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The Mobility-as-a-Service Business Ecosystem

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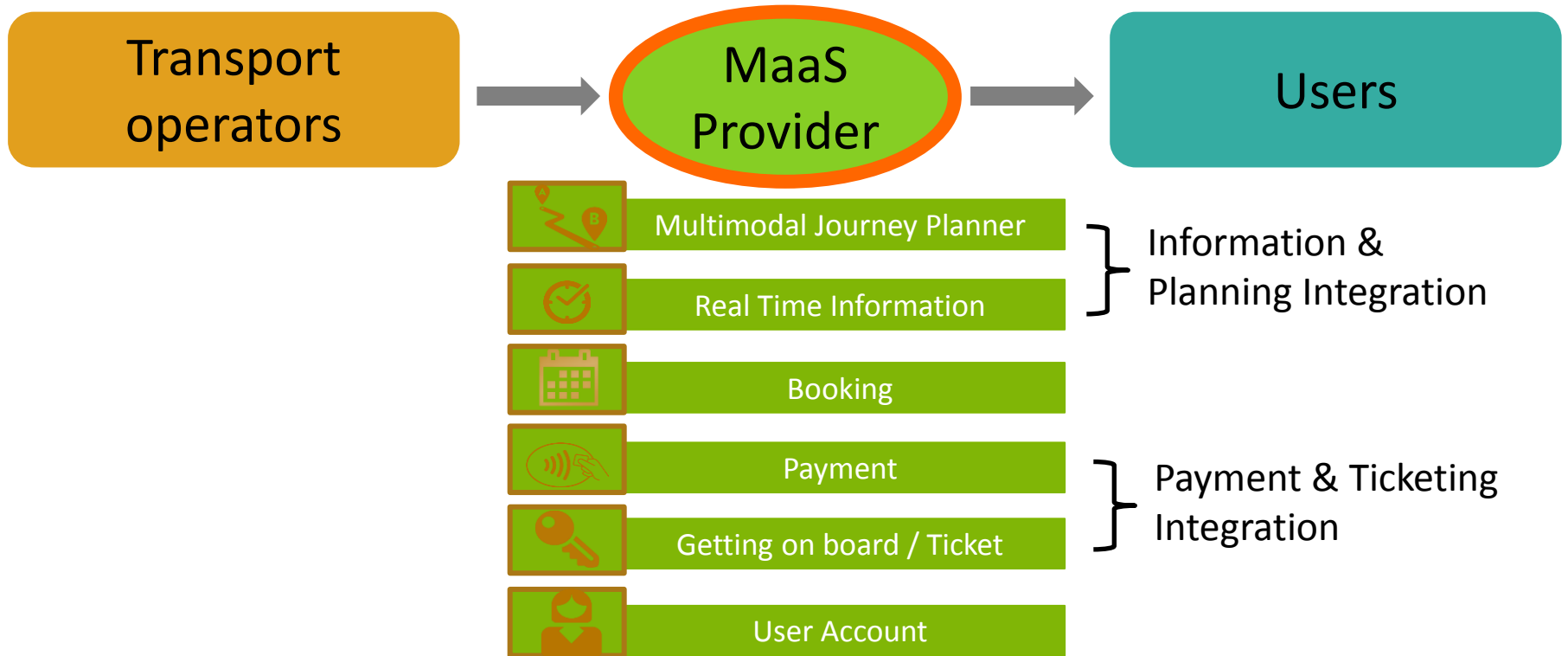
Objectives

This work aims to:

1. provide a preliminary *definition for the MaaS concept*,
2. propose the *MaaS business ecosystem* where the role of each actor is described in details.

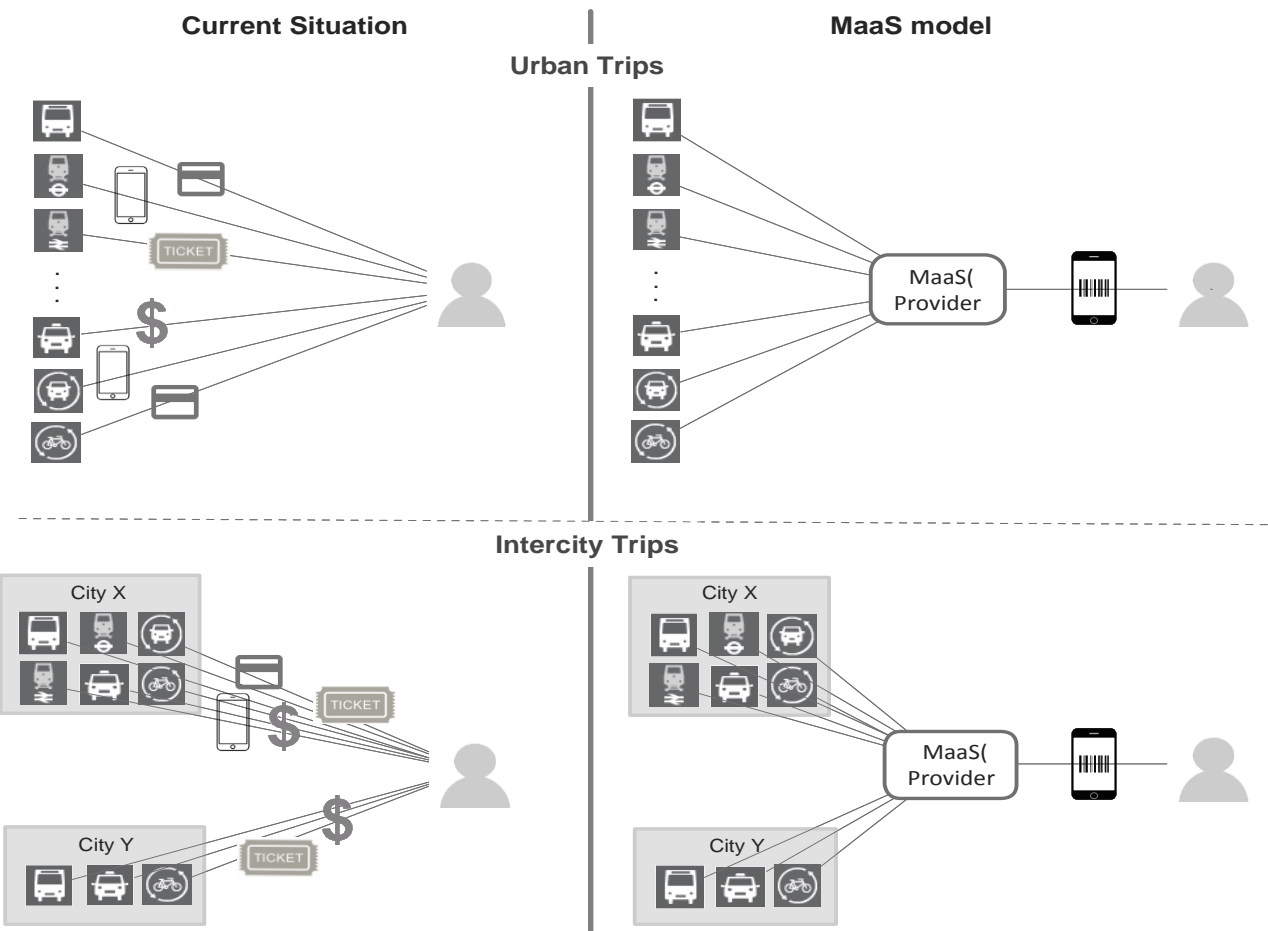
- The MaaS concept -

MaaS Concept (1/2)















“MaaS is a user-centric, intelligent mobility distribution model in which all mobility service providers’ offerings are aggregated by a sole mobility provider, the MaaS provider, and supplied to users through a single digital platform.”

MaaS Concept (2/2)



MaaS Products - Example

Light	Medium	Premium	Pay-as-you-go
<p>89€ /month</p> <p>Unlimited HSL Helsinki public transport + 1.000 Whim points</p>	<p>249€ /month</p> <p>Unlimited HSL Helsinki public transport + 5.500 Whim points</p>	<p>317€ /month</p> <p>Unlimited HSL Helsinki public transport + 8.000 Whim points</p>	<p>Try Whim without commitment and upgrade whenever you like.</p>
<p>Use your Whim points as you like, for example:</p> <p> + </p> <p>2 taxi trips (~10 km/trip) daytime + ∞ unlimited local public transport</p>	<p>Use your Whim points as you like, for example:</p> <p> +  + </p> <p>8 taxi trips (~10 km/trip) daytime + ∞ unlimited local public transport + 2 days of car rental</p>	<p>Use your Whim points as you like, for example:</p> <p> +  + </p> <p>8 taxi trips (~10 km/trip) daytime + ∞ unlimited local public transport + 5 days of car rental</p>	<p>Transport providers:</p> <p>   </p> <p>We get you to your destination using your preferred mode of transport, letting you pay as you go - all in one app!</p>

Source: whimapp.com

- The MaaS model covers several concepts that have been extensively discussed in the transportation sector during last decades.
 - These are the integration, interconnectivity and optimization of the transport services, smart and seamless mobility, and sustainability.
- The model also includes concepts that have recently emerged via the Internet of Things and the sharing economy, such as the term “as a service” and personalisation.

Background for MaaS Materialisation

- Practitioners point out that it is rather easy to come up with new ideas, but the real challenge is putting them into practice.
- Designing a business model and institutionalizing it is especially demanding when innovations occur outside the exclusive control of traditional firm boundaries.
- Diffusion of innovations in transport is particularly slow and requires a credible evidence base, observability, strong leadership and trust, as well as strong social interactions between professional groups and suitable organizational contexts (Barnett et al., 2011; Fitzgerald et al., 2002; Leung et al., 2013).

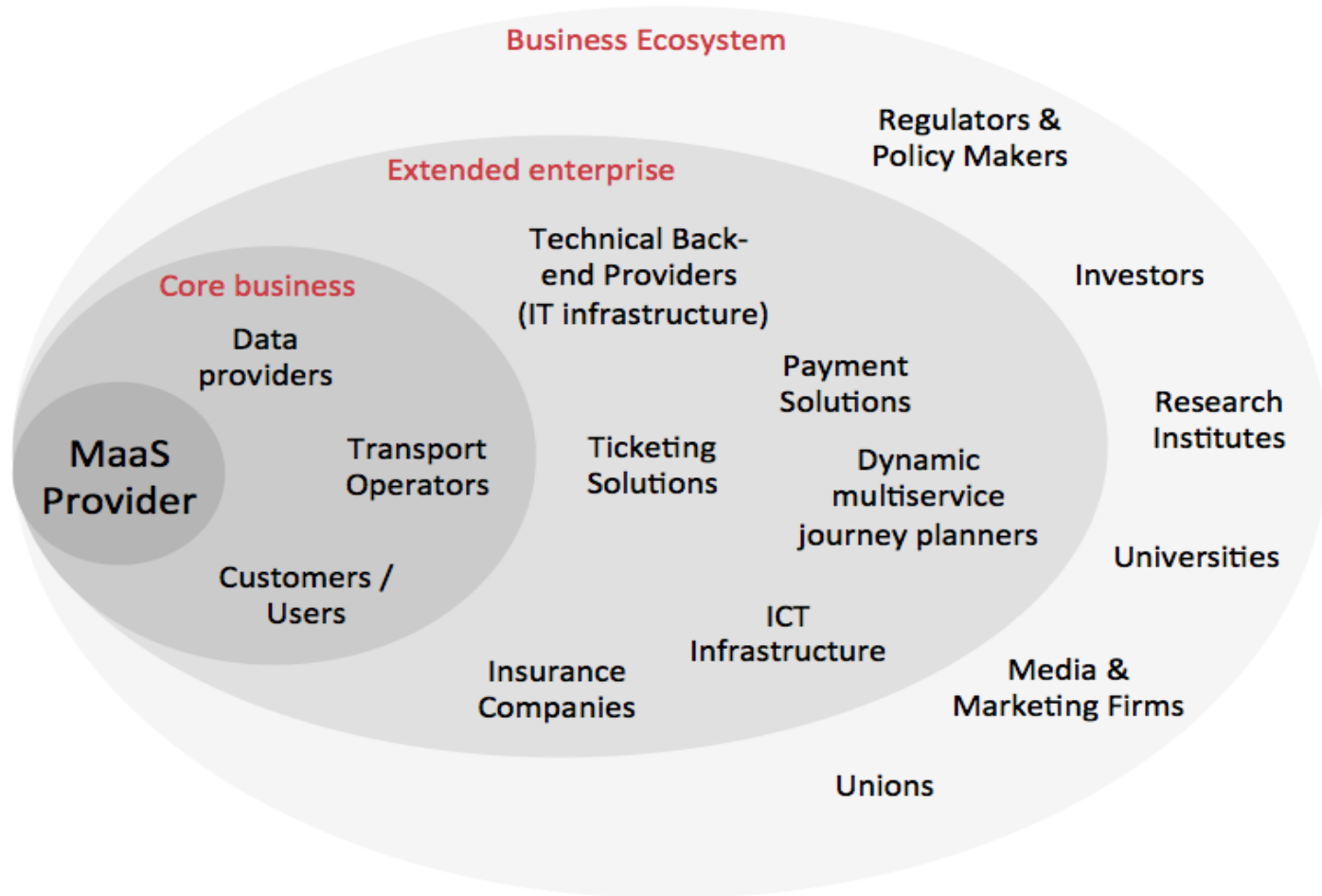
Background for MaaS Materialisation

The necessary changes for MaaS and most of the new mobility services are of a systemic nature:

- they require a business ecosystem where *multiple organizations act in collaboration*, mixing the traditional boundaries of business sectors and companies, and involving users in the co-creation (Heikkilä et al., 2012; Lettle et al. 2006; TSC, 2015).

-The MaaS Business Ecosystem-

The MaaS Business Ecosystem



The MaaS Provider

PTA

- + already responsible for all public transit modes/operators
- + the authority regulating and authorizing MSPs
- + might be able to cultivate the trust needed
- organisational change
- Connectivity/roaming
- Poor incentives

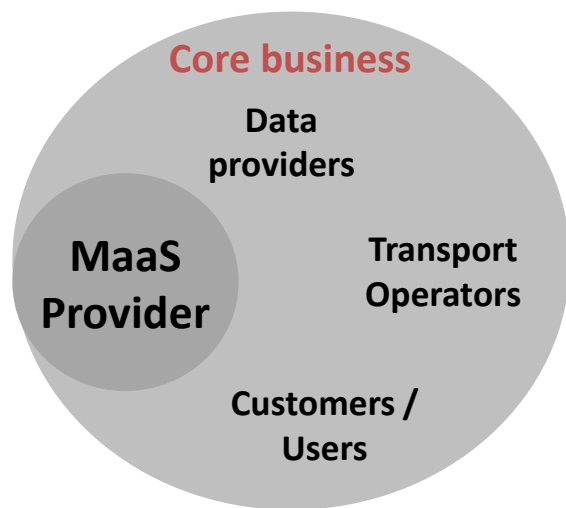
Transport Operator

- Coopetition (collaboration between competing actors)
- + may support cost savings in operation and co-investments
- trust

Trailblazer MaaS company

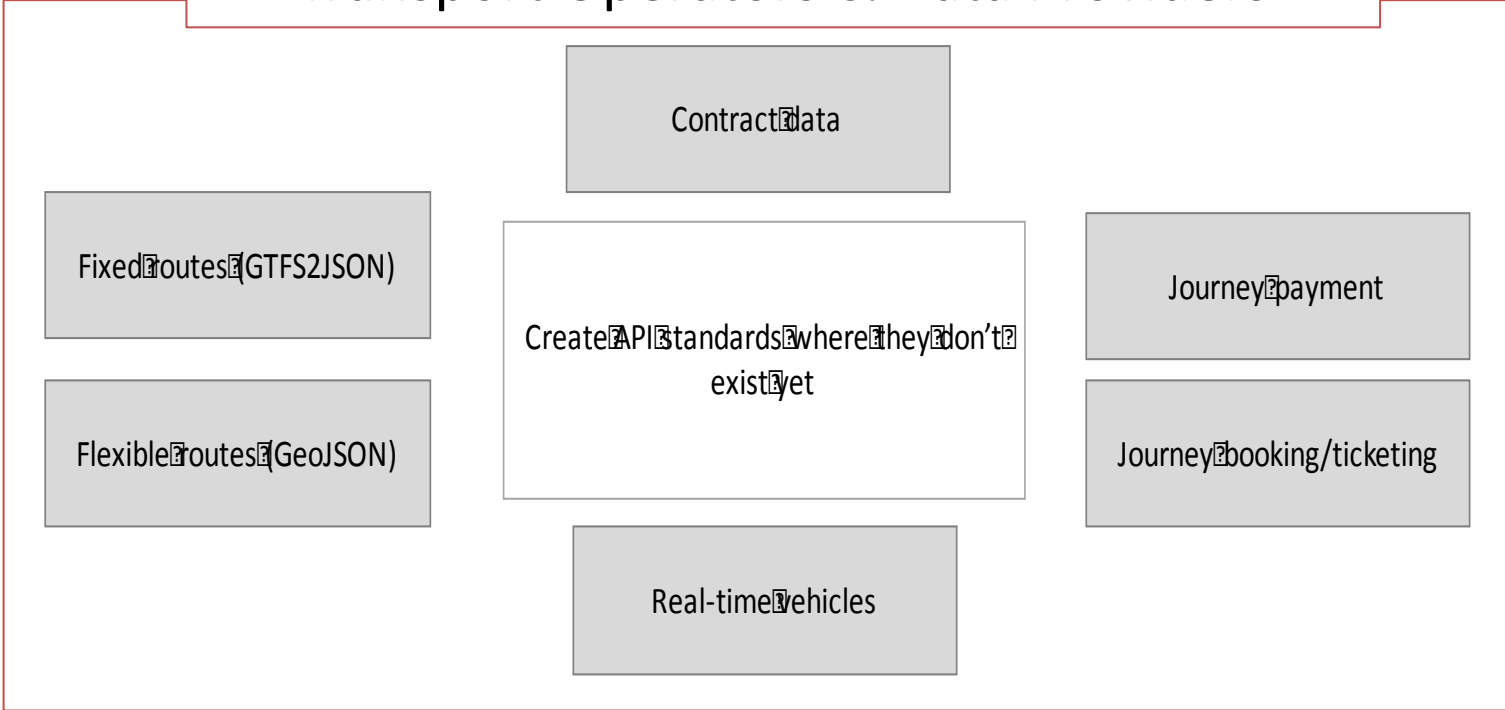
- + new ways to address fundamental user needs drive new collaborations
- + harness creativity and innovation
- + transverse existing boundaries and silos in the mobility sector
- inertia and lock-in effects from previous efforts

The Core Business

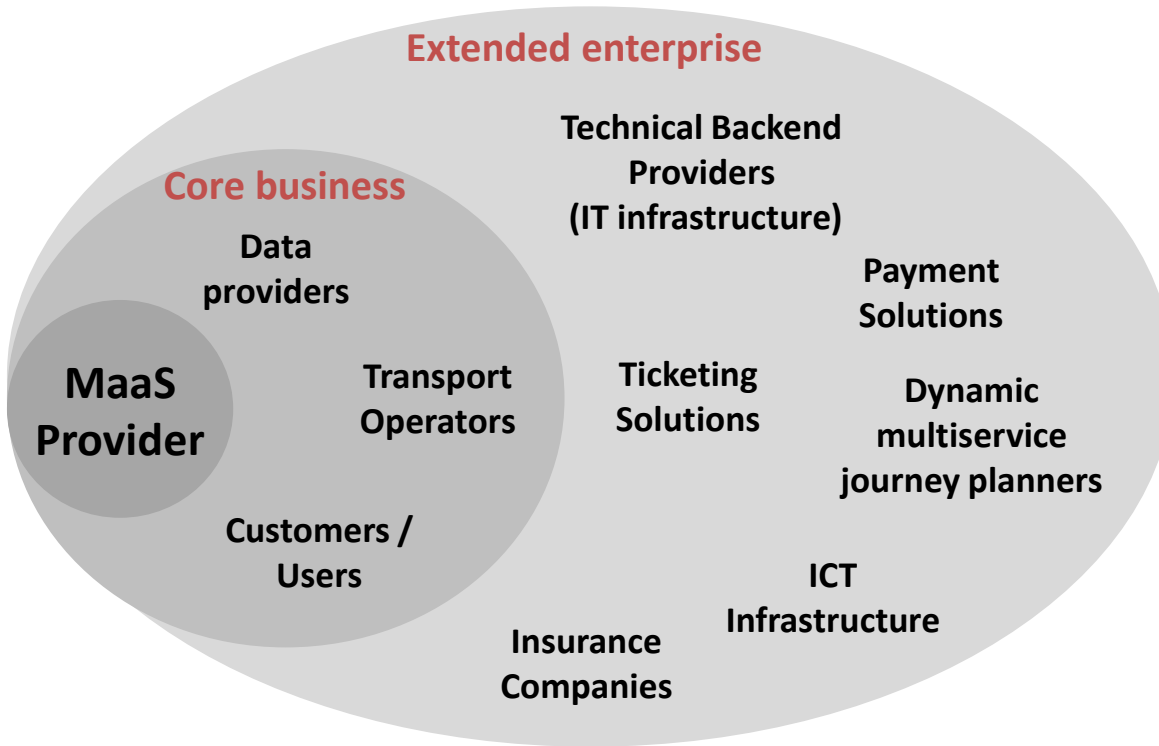


- **Transport operators:** sell their capacity to MaaS operators and provide access to their data via secure APIs.
- **Data providers:** offer data and analytics capabilities to MaaS providers. They process the data of the transport operators and collect data from a range of other sources
- **Customers:** could be individuals, companies or both (B2C, B2B, B2C&B2B)

Transport Operators & Data Providers

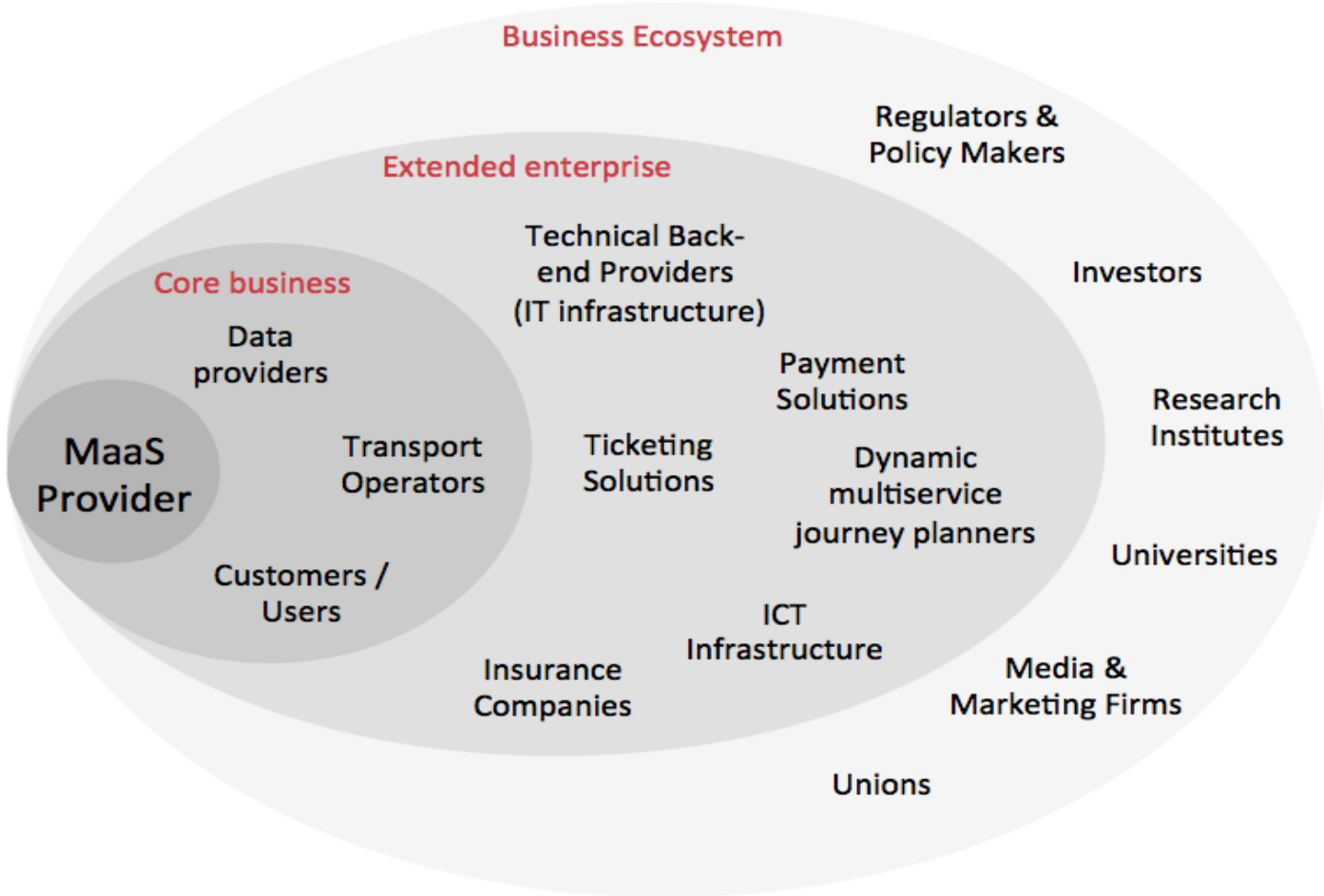


The Extended Enterprise



- Technology-specific actors offering support to the MaaS provider.
- Backend providers: on-demand cloud computing services
- Internet connectivity is also critical to any MaaS provider.

The MaaS Business Ecosystem



Conclusions

- The regulators could spark the MaaS-fire by providing the standards and the regulatory frameworks to protect the involved actors.
- The MaaS model creates value to the society, the authorities and the industry:
 - More efficient use of transport management tools and resources/data to meet the needs of citizens.
 - Multi-trillion dollar market (TSC, 2016).
- Research is needed in several sectors of the ecosystem

Next steps

- Market research for MaaS demand in London (supported by TfL and DfT)
- H2020 project - MaaS4EU: 3 pilots
 - Greater Manchester (city and national trips - PTA)
 - Luxembourg - Germany (intercity, international trips - TO)
 - Budapest (city, national and international trips - MaaS trailblazer).



Thank you!

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