This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 633338.
SUCCEED card

- **SUCCESS**: Sustainable Urban Consolidation Centres for Construction
- **Funding tools**: H2020-Societal Challenges
- **Topic**: MG-5.2-2014: Reducing impacts & costs of freight & service trips in urban areas
- **Duration**: 36 months *(Start 01/05/15)*
- **Total budget**: 3.2 M €
- **LIST's role**: Coordinator
- **Partners**: 11 partners

### Societal Challenges
- Health, demographic change and wellbeing
- Food security, sustainable agriculture and the bio-based economy
- Secure, clean and efficient energy
- **Smart, green and integrated transport**
- Climate action, resource efficiency and raw materials
- Inclusive, innovative and secure societies
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**SUCCEED consortium**

Luxembourg Institute of Science and Technology (LIST)
Valenciaport Foundation (VPF)
Institute for Transport and Logistics Foundation (ITL)
En&Tech Research Centre (EN&TECH)

Tralux
Federation of Construction Companies (FEVEC)
Cooperativa Muratori e Braccianti di Carpi (CMB)
Vinci Construction France (VCF)

Emilia Romagna Region (RER)
Foundation of the Valencian Community for Strategical Promotion, Development and Urban Innovation (INNDEA)
Association pour la Formation professionnelle dans les Transports (AFT)
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4 Living labs

<table>
<thead>
<tr>
<th>Luxembourg (Luxembourg)</th>
<th>Paris (France)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 400 m²</td>
<td>55 475 m²</td>
</tr>
<tr>
<td>21 M €</td>
<td>144 M €</td>
</tr>
<tr>
<td>Residential, shops, offices</td>
<td>1st Minister headquarter, public auditorium</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Valencia (Spain)</th>
<th>Verona (Italy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 772 m²</td>
<td>85 3 914 m²</td>
</tr>
<tr>
<td>16 M €</td>
<td>126 M €</td>
</tr>
<tr>
<td>Railway station, park, shops</td>
<td>2 hospitals</td>
</tr>
</tbody>
</table>
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Urban challenges

• CO2-free city logistics in major urban centres by 2030*

• Urban freight logistics:
  ➢ 20% of the road congestion
  ➢ 25% CO2 emission (42% of the GHG emissions)
  ➢ 20% of the transportation costs

*Transport White Paper, European Commission 2011
Innovative Urban Freight Management Systems Symposium

Urban freight logistics

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Innovative Urban Freight Management Systems Symposium

SUCCESS objectives

- Negative externalities of urban freight transportation: congestion, pollution, noise and accidents
- Building and renovating costs and impacts on urban environment
- Use of the existing transport infrastructures
- Level of cooperation and coordination among all the stakeholders of the supply chain
- Reusable methods and tools

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Leverage: Consolidation Centre

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Need to find answers ...

Who pays?  For which products / materials?

CCC organizational processes

What financial gains and for whom?

What type of construction site?

For and with whom?

Societal impact
CO² emission reduction

What organization on site is needed?

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**Through our pilots**

- Construction supply chain analysis
- Cost breakdown for logistics activities

*Managing Construction Logistics, G. Sullivan 2010*
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Data collection

• Define data to collect
• Define tools to collect
• Define KPIs

• Delivery tracking board
  ➢ All information about material in/out construction site
• Activity monitoring report
  ➢ Track material use and productivity on site
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Samples collected

Plaster coating work

- 93% hours of installation work
- 4% hours of waiting time
- 1% hours of setup
- 2% hours of looking and transport

Unloading equipments

- Deliveries with crane used
- Self-discharged trucks

- Paris
- Luxembourg
- Valencia
- Verona

Samples collected
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Innovative Urban Freight Management Systems Symposium

Process mapping

• Main processes
  ➢ Distribution Network
  ➢ Construction Site
  ➢ Reverse Logistics

• SWOT analysis
  ➢ Process improvement, best practices
  ➢ Potential saving sources
  ➢ …
Business models

• Stakeholders relationships introducing a CCC
  ➢ Economic
  ➢ Organisational

• Factors identification for a viable Business Model
Design solutions

- Solutions proposed
  - Operational management
  - Business models
  - ICT Tools

- CCC under SUCCESS will be virtual
  - Simulations

- Tools
  - Define methods and tools to optimise the Construction Supply Chain
  - Develop modelling and simulation tools
Examples of scenarios

Single supplier

Multi-supplier for single site

Multi-supplier/Multi-client

Multi-site/multi supplier

Multi-client CCC for supplier

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**Road map for a CCC**

1. **Select good practices** already developed in EU and USA
2. **Show the replicability** of the project solutions
3. **Develop action plans** with related Road Maps to be applied to non-partner cities
4. **Take up the SUCCESS results** through a European-wide enlarged transfer programme
Expected results

Sustainable business models to address problems in the construction supply chains, focusing on distribution networks, construction sites and reverse logistics.
And impacts

New policies, new regulations, infrastructure design improvement

Transportation cost reduction assessment (CCCs implementation)

Strengthened ROI estimation facilitating the investment

Refine scientific data on CCCs overall performance

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SUCCESS neighbourhood

- Sharing information, expertise
- EU guidance documents on urban logistics
- Prepare new research framework programme
Thank you for your kind attention!

http://success-urbanlogistics.eu

david.evaristo@list.lu

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