

# *A process design towards a level playing field for the development of Mobility as a Service in Netherlands*



*MaaS – The best way to everywhere*

Group 15

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## Overview of slide pack

### 1. Dilemma

A key dilemma can be foreseen for implementing MaaS in the Netherlands: *‘Whom should MaaS system optimize for during the market entry design? The public sector (existing players) or private sector (new/business players)?*

Two issues are identified during the negotiation phase regarding to the dilemma: market reshaping and open data.

### 2. Actor analysis

The interests and resources of relevant stakeholders are analyzed for a clearer picture about the dilemma. It implicates the scope of the process design.

### 3. Process design

In order for the process to be efficient, openness out of the four principles needs to be ensured at the first place. Relevant requirements and design options are proposed to set limits on the process such that the desired outcome is still reachable.

### 4. Alternative evaluation

The different alternatives based on various design options are compared and evaluated. Furthermore, potential internal & external events including strategic behavior of stakeholders are discussed to improve the robustness of the process design.

## Introduction

*“Multimodal and sustainable mobility services addressing customers' transport needs by integrating planning and payment on a one-stop-shop principle.”*

*(MAASiFiE Definition of MaaS, 2016)*

- MaaS (Mobility as a Service) is expected to be a solution for future mobility system, which is characterized as the integration of shared mobility, booking/ticketing, and multimodal traveller information. The development of MaaS ecosystem requires interoperability and collaboration of different-level actors from public and regulatory authorities, transport and logistics service providers, MaaS operator and end users.
- MaaS still needs to be developed. There is a conceptual idea, but not yet a complete and mature design. Decisions made during initial phases of the development of the design determine outline of the final product. So it is important to identify the key dilemma and shape a decision-making process to achieve the optimal solution space.
- In the Netherlands, the Ministry of Infrastructure and Water Management intends to develop a national MaaS system. The efficient and clear regulatory framework is an essential enabler for MaaS development from both national and regional scale. Meanwhile, it is recognized that two key success factors of MaaS are the incentives of providers and users. Without the viability of business models and the acceptance of end users, MaaS is not possible into operate.
- This slidepack will specify an advice to the Ministry, in which a process design is proposed to solve the key dilemma during MaaS development. Five dilemmas are identified in the next slides and one out of those is selected as the key dilemma within this project scope.

## The 5 important MaaS dilemmas

- **Whom should MaaS system optimize for?**

**Key dilemma**

Open market with fair competition, high entry threshold with key players only, or a certain tenure for bidding? *Whom should MaaS system optimize for during the market entry design, public sector or private sector?*

- **How will the ownership of MaaS be distributed?**

Public, private, or hybrid ownership regarding the data, the MaaS platform, essential and common facilities?

- **How much control should authority hold?**

Facilitate competition with broad concession of operators, or central planning by the authority with narrow concession of operators?

- **What value will the MaaS route recommendation be prioritized for?**

Route recommendation priority by time consumption, CO2 emission, cost, supplier credit, supplier advertising bidding price or personalized suggestion?

- **How will MaaS dispatch the service capacity?**

Dispatch priority during oversupply scenario by free capacity, supplier credit, distant to user, offer price or just randomly?

## Key dilemma

**Whom should MaaS system optimize for during the market entry design?**

The private sector (new/business players) or public sector (existing players)?

### Fully public sector MaaS

*A market with exclusive rights for public parties; parties that have a public service obligation to provide public transport according to pre-set requirements.*

- Limited to conventional transport modalities, with little room for innovation on modalities. Parties are obliged to deliver according to their public service obligations.
- Less transport modalities, limited competition.
- High market entry threshold because of the current institutional arrangements and necessity of public tenders.
- Less transport modalities, leading to less competition.
- Financial burden for the authorities as mobility is seen as a public service.
- Authorities have the possibility to set priorities, necessities and requirements on the transport to be provided.

### Fully private sector/business-player MaaS:

*A market comprising of private parties only. The providing of transport services is assumed to be a natural result of business cases and competition.*

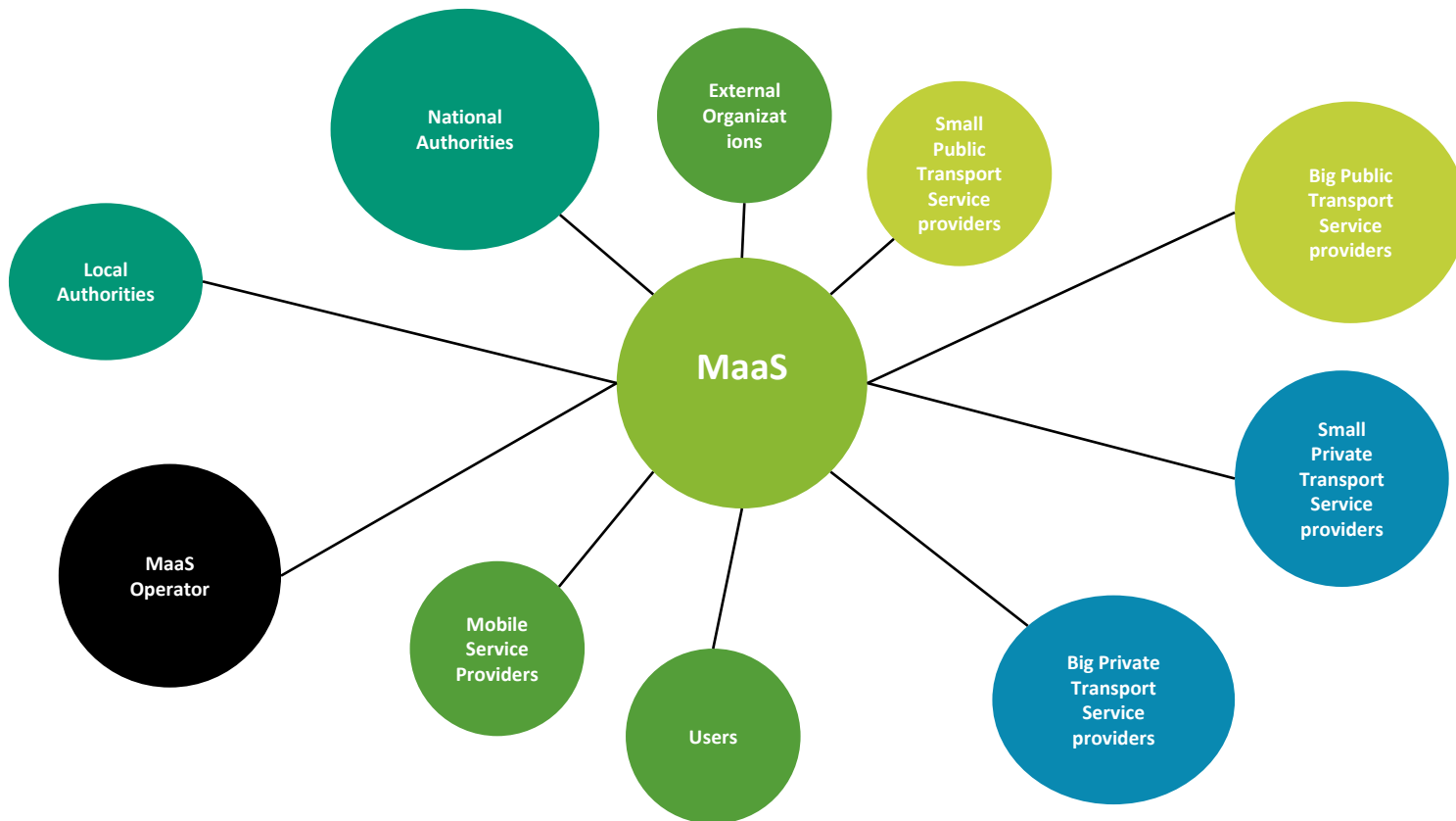
- Room for small to large private businesses, enabling the possibility for market dominance. Resulting in less innovation and competition. "Winner takes it all."
- Low influence of authorities on quality of service.
- Measures to prevent consumer exploitation are less effective, unless institutional arrangements are made, therewith restricting market parties freedom.
- Less incentives for environmental sustainability improvement.
- Service is dependent on business cases; non-profitable areas will suffer from a lack of transport service.

## Key issues identification

- During the negotiation of the key dilemma, we foresee multiple issues where different stakeholders may have interests, conflicts or various preferable alternatives. Two of those are market reshaping and open data.
- A solution needs to be sought for these two issues. The chosen approach to solve these issues influences the outcome of the general process of developing MaaS towards the national scale and the final market entry design.

Market Reshaping	Open Data
<ul style="list-style-type: none"> <li>• Interoperability needs to be governed between transport modes locally and across regional borders</li> <li>• Regarding how the transport market is shaped right now, different transport services are limitedly shared between mobility service providers. For instance, it is not possible to share the same taxi provided by different mobility service providers</li> <li>• Currently, there is no level-playing field for the transport service providers. Legislation, concession, subscriptions needs to be reshaped to fit MaaS</li> </ul>	<ul style="list-style-type: none"> <li>• To get these modalities to work with each other, the availability of real time travelling data is essential. Not only technical integration is necessary, there first needs to be political and commercial acceptance on an open market. Setting up targets for the level-playing field therewith forms a high priority.</li> <li>• Technical integration demands a smart cooperation between parties to share data and information. This sharing needs to be arranged in such a way that the exchange of information is safe - complying with laws and regulations (of which the GDPR is one) and interests of actors are protected.</li> </ul>
<b>How is it relevant to the key dilemma?</b>	
<ul style="list-style-type: none"> <li>• Parties that have a public service obligation to provide public transport according to pre-set requirements have a tendency of not intensively collaborating with private parties because of core value differences.</li> <li>• In the reformation of the market, both public and private parties have to work together in order to provide a level playing field.</li> </ul>	<ul style="list-style-type: none"> <li>• Essential aspect of MaaS is that it concerns multi-modal mobility options. This means as many transport providers as possible should be made accessible without discrimination (in principle).</li> <li>• It is very difficult to make agreements about data exchange between parties because of technical and commercial sides to data exchange</li> </ul>

## The MaaS playing field



## Actors classification & analysis - 1

Category	Actor	Interest	Resource
Authority	National authority: Ministry of Infrastructure and Water Management	A level playing field to both public and private, both big and small players, National implementation of MaaS	National policy-making and regulation; a role of orchestrator; Certain control of national public transport service providers
	Local authority: transport agencies at municipality, provinces, metropole regions	Quality of mobility service should remain the same or improve; higher accessibility from other regions; attract investment but avoid mismanagement chaos	Regional policy-making and regulation; operation experience of pilot projects; Certain control of local public transport service providers
Operator	MaaS operator	Integration of both public and private sector transport providers for maximum system usability.	Endorsement by the national authority; Central function of MaaS to connect service providers and consumers
Public transport service providers	Large market share: NS	Conservative towards MaaS. Wants to maintain market position therewith directly influencing the decision-making process, or even develop MaaS by themselves	Lower replaceability; market power -- positive network externalities,
	Small market share / potential new players: HTM RET Viola Connexion, EBM	Tend towards a publicly shaped MaaS platform to increase their role in mobility; also see opportunities to work along with private sector, increasing usage of their network	A certain consumer base; local operation experience



## Actors classification & analysis - 2

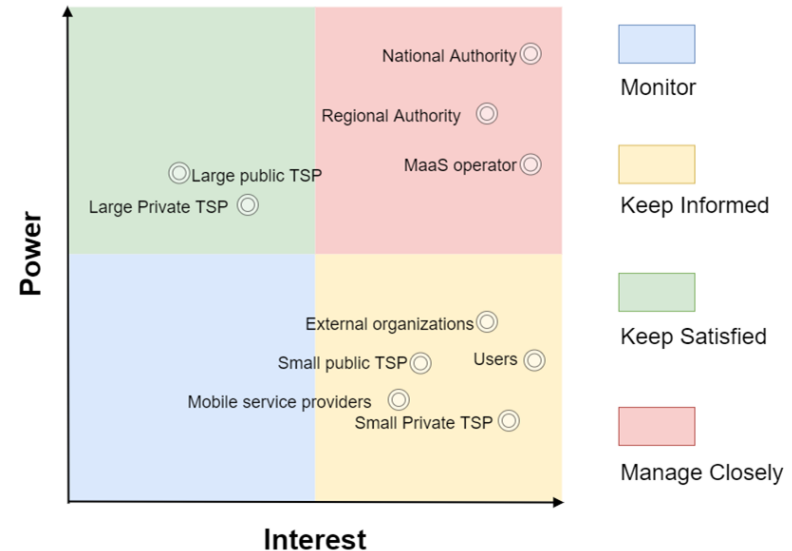
Category	Actor	Interest	Resource
Private transport service providers	Large market share: Uber, Hertz, Sixt	Tend towards privately shaped Maas platform to maintain the market position and increase the revenue. Their core business case is affected by public modalities.	Large consumer base & data resource; flexible transport service; mature business model
	Small market share / potential new players: Small Taxi & transport rental companies, Bike sharing companies.	Demand a fair access to the platform and utilize the new opportunity to connect with more users and remain competitive in the mobility market	The last-mile operation capacity; high creative & innovative ability to influence the existing market and institution (new modality, new business model)
Mobile service providers	Mobile ticketing, payment and data service company	Enter MaaS market and expand the business	Existing ICT infrastructure; large end-users base; advanced technologies
Users	In high population density areas In low population density areas With special need: disability, baby, elder	More accessible, affordable, convenient, friendly, personalized transportation service	High travel demand and free choices among service providers; consumer rights protected by law
External organizations:	On environmental impact: NGOs such as Greenpeace On consumer rights: Rover	Protect and promote their core value and vision; evaluate the key impact of MaaS implementation and make changes	Influential and global networks; high reputation among citizens

## Power/Interest Grid regarding the dilemma

Both national and regional authority should be managed closely to be a role of orchestrator and facilitator. With the policy-making and regulation power, the authority could contribute to a level playing field. The MaaS operator, as a new role in the mobility sector endorsed by the authority, decides the accessibility of both providers and consumers into the MaaS platform.

Some big public & private transport service providers started to create their own platforms and thus are not interested in the “Ministry MaaS”. But due to the low replaceability, keeping satisfied is required to make progress..

Besides, small public & private players show high interest in this emerging market to expand the business. Both users and external organizations have the claim for their demand and value. Mobile service providers also want to enter the new market and increase their revenue. All the actors mentioned above should be kept informed.



## Key principle: an open process

The development of MaaS ecosystem requires close collaboration and active participation of aforementioned actors, which demands an open negotiation process.

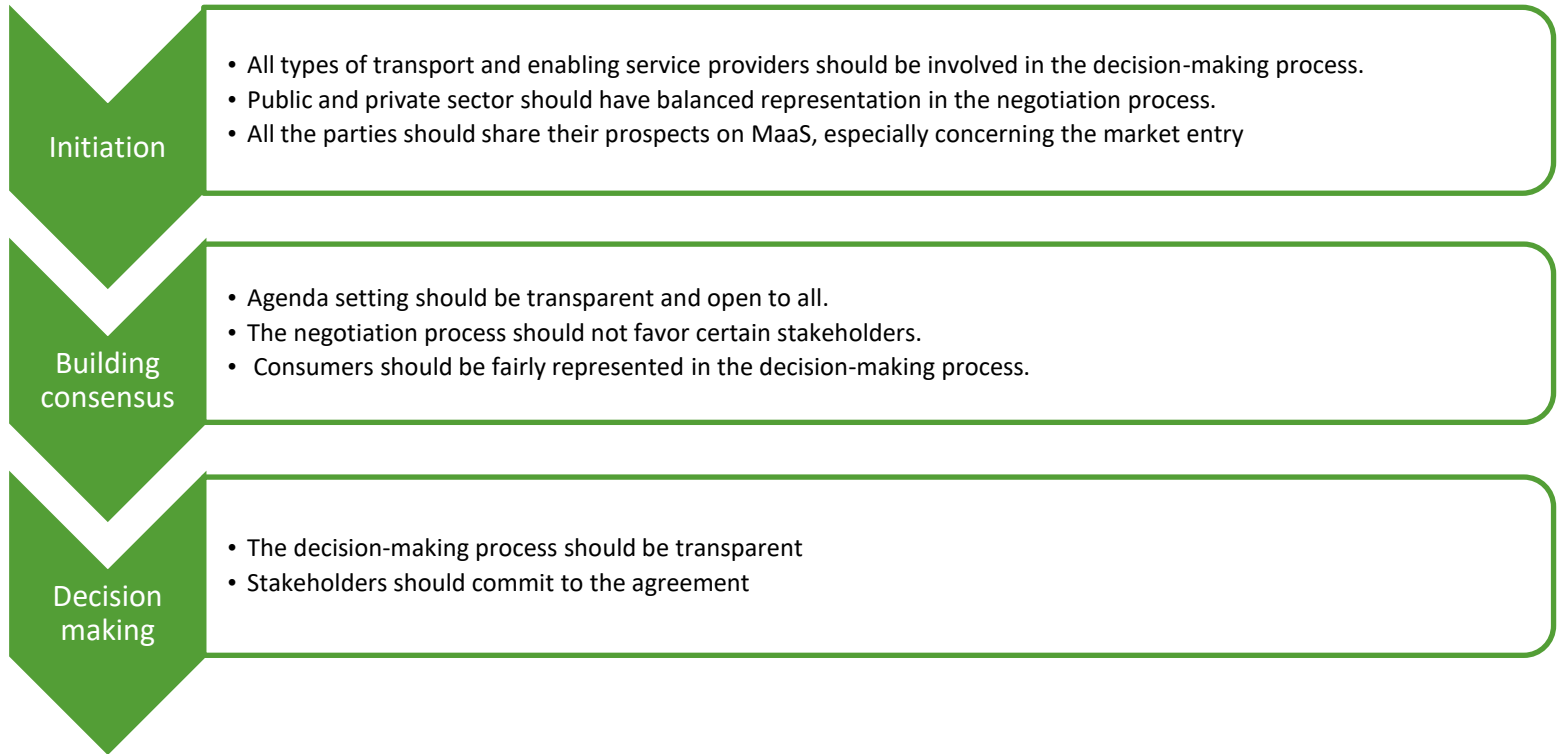
Regarding to the specific dilemma, either public or private sector has its own Best Alternative to a Negotiated Agreement that will hamper the progress. Therefore, an open agenda with multi-items is critical to coordinate the value conflicts and involve all the actors on board. Besides, openness guarantees sufficient room for substantive choices to avoid sub-optimal solutions.

Furthermore, openness implicates transparency and impartiality to make sure the interests of the actors will be addressed during the process, in accordance with the process agreements. This will lead to a decision-making environment that incentivizes the actors' willing to participate. In addition, an open process allows the leverage of external events and parties to stimulate cooperative behaviors as well as the progress.

### **Role of the ministry**

Ministry of Infrastructure and Water management will remain exploring the possibilities for developing MaaS. The ministry will adopt the role of process manager and will ensure an open and constructive process for the development of MaaS.

## Process design requirements - openness



## Design options - 1

#	Requirement	Option 1	Option 2	Option 3
1	All transport and enabling service providers should be involved in the decision making process.	Ministry invites all the relevant parties to the negotiation table since the beginning of the process	Negotiation process is drawn up in terms of different rounds and ministry decides who to involve in which round of the process. Notification informing all the players regarding this design is published before the start of the process.	Ministry publishes certain set of rules like data sharing, compulsory agreement at the end , et cetera and involves all the parties adhering to these rules in the negotiation process since the beginning.
2	Public and private sector should have balanced representation in the negotiation process.	Representatives of large and small players from both sectors are allowed to participate in the process to ensure a balanced mix of actors	Ministry analyzes all the participating actors and use 'command and control' techniques to bring down certain powerful actors to the level of rest of the participating actors to ensure balance. Power balance in dynamic processes changes over time, hence ministry keeps tab on this 'power' during various rounds of negotiations	Ministry analyzes all the actors and try to empower certain weak actors (eg. small startups) by helping them build their capacity (providing training to build negotiation skills/help build legal capacity etc) to bring them up to the level of other powerful actors. Power balance in dynamic processes changes over time, hence ministry keeps tab on this 'power' during various rounds of negotiations.
3	All the parties should share their prospects on MaaS, especially concerning the market entry	Representatives of players from both public and private sectors negotiate separately with the ministry on the issues regarding concessions, legislation and subscription	Public and private players negotiate with each other on the issues of legislation, subscriptions and concessions in the future market, in an open and transparent process under the mediation of the ministry which further opens possibilities of trust building and collaboration.	Passive approach - Ministry takes help from academia, expert groups from the Netherlands and other countries to understand the potential positions of these players on legislation, concessions and subscriptions in the Netherlands. It also carries out surveys, informal interviews et cetera to better understand the players positions on market entry.

## Design options - 2

#	Requirement	Option 1	Option 2	Option 3
4	Agenda setting should be transparent and open to all.	Each participating actor gets to choose the agenda for the next meeting on a rotating basis. In this way, every actor can raise issues important to them as far as legislation, subscription and concessions for market entry are concerned.	Ministry identifies the important issues (rules, risks, competition, incentives) regarding market entry during the actor analysis phase. It holds separate negotiations with each group of actors mentioned in the slide pack to address the issues.	In the initial rounds , each actor proposes an agenda. In the later phases, however, ministry/ process manager decides the agenda (potentially contentious issues drawn from initial phases) to speed up the process.
5	The negotiation process should not favor certain stakeholders.	Ministry refrains from making any unilateral concessions to an actor or using its power against any particular actor in order to influence the outcome of the negotiation process	The process mandate provides a mechanism like independent appellate body to hear the appeals from relevant actors against each other or the ministry regarding unfair, unjust treatment.	Each category of actors has equal representatives and the same time limit during the negotiation. Anonymous voting to protect the interest of small players
6	Consumers should be fairly represented in the decision-making process.	Self-diffusion surveys: online and offline questionnaire about the the attitude and opinion about the entry-exit rules and key issues. The results are indicated in the negotiation for review.	Structured Interviews or workshops: focus group, citizens selected from different ages, areas, education background, income level; simulation games / brainstorming workshops for market entry design. The results are reflected in the negotiation agenda.	Represented by the consumer right protection organization (CRO, association or NGO). This organizations are engaged in the decision-making process.

## Design options - 3

#	Requirement	Option 1	Option 2	Option 3
7	The decision-making process should be transparent	Ministry makes the final decisions about legislation, concessions and subscriptions in the MaaS market provided it informs all the stakeholders about the causes/parameters that made it arrive at that particular decision.	Actors involved in each round take unanimous decisions.	Any decision / agreement should be approved by the simple majority of all the actors.
8	Stakeholders should commit to the agreement.	Agreements are reached at the end of each of the 3 rounds. Every actor who is part of these rounds commit to the final agreement separately. [3 rounds: Legislation, concession, subscriptions for market reshaping]	Combined agreement is made at the end of the 3 rounds of negotiations.	Actors agree to bits and pieces and not to the whole of agreement of 3 rounds. Some actors who participated in round 1 about legislation, only agree to some of the laws and they are allowed to do that.

## Process design alternatives evaluation - 1

### Alternative 1

1. All relevant mobility service providers are involved
2. Representatives of public and private companies participate
3. Passive ministry approach
4. Rotating agenda setting
5. Equal amount of representatives and anonymous voting
6. Consumers represented by a CRO
7. Decision approval by the special majority of all the actors
8. Separate agreements are reached at the end of each of the 3 rounds

**Time:** The passive ministry approach and majority approval will elongate the negotiation process. Combined with the fact that all relevant mobility providers are involved, will further elongate the process with the risk of moving away from substance.

**Openness:** Because of the rotating agenda, parties can put certain issues on the agenda, implicating that parties are offered an opportunity to participate in steering the decision making.

**Public vs private balance:** Representatives of large and small players from both public and private sectors will participate in the process to ensure a balanced mix of actors.

**Transparency:** Transparency is secured by the fact that any decision / agreement should be approved by the special majority of all the actors.



## Process design alternatives evaluation - 2

**Time:** Fast negotiations due to final decision making, rule setting and agenda setting by the ministry.

**Openness:** High ministry involvement restricts other parties in the decision-making steering by ministry agenda setting.

**Public vs private balance:** Although the public and private sector might be represented equally, their involvement in the process is limited by separately negotiating with the ministry on the issues regarding concessions, legislation and subscription

**Transparency:** Ministry makes the final decisions provided it informs all the stakeholders about the causes/parameters that made it arrive at that particular decision, hereby securing the transparency.

### Alternative 2

1. Only the parties that adhere to the rules are invited
2. Ministry empowers weaker actors
3. Ministry negotiates with public/private players independently
4. Ministry determines agenda setting
5. The process mandate provides an independent appellate body
6. Self-diffusion surveys
7. Ministry makes the final decision
8. Actors don't have to agree on the whole of agreement

## Process design

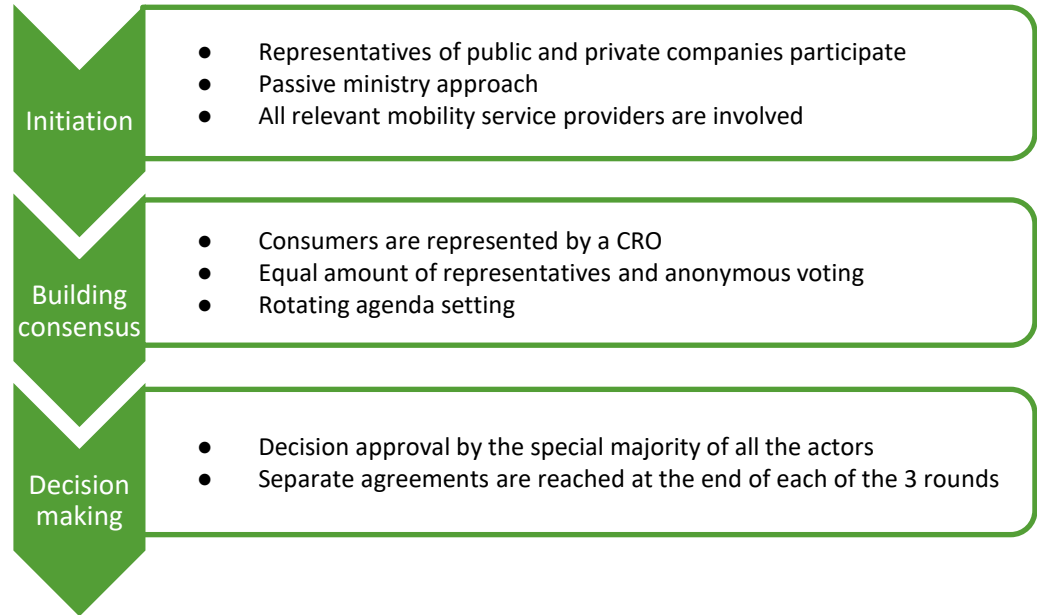
### Comparison between Alternative 1 and Alternative 2:

Alternative 2 is fast but gives less openness to the process since it delegates many tasks and decision-making power to the ministry itself, making it the single most powerful player.

Alternative 1 on the other hand, ensures openness and transparency by involving actors in agenda setting and decision-making processes.

Hence, we advise the ministry to go with the alternative 1.

### Alternative 1



## Internal Events

Internal events could emerge during the negotiation towards a MaaS level playing field, including strategic behaviors of certain stakeholders. Such events could be an obstacle or enabler for the decision-making, which requires to incentive or disincentive various actors and improve the robustness of openness.

Events	Type	Coping strategy
Some small and big public transport providers started creating an own platform. They see setting up a neutral platform as not interesting for commercial parties and therefore they think it is their responsibility to set up the platform.	Passive attitude and participation	There is possible for the authority to regulate and mandate the public transport firms since they are essentially owned by the public, in term of legislation, concession mechanism, etc. ; Or establish a cooperation relationship in the short term to speed up the MaaS development
Big players claim for privilege and intend to dominant the process considering the high market share and close connection with large consumers, ex. Intend to set strict standards to increase the threshold of market entry	Strategic Behaviors	The process manage should monitor and constraint big player's influence, and meantime, support the weak group for more bargaining power
Some players try to hamper the decision-making or strongly object the agreement	Interest Conflicts	It will alleviate the conflicts to involve other topics into the process to create a multi-issue agenda
Different municipalities adopts various regulations and designs regarding the market entry, which imposes a possibility of regulatory failure and chaos competition.	Institutional challenge	The national authority should first coordinate the interests of local authority and establish a baseline & common framework of MaaS regulation.

## External Events

External events could also play an influential role towards an efficient and effective process, such as relevant “policy windows”, international events and creative destruction. It is important to identify those events and prepare coping strategies to guarantee and facilitate the process.

Events	Type	Coping strategy
Possible introduction of local roadway tolls by municipalities. Adjustment of ‘Wet gemeenschappelijke regelingen’ and possibly introduction of ‘Wet regulerende heffing wegverkeer’	Legislative changes	Include representatives regarding tolls from municipalities into negotiation rounds.
The rapidly technological development leads to the emergence of new modalities, such as massive use of Self-driving car.	Creative destruction	The negotiation process should keep evolving as a long-term mechanism to incorporate the new players and tackles new challenges.
Nitrogen crisis	Sustainability issues	It is possible to creation of multi-issue agenda towards a national/international policy goal such as climate change mitigation.
International events to be held in Netherlands such as UEFA Euro 2020, Eurovision, Floriade and other Expo, conferences, etc.	Enabling opportunity	Those events could serve as an opportunity to implement the conceptual ideas and conducts the experiments to obtain experience and build consensus among stakeholders.

## Summary

This slide pack showcases a preferable process design towards a level playing field of MaaS. It could provide suggestions and insights for the Ministry to implement the pilot projects and upgrade into a national MaaS system.

The balance between public and private sector regarding the market entry is addressed as the key dilemma. The process design are derived from a detailed analysis of relevant actors' interests and resources. The openness is regarded as the key principle from initiation, building consensus and decision-making phases.

The best alternative is selected in terms of opennes, time, public vs private balance and transparency. 8 design requirement and corresponding options are proposed to empower the negotiation process to achieve reciprocal outcomes. Furthermore, 8 types of internal & external events that could affect the process are identified and analyze, with coping strategies to improve the robustness.

