# Mobility as a Service

BIG DATA ARCHITECTURES

a.a. 2024/2025

MaaS

- **Mobility-as-a-Service** technologies could provide in the near future a valuable source of information

- MaaS integrates the whole mobility offer, and constitute the main interface (via dedicated apps) for the user to access to the transport services
  - Integrates public and private mobility services
  - Provide multimodal urban and extra-urban travel solutions
  - Offers service to plan, book, pay, and use mobility solutions

MaaS

Actual solutions
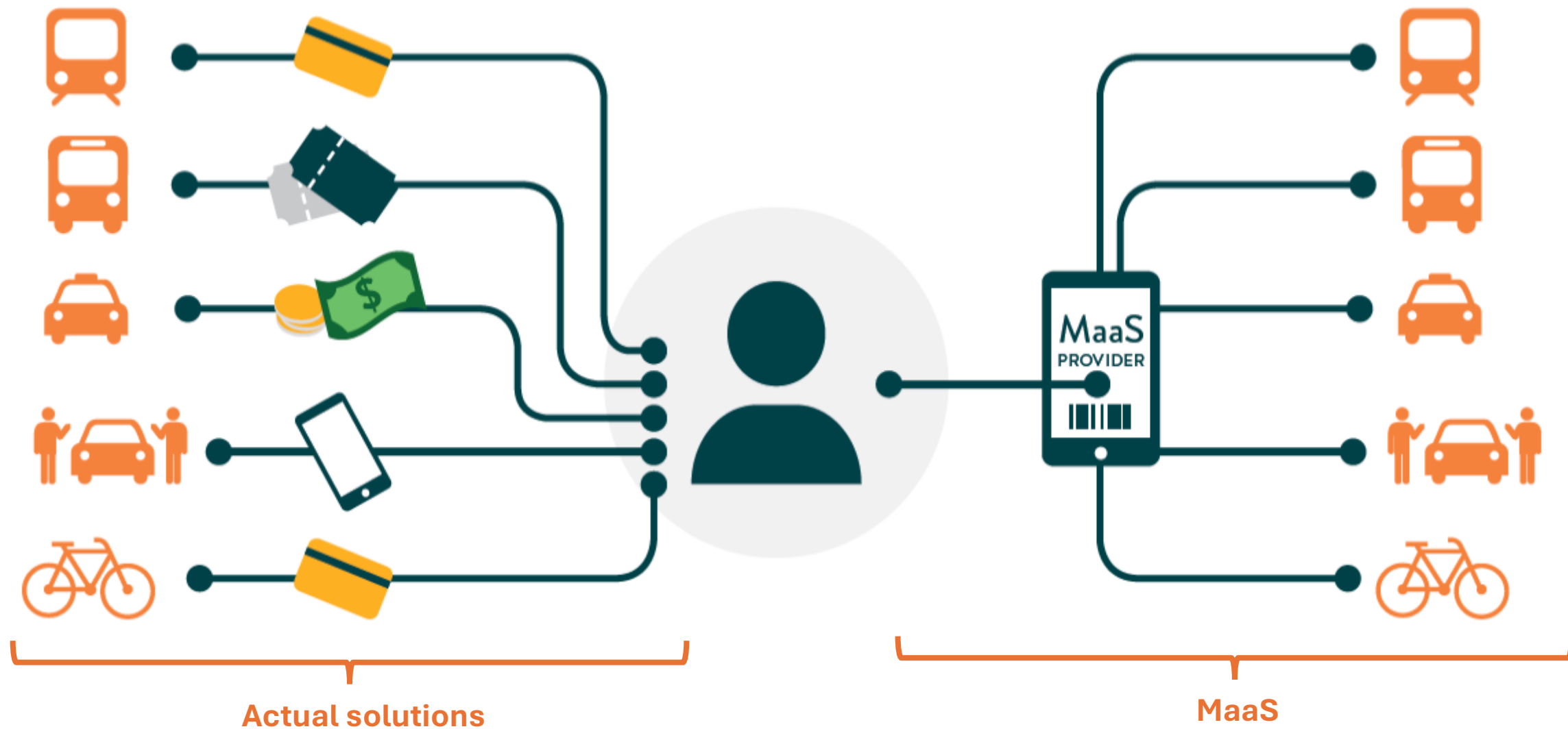
MaaS

MaaS

Level 0: No integration

Each mobility operator provide to the user his specific offer, using his app/website. The user must provide for himself to plan, book, and pay his travels

MaaS

Level 1: Multimodal travel planning, Fare information

Level 0: No integration

A first level of integration. A single app/website can provide the user with a multimodal travel solution and give to the user information on pricing (maybe link to the mobility operator payment service). The user still must book/pay his travels independently.

MaaS

Level 2: Booking and payment integration (includes function to search, book, and pay single travels)

Level 1: Multimodal travel planning, Fare information

Level 0: No integration

At this level the system provides an integrated travel solution that the user can book or pay directly from the MaaS app/website. The MaaS acts as a fare collector and then redistributes the payments to the involved mobility operator. The MaaS handle ticketing and vehicle access.

MaaS

Level 3: Full integration of services, including subscriptions, passes, best-fares, bundled offers

Level 2: Booking and payment integration (includes function to search, book, and pay single travels)

Level 1: Multimodal travel planning, Fare information

Level 0: No integration

With the full MaaS integration, the system is able to provide the user with bundled offers, including subscriptions and best-fares

MaaS

Level 4: Integration of social goals though public-private cooperation, rewards, and incentives

Level 3: Full integration of services, including subscriptions, passes, best-fares, bundled offers

Level 2: Booking and payment integration (includes function to search, book, and pay single travels)

Level 1: Multimodal travel planning, Fare information

Level 0: No integration

Finally, using rewards and incentives the Public Administrations can drive the change towards more sustainable and green mobility solutions with the aim to avoid the use of private cars

MaaS (usage data)

- A MaaS system can then be able to collect the mobility patterns of the users, and, if managed by public organization such data could be released and used in smart mobility platforms

- MaaS are new technologies under development. Possible standards and formats are yet to be defined or under development.

- The **Transport Operator to Mobility Provider (TOMP) API** is a standardized interface for data exchange between transport operators and MaaS providers. It encompasses the entire user trip, from planning to booking, execution, and payment.