



RATP
SMART SYSTEMS



Open standards and interoperability, the key to sustainable mobility

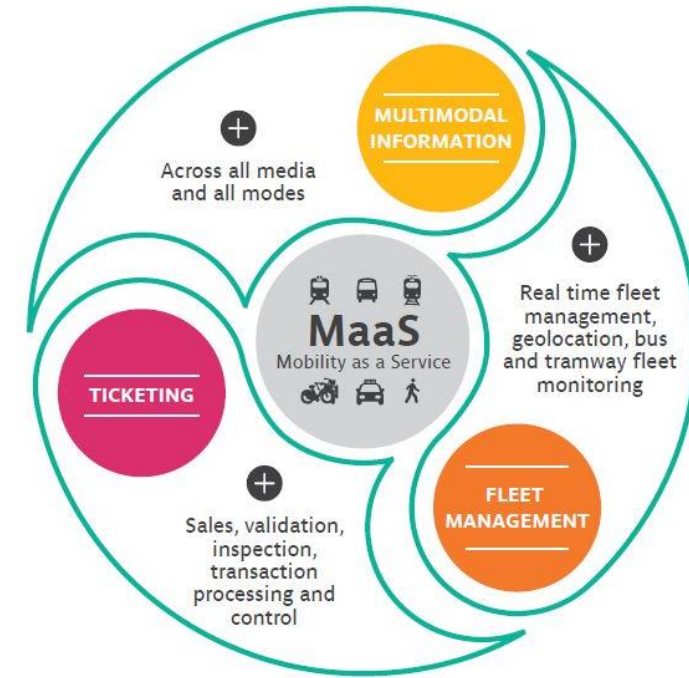
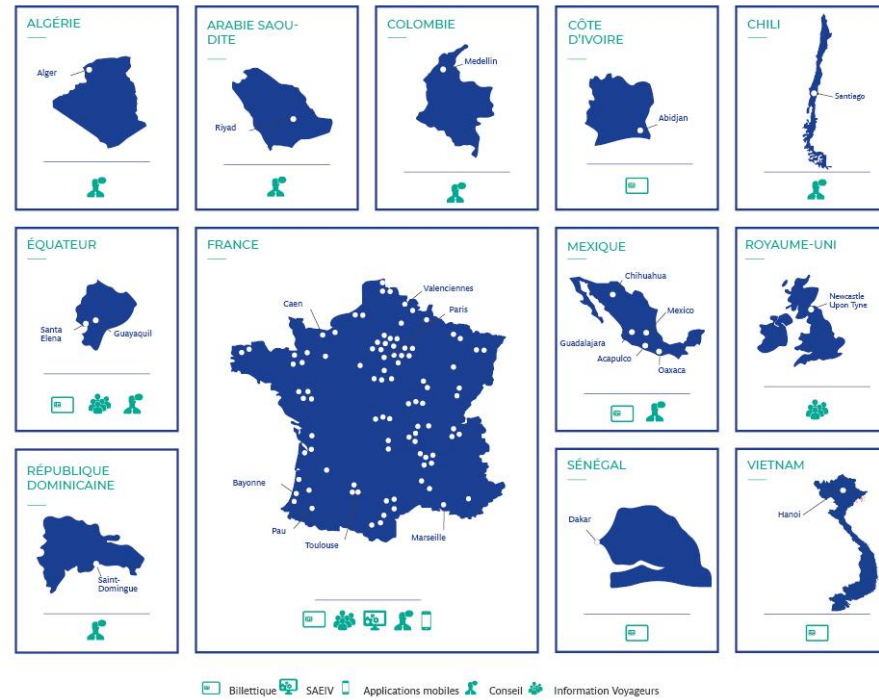
Francis Sykes— 28th of January 2020



Agenda

1. RATP Smart Systems in a nutshell
2. Need for and ways to sustainable transport
3. Standards as enablers
4. Overcoming the challenges of standards

RATP Smart Systems in a nutshell



- We design, build , integrate maintain and operate ticketing, RTPi and Fleet management systems
- We manage the RATP ticketing system and part of the RTPi system
- We are independent from equipment suppliers
- We champion the durability of clients' investments
- Our clients: transport authorities and operators

From...



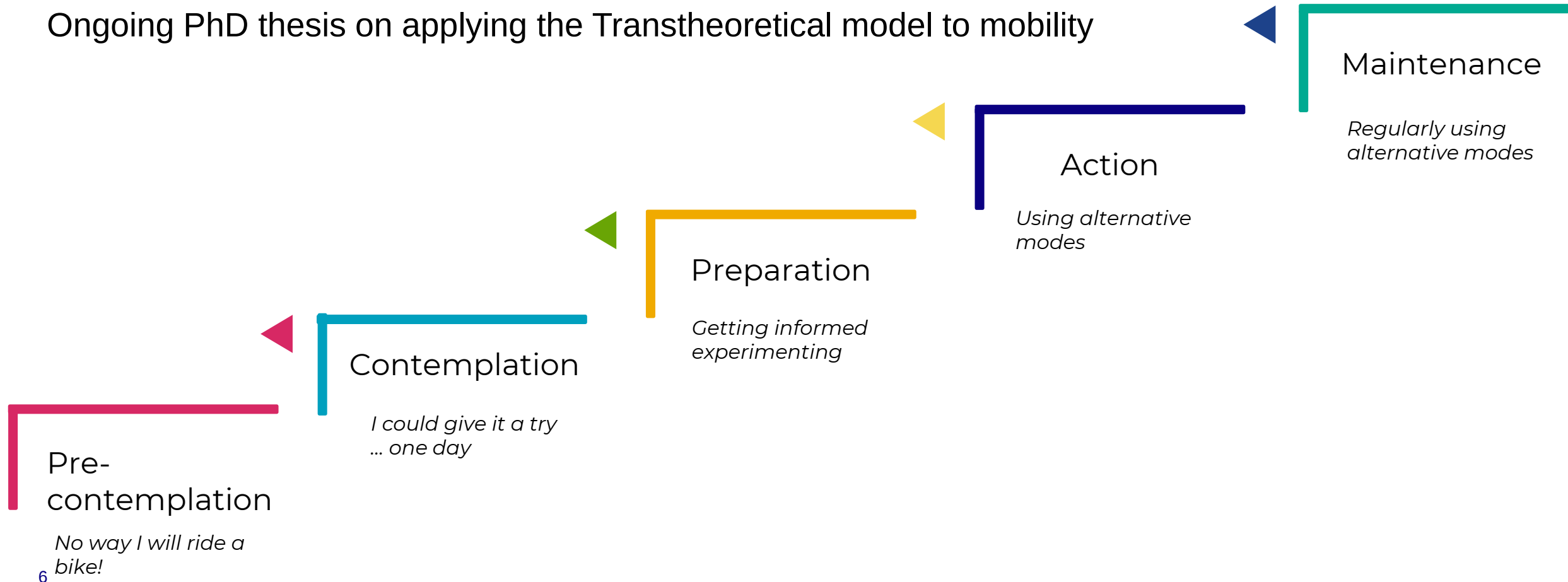
To...



Two approaches to get to sustainable mobility

1. Getting people interested in trying alternative modes

Ongoing PhD thesis on applying the Transtheoretical model to mobility



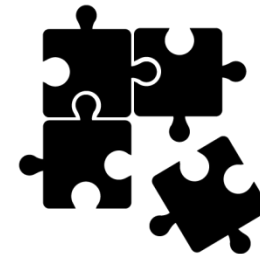
Two approaches towards sustainable mobility

2. Making alternatives to driving compelling (achieve MaaS)

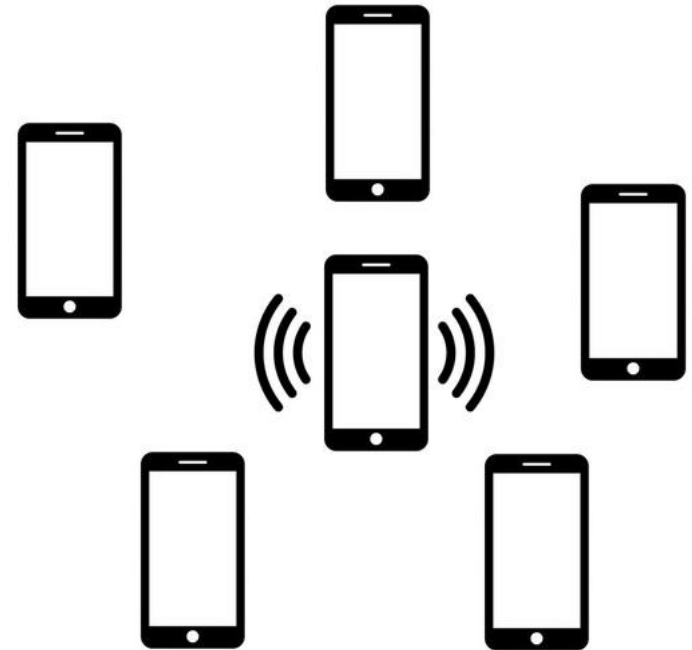
- ▶ Wide choice of mobility modes
- ▶ Seamlessly interconnected
- ▶ Unified interface
- ▶ Support during journey
- ▶ ...
- ▶ You have heard this tune before



Definitely a multiplayer ecosystem ...
Openness is a requisite
Standards are key enablers



The value is in the scope of the network



The value is in the scope of the network

Cash



Scope: businesses within a country (or group of countries)
Monopoly

Credit-debit cards

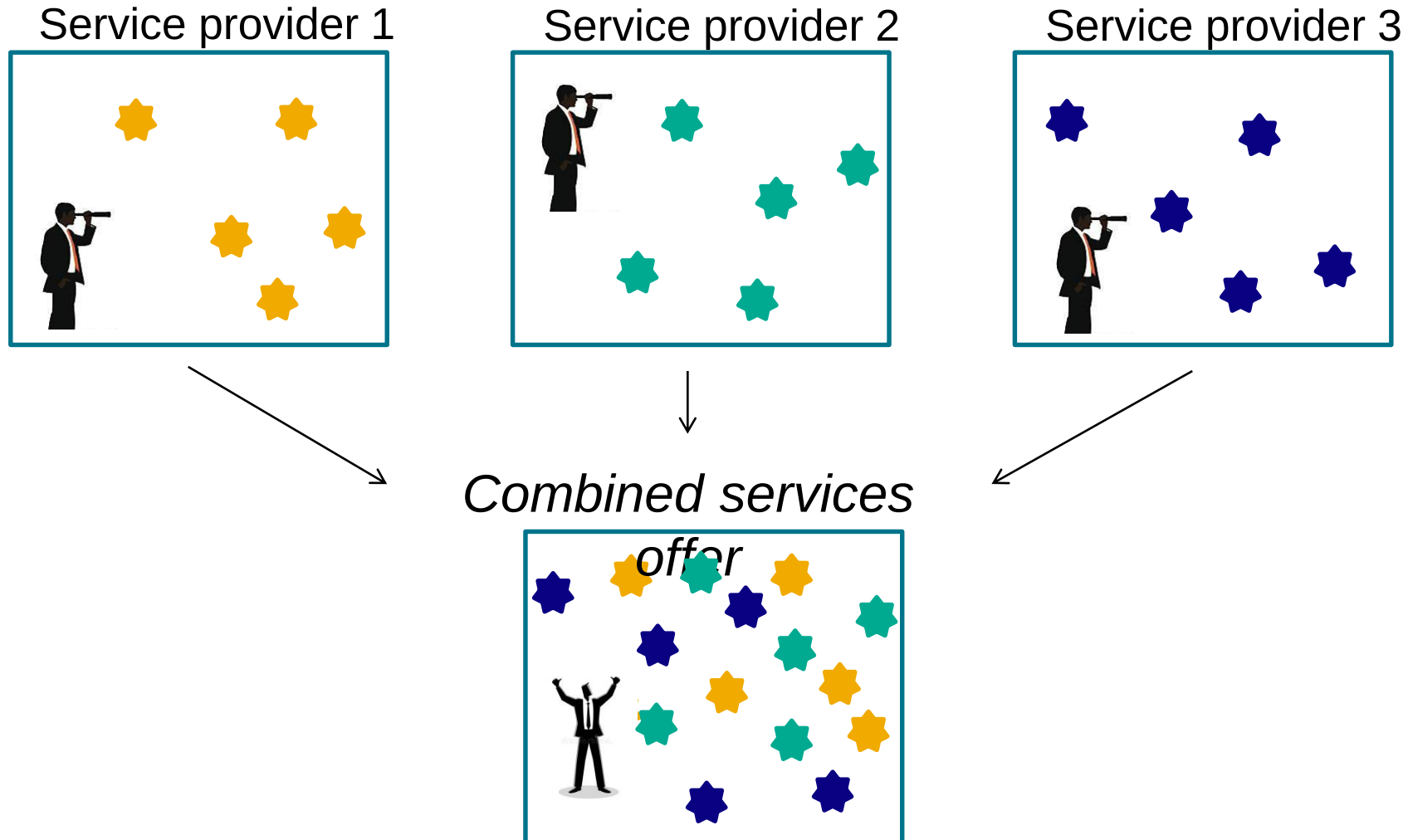


Scope: scheme (Visa, Mastercard etc.).
Triopoly
Technical interoperability between many schemes (EMVCo)

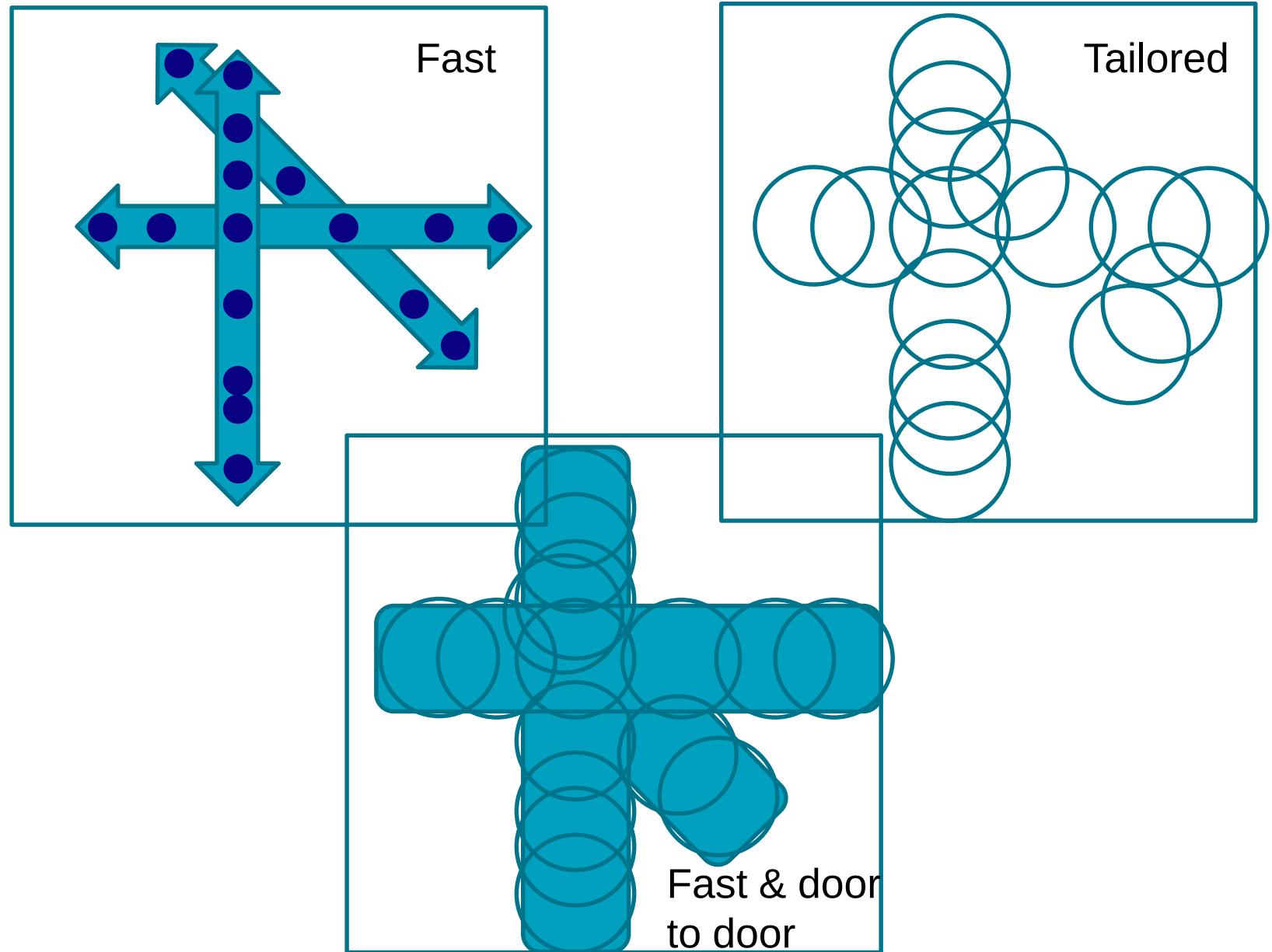
The goal is to get customers not to think about feasibility: just do it!

For public transport the value is about the range and wealth of connected modes and services (MaaS)

Combining sub-optimal services can give rise to a compelling combined service



Combining mass transit and last mile services

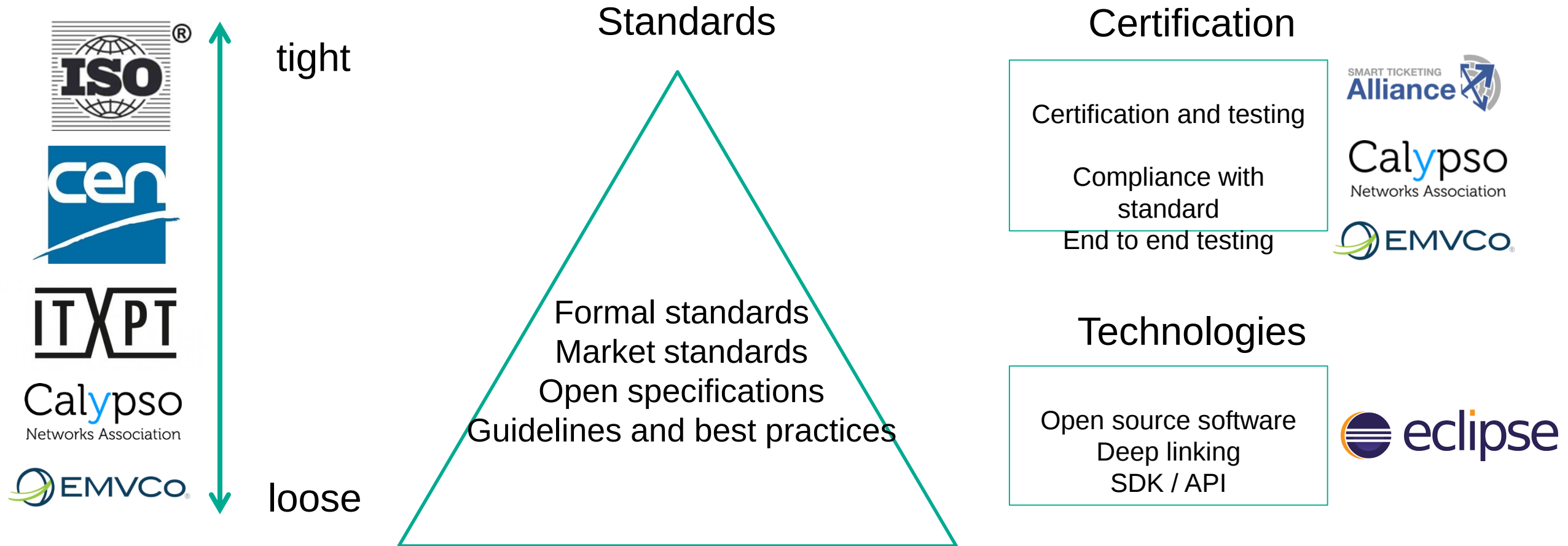


The value is in

Combining
Associating Partnering
Cooperation Connecting
Sharing
Linking

Yes but how?

Standards ecosystem



The challenges of standards

- ▶ Time to develop a standard
- ▶ Working with competitors
- ▶ Intellectual property
- ▶ Options-profiles
- ▶ Testing and interoperability
- ▶ A level-playing field

EMV Contactless
based on ISO14443
Limited options
Profiles
certification

Approaches to MaaS

Liberal

Total openness
Market-forces-driven
Competition encouraged

vs.

Regulated

Legislation to guaranty fairness
Balance
Competition encouraged

Loi Orientation des mobilités (LOM)

All PTOs must be included on whole network
For a given mode, non discrimination between operators
Selection criteria of modes must be transparent

**ITS directive
2017/1926 (EU)**

Case study 1

The TCT project



- 1 New POS terminal for  3rd party retail network
- 2 Calypso Compatibility
Networks Association
- 3 Open competition to suppliers without Calypso experience
- 4 Capitalise on developments

Why Keyple?



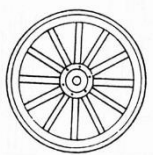
open to new
suppliers



Sustainability
and
upgradability

Calypso
Networks Association

Eclipse warranty
and open source
community
support



Do not reinvent
the wheel!
Capitalize

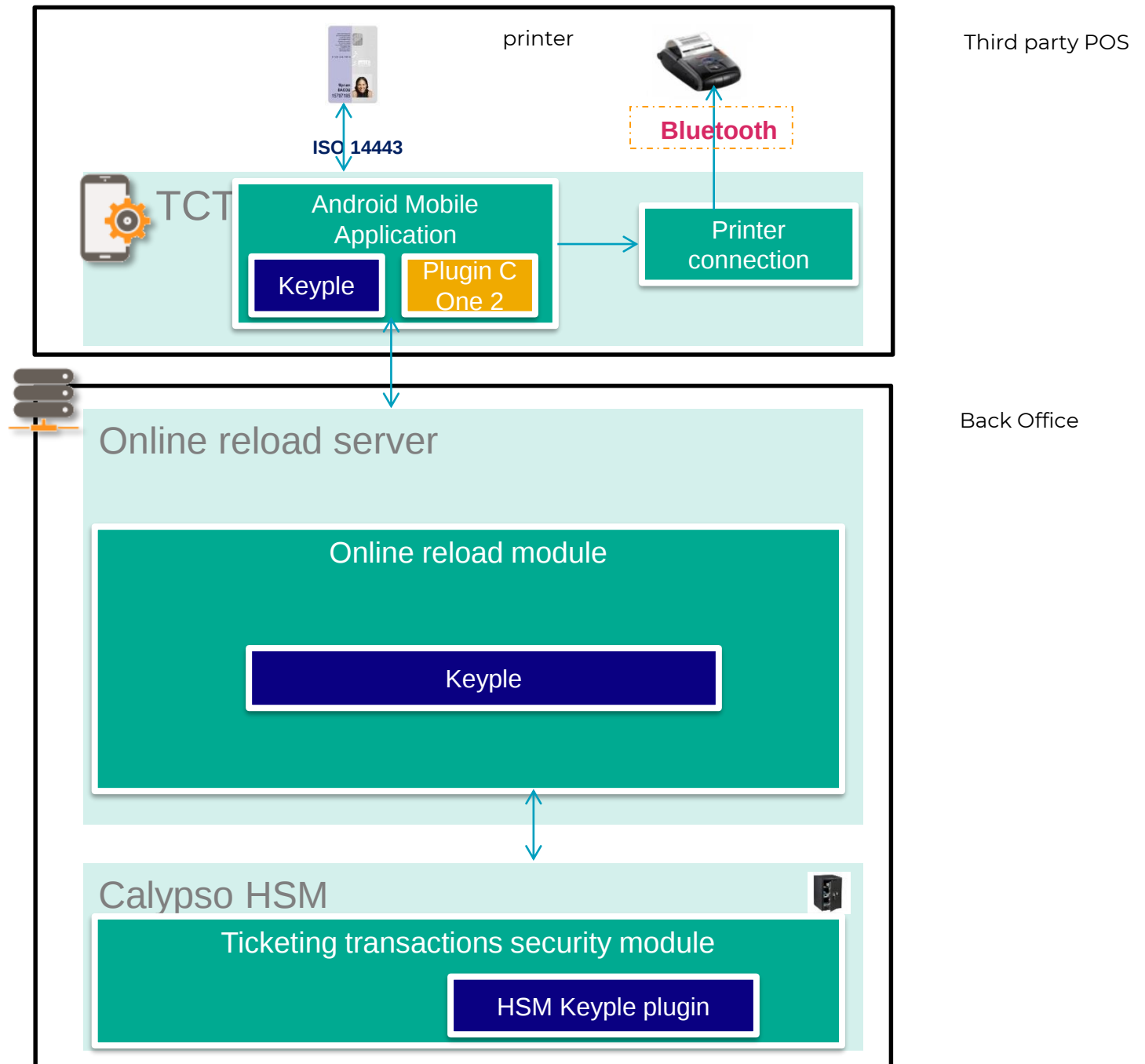
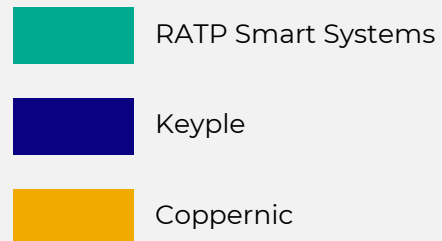


Relying on a reusable
solution



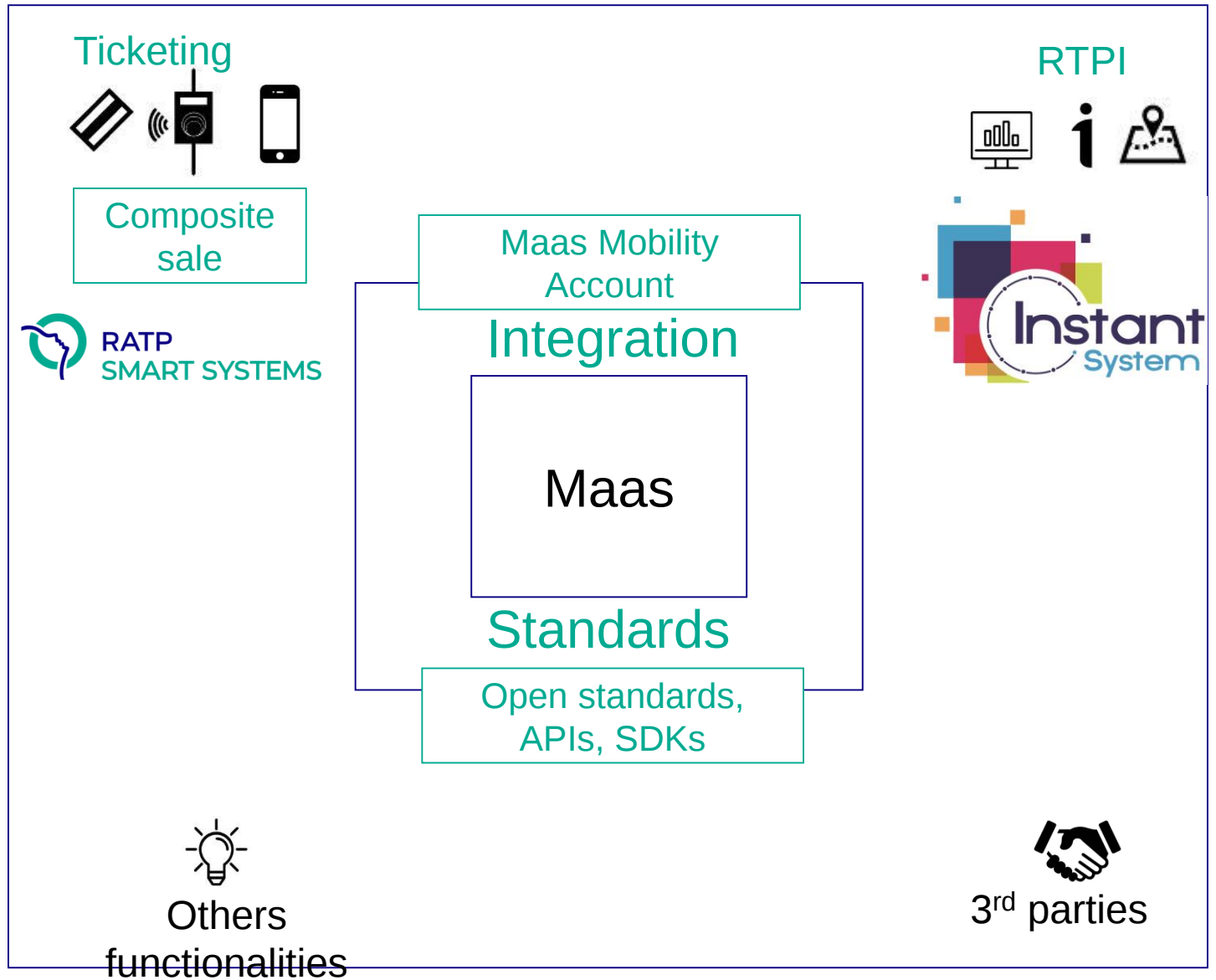
independence

Global functional architecture



Case study 2: Annemasse

MaaS DNA is in our genes

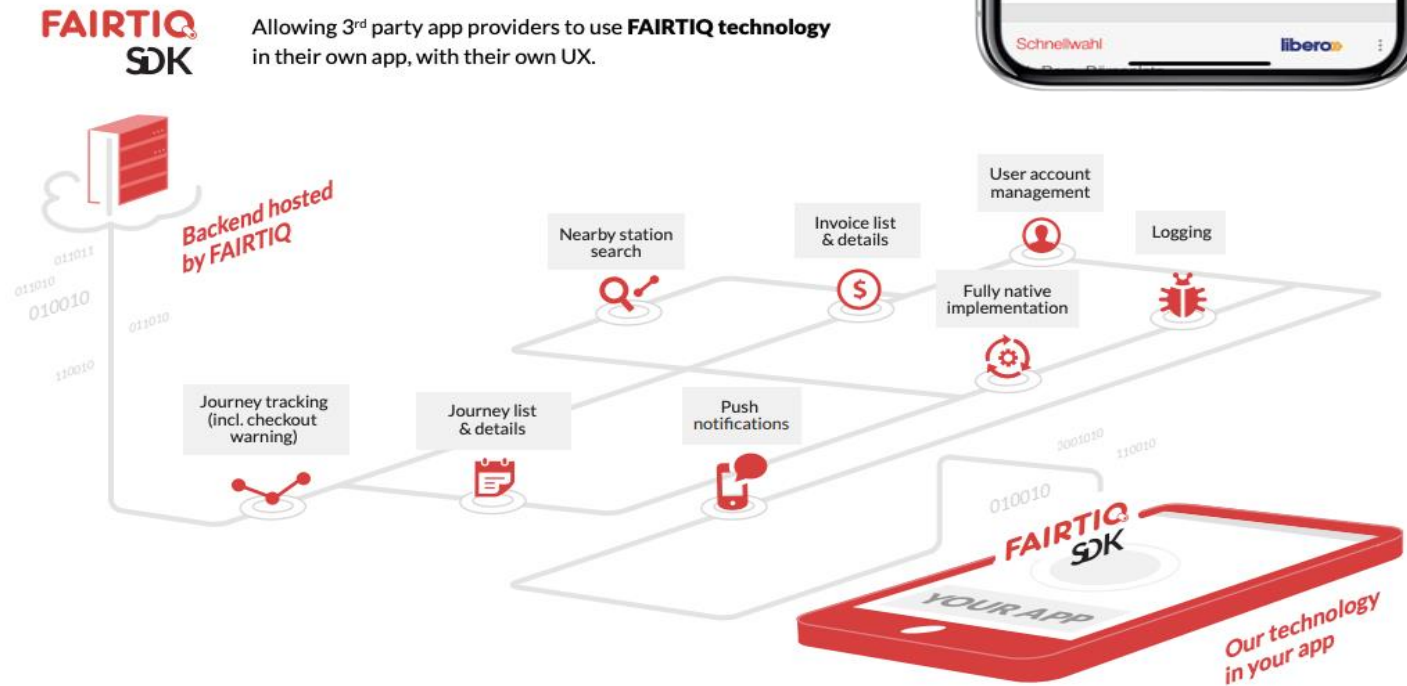
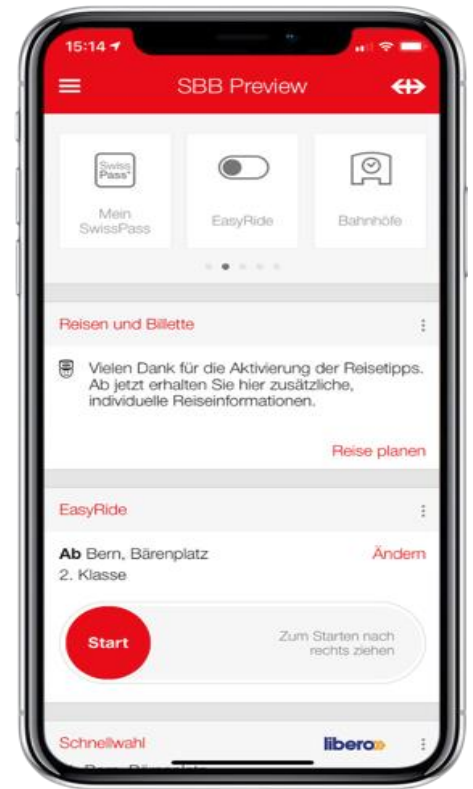


— RATP Smart Systems core skills and technologies

Case study 3

FAIRTIQ

- Best of breed approach
- Speed-up time to market
- SDK-based
- Swipe-in swipe out
- Beeline/distance-based pricing
- in a multimodal environment



Coopetition





Come and meet us on booth A4,
you won't be disappointed !