E	F
1	Technology	Emissions_Factor	Generation_percentage			
2	Combined cycle	0.37	37.3304075252478			
3	Coal	0.95	2.41089049904467			
4	Diesel engines	0.77	0.838821087121886			
5	Gas turbine	0.77	0.218317546573887			
6	Steam turbine	0.77	0.483602505000601			
7	Cogeneration	0.38	8.61567955434109			
8	Non-renewable waste	0.24	0.644466774600285			

energy_consumption.xlsx - LibreOffice Calc

	A	B	C	D	E	F	G	H	I
1	ResponsePlanId	Category	Fuel	Segment	EuroStandard	Stock	MeanActivity	energyTJ	energykwh
2	577	Transit	Electric	Cargo	Vehicle	4	60	4.903E-05	13.62
3									
4									
5									
6									

- Input Data
- Configuration File
 - Service File
 - Facilities File
 - Vehicle File

- Output Data
- CSV output file
 - Total Delivery Distance
 - Total Delivery Time
 - Number of Vehicles Needed

- Input Data
- Factors XLSX input
 - Consumption XLSX input
 - Output directory



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Scenario Creation



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Data Assets



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Simulation Configuration



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Simulation Results



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Simulation Results



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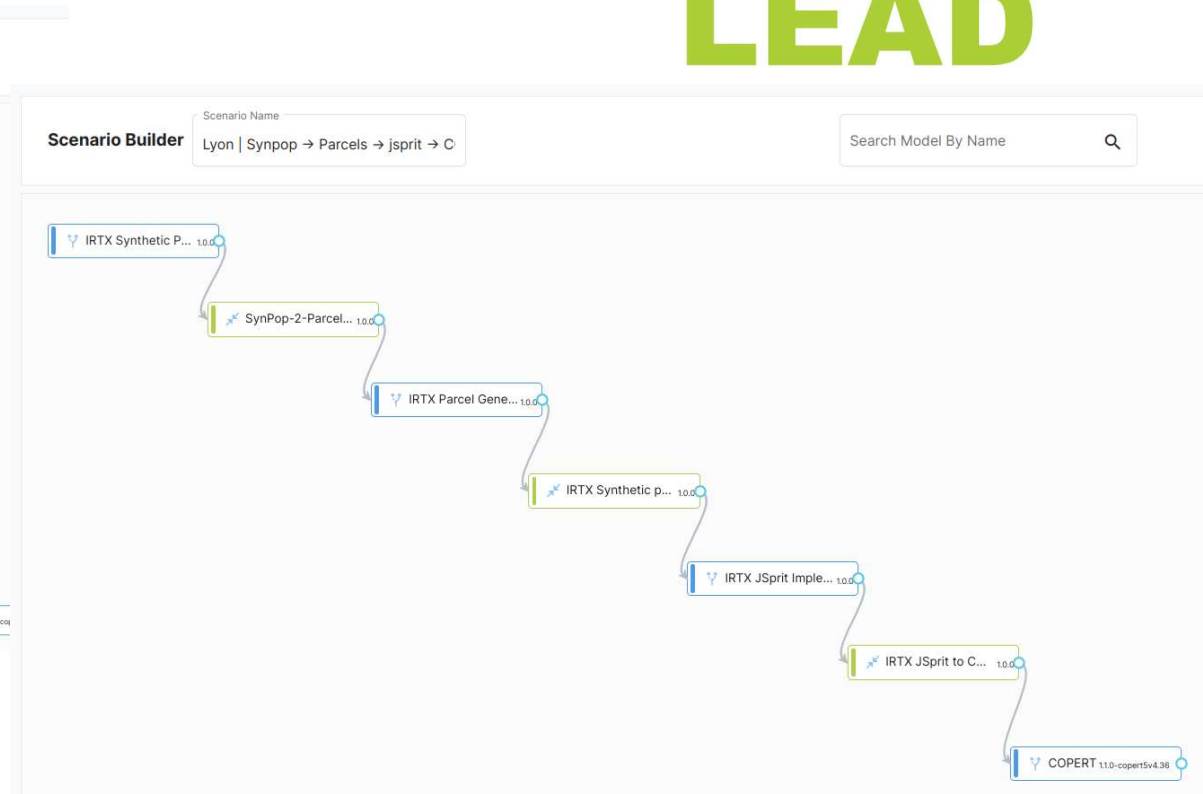
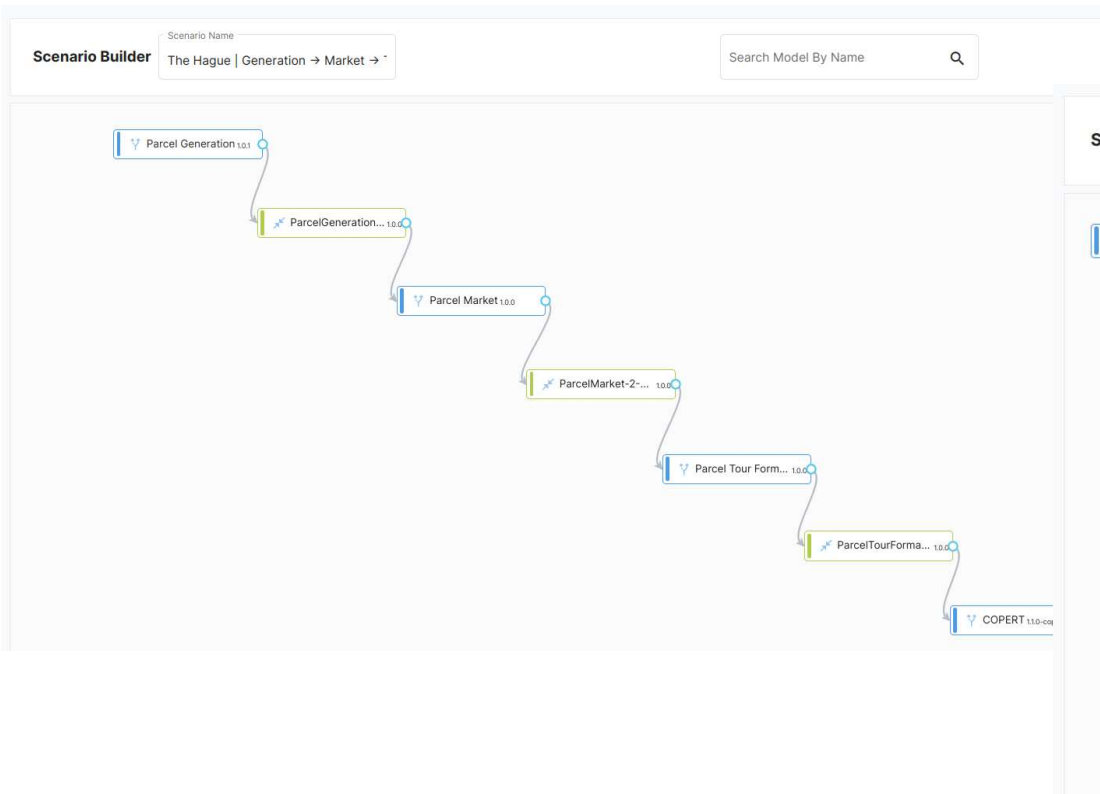


Overview



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A Scalable Digital Twin



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Thank you!
Questions ?



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