DEVELOPMENT OF GALENA’s TRAINING PROGRAM AND TRAINING MATERIALS

Training session 4:

GALENA logistics solution (urban logistic: challenges / solutions / possible organisation / role of public authorities / traffic organization / Smart cities context)

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Cfr. WP2 – Users’ Requirements

Needs and requirements of (potential) users of ‘satellite navigation supported orchestrated urban logistics’
Vision on Logistics & Supply Chain Management

- Before 2008:
  - Efficiency = cost
  - Effectiveness = service
  - Supply Chain Optimisation

- After 2008:
  - Sustainability = carbon footprint
  - Trade off between 3 supply chain powers

* Source: TRI-VIZOR
‘Multi-public – multi-private collaboration’ for urban logistics
Research questions

• **Who** are the stakeholders?
  • To set up a stakeholder platform

• **What** kind of specific needs in a collaborative urban freight environment?
  • To specify users’ expectations/needs/requirements in a urban freight pooling context

• **How** to provide feasible, viable, appropriate functionalities?
  • To refine users’ needs/requirements in terms of functionalities
Methodology for a multi-stakeholder survey

A firm methodology with user-friendly and accessible tools is needed in order to take into account the different opinions of the various stakeholders on requirements and needs for an orchestrated urban logistics system!
Methodology for a multi-stakeholder survey

- **Who** are the stakeholders?
- To set up a stakeholder platform

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<tbody>
<tr>
<td>1</td>
<td>Government</td>
<td>European, federal or regional authorities providing a legal, regulatory and standardisation framework.</td>
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<td>2</td>
<td>Municipality</td>
<td>City or local authority.</td>
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<td>3</td>
<td>Supplier</td>
<td>Producer and generator of freight flows – production company.</td>
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<td>4</td>
<td>“Consignee in the city”</td>
<td>Party receiving goods in the city: retailer, shop, store, trader, food service,…</td>
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<tr>
<td>5</td>
<td>Consumer</td>
<td>Actor consuming finished goods.</td>
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<tr>
<td>6</td>
<td>Logistics provider</td>
<td>Actor offering logistics services: transport, warehousing, value added logistics and value added services.</td>
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<td>7</td>
<td>Technology provider</td>
<td>Actor providing technology based solutions.</td>
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<tr>
<td>8</td>
<td>Third party</td>
<td>Citizens, visitors, tourists,… and other actors involved.</td>
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Methodology for a multi-stakeholder survey

| Urban logistics policy options: urban distribution platforms either operated by private companies and/or controlled/facilitated by public authorities |
|---|---|
| Free market | As little as possible interference by the government in urban logistics. |
| Restrictive policy | Specific rules and restrictions are implemented in the urban environment in order to limit the burden of freight transport. |
| Urban distribution platforms operated by private companies | Local government supports these platforms and the specialised actors operating these platforms with an appropriate enabling policy. |
| Open access urban distribution platform(s) awarded through a public tendering | Local government assign (an) operator(s) for the open access urban distribution platform. Logistics actors are motivated to use such a platform by a carrot-and-stick policy. |
| Integrated public transport system | A fully integrated public logistics/distribution system, where possible automated and where needed e.g. underground or unhindered (cfr. The Physical Internet). |
Preference ICT-level: connectivity preferred
Galena – the project – WP2

1. **FUNCTIONAL NEEDS FOR ORCHESTRATED URBAN DISTRIBUTION**
2. **CHAIN VISIBILITY** – Product traceability
3. **TRACKING AND TRACING** (on line)
4. **MONITORING** (off line – KPIs)
5. **LOGGING**
6. **OPTIMIZING**
7. **CONNECTING**
8. **RESILIENCE**
9. **SAFETY & SECURITY**
10. **COMMUNICATION**
    11. **INFORMATION SHARING**
    12. **SEAMLESS TRACKING**
    13. **BUNDLING AND POOLING**
    14. **GAIN SHARING**
    15. **STEERING**

*Quid Proof of Delivery (POD)?*
Galena – the project – WP2 - outcome

GENERAL CONCLUSIONS AND SUGGESTIONS

• Comprehensive **cost – benefit** analysis of satellite navigation **positive**!

• **Time horizon 2030** instead of 2020!

• **Sense of urgency** to tackle urban logistics in an orchestrated way!

• Need for a **growth path** for the implementation of an orchestrated urban logistics system supported by satellite navigation!

• Stakeholders often react in a conservative way – still **work to do to convince** the various actors in urban logistics
Having the ambition to reach in 2020 an urban logistics system that is integrated, open access and beneficial to all stakeholders. Through collaboration one could reach economies of scale (bundling of flows, increased drop density), economies of scope (integration of services) and economies of chain (chain optimization)! In this way one can reach a fair deal (a fair gain sharing) among all stakeholders involved, with the city council in a facilitating position.
Vision and strategy

The critical success factors are threefold:

- **Economies of scale**: bundled volumes resulting in more cost-efficient logistics processes with e.g. routes with a higher drop density or even combined or mixed drops;

- **Economies of scope**: an integration of services (cross dock hub, depot, repacking, labelling, combining, collection point service, ICT services,...);

- **Economies of chain**: collaboration within the supply chain generates benefits in terms of value towards the end-customer in terms of tariff decrease, higher service (delivery frequency, delivery reliability, avoidance of stock breaks,...), more sustainable logistics solutions (in terms of CO2 emissions, etc.). Through decoupling one can combine slow, but efficient transport outside the city or urban area, and personalised, and agile, transport inside the city or urban area, separated by the decoupling point. The last mile in case of urban distribution (drops) or the first mile in case of urban collection (pick-ups) are optimised. Finally the chain as a whole becomes more valuable.
Vision and strategy

The above mentioned ‘economies’ can only be achieved through integration. This integration manifests itself on various levels:

- **Policy integration** – clear policy in urban logistics integrated in a broader city council policy;
- **Governance integration** – need for neutral body as orchestrator (trustee, mediator,...);
- **System integration** or “virtual” integration – integration in Information Structure, ICT, database integration;
- **Physical platform integration**, consolidation of freight flows, sharing capacities, open source or open access depot or service centre and transport.
Drivers for successful urban logistics

Efficiency – cost
Not only focus on direct transport costs, but on total logistics or supply chain cost
Drivers for successful urban logistics

Effectiveness – service

1. On time Delivery
2. In full Delivery
3. Responsiveness
Drivers for successful urban logistics

Sustainability
1. Carbon Footprint – CO₂
2. Environmental Pollution (SO₂, NOₓ, PM)
3. Number of Vehicle km
Drivers for successful urban logistics

Social value
1. Quality of Life
2. Revitalisation of Local Economy
3. Safety
4. Accessibility
Training session 4 – Conclusion

Let us work together on an urban logistics system that is integrated, open access and beneficial to all stakeholders. Through collaboration one could reach economies of scale (bundling of flows, increased drop density), economies of scope (integration of services) and economies of chain (chain optimization)! In this way one can reach a fair deal (a fair gain sharing) among all stakeholders involved, with the city council in a facilitating position.