Parking *trend*

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Questions and answers on the DISCO project

"The idea comes from the music industry"

What is the DISCO project about? How did it get started? Where did the idea come from?

Paola Cossu: DISCO is a 42-month innovation action, started on May 2023, co-funded by the European Commission in the Horizon Europe Programme, coordinated by Paola Cossu, FIT (www-fitconsulting.it). With its 47 partners, including local and regional authorities, technology providers, EU-wide parking/logistics/cities and data-related associations, logistics service providers, infrastructures owners, DISCO aims at fast-tracking upscaling to a new generation of urban logistics and smart planning framework, as recommended in the Urban Mobility Framework launched in 2021 by the EU Commission, delivering innovative tools and methods, changing the urban logistics and planning paradigm with a Physical Internet (PI) – led approach. In this context, it is of paramount importance to integrate urban freight within an efficiently operated network-of-networks, exploiting underused lands and assets, including both fixed and mobile infrastructure, based on throughput demands. This integration will contribute to the dynamic and optimal space re-allocation needed in the different European cities.

The idea comes from the music industry where the evolution already accomplished a transition from physical support in vinyl, magnetic tape, or metal, to full dematerialisation of products, distributed by means of a data platform, able to share royalties, services, and music as an end-to-end commodity, like Spotify. Music can now be massively used by everyone by regular subscription (just by mobile), wherever they are and whatever music one would like to listen (Music as a service). The same should go for deliveries in urban logistics (es. Logistics as a service).

The DISCO PI-led approach delivers trusted integration of systems and networks,

The expert

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adopted by cities actively shaping their transition, smoothly harmonising freight considerations into land-use and parking policy and planning. Within a data-driven "cloud" ecosystem a city could fairly penalize abusers of the infrastructure by having access to real-time data on use, avoid costly infrastructure investments that simply address congestion times, by optimizing use during all times of the day and control dynamically access to infrastructure and avoid road congestion, illegal parking, or overuse.

Which are its major outcomes?

The DISCO vision lays upon some key **Game Changers** in the last mile: Fast-tracking transition of digital, physical, and economically / socially viable sustainable solutions driven by new technologies, by integrating interoperable innovations with enabling technologies by an online PI-led Meta Model Suite, composed of five **"DISCO-X"** innovations: **DISCOCURB**, DISCOPROXI, DISCOBAY, DISCOESTATE and DISCOLLECTION. An **Assessment Toolkit** measures digital transition maturity, for a holistic urban logistics and planning. The **Meta Model Suite** helps the deployment of 23 innovative measures across eight European Living Labs; Co-creating an

innovative enabling city "cloud" ecosystem for trust and data protection to ensure services interoperability and common protocols. This target has potentials to valorise urban freight data, for new value creation, fostering capacity in aligning digital challenges among public/private stakeholders, by introducing a **Data Space** in Living Labs - with anonymised and customised data pipelines supporting such services, enabling better collaboration and coordination among different stakeholders. Driving cities in effectively implementing new urban logistics sustainable planning adopting a Poly-parametric city typology as Functional Urban Areas (FUAs) to synchronise city centres and peripheries with mixed and optimal space distribution and of lands uses; Accelerating the adoption of innovative business models, of assets that are based on data-driven and sharing principles among private/public players, stimulating an executive collaboration model to generate new market and values.

What is the envisaged role of EPA, along with its partner associations such as POLIS and ALICE?

In DISCO, **EPA, ALICE,** and **POLIS** EU-wide associations are fundamental players

as they are pioneering such transition, acting as adoption multipliers for cities, logistics and parking industries. They can bring needs and interests from their respective ecosystems so that DISCO can comply with them as much as possible, guaranteeing concrete market adoption and scale up of the demonstrated innovation measures. Additionally, International Data Space Association **(IDSA)** plays a major role in providing functionalities and guides for the establishment of the Urban Freight Data Space.

There are 8 European Living Labs and 4 Follower Cities, in which of those will parking / kerbside management play a major role? What technologies will be looked at in this respect?
The DISCO's 23 ground-breaking measures are demonstrated on a 3-Steps implementation lifecycle, involving in total 8 demonstrators: 4 Starring Living Labs, Copenhagen (DK), Ghent (BE), Thessaloniki (EL), and Helsinki (FI) (Step 1), 4 Twinning Living Labs, Padua (IT), a Spanish Cluster with Barcelona, Valencia, and Zaragoza (ES) (Step 2), and 4 Early Adopters, Prague (CZ), Piacenza (IT), Aarhus (DK) and North Hesse (DE) (Step 3).

In many cities across the globe, the curb is an increasingly contested piece of urban real estate. Where motorisation rates are high, the curb serves to store vehicles that are not in circulation. Where motorization rates are lower, curb space is used for many other activities, including commerce and socialising. Knowledge of the curb is generally poor. Appropriate metrics and data collection to support decisions about the (re-allocation of curb space is generally lacking. Where data exist, they are often generated and collected by private actors. This limits the ability of local authorities to assess whether allocation mechanisms are effective or how this space could be used more efficiently. With the contested curb as a focus of local authorities, many cities risk addressing these hotspots in a piecemeal fashion and underestimating longer-term changes that are underway. These changes require increasingly strategic management when allocating public roads in cities, at the curb[1] to reduce pressures and better satisfy needs of the curb community (delivery, public transport, parking, taxi, EV charging, micro mobility, bike, etc.).

The DISCO-X innovation that takes care of digital and dynamic curb side management of loading or on street parking zones is DISCOCURB: Demonstration of citywide approach for curb management with advanced data analytics, implementing curb performance metrics and optimise loading/unloading dock management system and dynamic LEZ and spatial management, via Digital Twin (real-time information, dynamic space management, smart parking). In DISCO, city planners better understand the untapped value of curb, introducing equitable dynamic pricing and zoning in urban and peri urban areas. – e.g., adoption of UVAR applications and smart traffic planning and network management. These include multi-retail hubs to reduce drop-off sites for fulfilment and delivery consolidation and co-location through innovative logistics concepts. Multipurpose and optimal use of curb space will accomplish fierce competition from other urban stakeholders upon the space available. City planners can better address priorities to urban and peri-urban areas and matching different mobility. Helsinki, Copenhagen, and Barcelona will increase curb visibility to drivers, giving them key delivery information on networks, options on optimal routes & parking slots with balanced use.

The kick-off meeting took place last May in Brussels, so the project is just getting started, what is the current state of play and what are the next major milestones ahead?
Main activities related to the DISCO-X innovations are currently focusing on defining DISCO-X requirements together with the cities. This process will allow for instance to define which type of data are available within the cities and which are needed for the implementation of the DISCO-X (but not yet available). This type of information is fundamental to define the architecture of the Urban Freight Data Space. The DISCO **Adaptive Blueprint** process will help cities and communities in undertaking a successful digital tran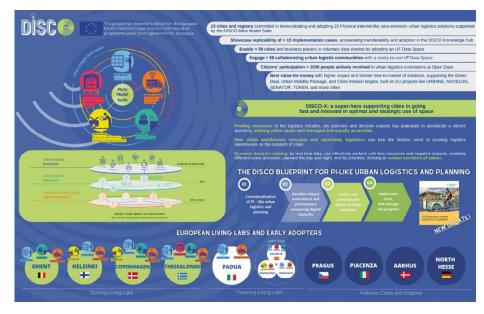sformation with a simple stepwise approach. It will intensify the dialogue on SULPs and will provide insight in relation to urban logistics system of the future, the main planning requirements for promoting the shift towards PI-led solutions.

DISCO supports European Living Labs with a **Policy package** to achieve the EU Mission goals for inclusive climate-neutral smart cities by 2030 with socially and economically viable solutions of digital urban logistics and planning at different ranges of European city geographies and ambitions, distinctive and settled urban and peri-urban systems and hierarchies.

The interview was conducted by
Marko Ruh, Editor-in-Chief of Parking trend.

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[1] The shared-use city: managing the curb – OECD/ITF 2018