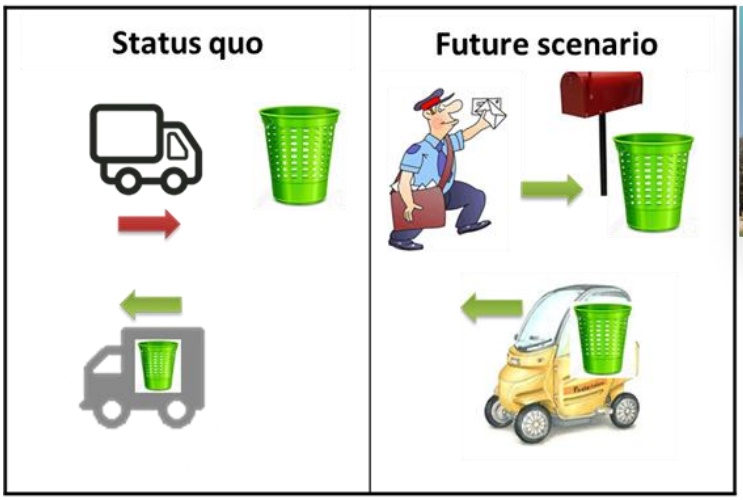
CITYLAB
ROME

The CITYLAB implementation in Rome worked on establishing a circular recycling system, where waste would be picked-up by postal services. It focussed on the waste collection facilities, looking in legal and regulatory conditions and business models that could contribute to circular recycling.



Context

The Rome implementation improved “urban waste, returns and recycling”, through collection of recyclable materials by reverse logistics.

The Living Lab in Rome integrated forward and reverse logistics flows in urban areas. The idea was to use the national postal operator (Poste Italiane), who already delivers mail/parcels all around the city, for the pick-up of recycled materials on route. This would utilise the spare capacity of the existing distribution system on return trips.

Currently, Rome uses two waste collection systems: door-to-door collection and ad-hoc collection points (“isole ecologiche”, ecological islands). The proposed hybrid waste collection strategy took both collection models into account. It intended to use large attractors as intermediate locations with dedicated recycling facilities, enabling the collection by organised and coordinated non-dedicated trips, based on an IT alerting system. The expected benefits were:

(1) reduction of the recycling effort for citizens (no specific trips to recycling facilities)

(2) reduction of trips by collection firms

(3) less illegal discharging of dangerous materials

(4) load factor optimisation

In action

The Living Lab was designed to perform several rounds starting from a small-scale implementation to be up-scaled later.

It proposed a concept replacing citizens’ dedicated trips deliver ‘consumed materials’ to recycling centres. To avoid the strict legislation for waste management, classifying ‘consumed material’ as

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product was necessary. This strict regulation also prevented the national postal operator from participating. Thus, the implementation focussed on this classification issue and opened the first reuse centre in Rome at the University of Roma Tre.

Results

The Living Lab partners decided to keep the process open with the aim of upscaling the solution. Several items of Rome's environmental policy action plan would benefit from the adoption of the suggested solution. However, the living lab identified some barriers to implementation:

- Regulatory/contractual constraints might limit the number of flows (volume) and alternative waste to be considered for recycling.
- Locating the recycling sites/facilities is difficult
- Conflicts with existing waste collection schemes

The needed regulatory and institutional changes require political will. Given the repeated assertions made in the major planning documents at the city level, it seems reasonable to foresee that the city administration will continue to provide the necessary support to stimulate an organisational, institutional and functional change on waste collection focussing on recycling and reduced emissions.

The Living Lab approach to solution co-creation may prove valuable as the proposed solutions remain discussed among a range of stakeholders who investigate feasible and pragmatic options.

Challenges, opportunities and transferability

The Living Lab implementation resulted in a number of lessons learnt that can be transferred to cities interested in recycling materials and reducing transport needz. The following covers the lessons learnt:

- Dealing with waste management is complex and requires involving, both the Transport and the Environmental Department. The challenge is to connect their visions and policy actions.
- The choice concerning the recycled material is critical due to regulatory constraints. This implies that some recycling materials might be considered when up-scaling the solution unless actual constraints diminish, or logistic operators are subject to less stringent labour constraints. A possible solution could be to concentrate on consumed materials to be re-used. In that case, no specific legislations apply.
- The choice of the sites where to locate recycling facilities account for contrasting issues, such as . maximising the total amount of recycled materials, high standards of cleanliness, and respect of safety rules.
- Notwithstanding the type of waste considered in the first round of the Living Lab has an economic value it is not financially sustainable. Higher market value materials should be considered. Alternatively, it could focus on hazardous materials that represent a serious problem for municipalities in case of illegal disposal. In this case, public subsidies could be obtained.

The Living Lab implementation proved successful in building a coordinated and cooperative way of working to test and adjust new urban freight innovations. No formal active collaborations taking joint-action on improving urban freight sustainability are established in Rome. The Living Lab implementation represents the first attempt for setting up a good context to develop a close relationship between research, industry and local administration with respect to a focused issue. Starting from it, a Living Lab on a city level has also been established addressing additional problems related to the improvement of accessibility while reducing negative transport externalities. The following issues are currently undertaken:

- loading areas management;
- demand management through off-hour deliveries.

In both cases, several meetings have already been held with the stakeholders. The Living Lab approach is currently planned. It will cover activities linked to the acquisition of preliminary information useful for developing the most effective solutions.

To sum up, the Living Lab implementation in Rome influences long-term policy-making in this sector providing knowledge needed to develop an operative intervention plan. The integration of forward and reverse logistics will most likely be included as a medium-long term objective within the Sustainable Urban Mobility Plan in Rome currently under discussion.

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