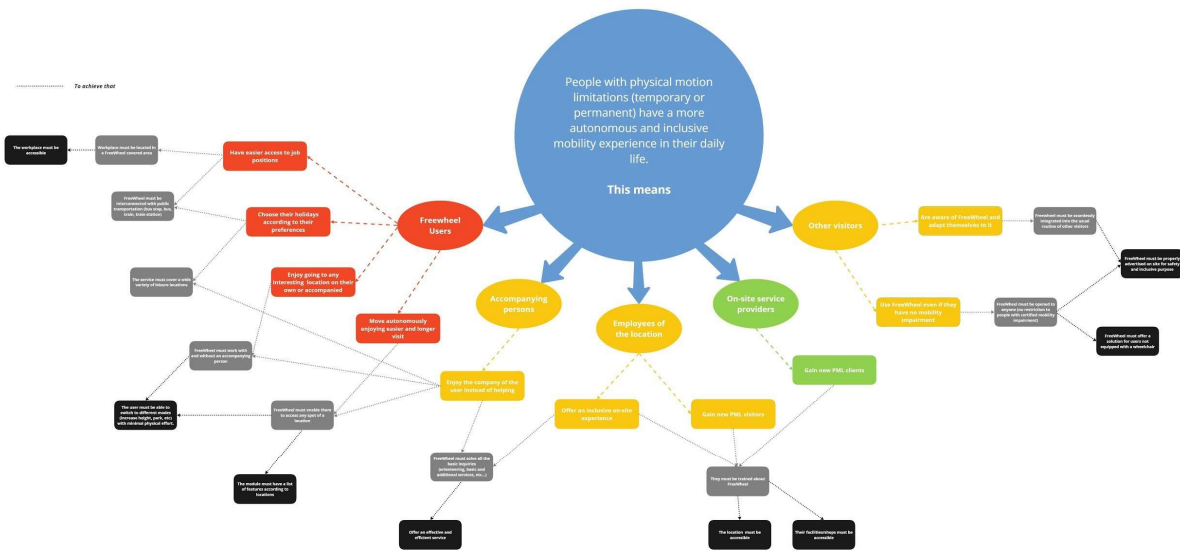




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Social Impact Objectives and Evaluation Model Definition

D2.4

Keen Bull

Executive summary

The following activities have been conducted to define the evaluation model of Freewheel and its social impact objectives in order to measure the effect generated by the service on beneficiaries.

With inputs from other consortium partners, FreeWheel Theory of change is developed as a way to capture a shared vision of the success of the project and define how the social impact of the service could be evaluated once it is fully operating.

The previous deliverables have helped speed up the co-creation process, and get a more precise and realistic vision of the change sought with this service. More precisely:

- Having done the User stories exercise during the 1st General Assembly made it easier to conduct remote brainstorming sessions with partners in order to identify key stakeholders and key changes they envision once the service is live;
- Interviews conducted for both the User Archetypes (D2.1) and the Experience Journey Map (D2.2) helped to gain clarity on the needs of the End Users and prioritize the key areas where the changes are most required.

The Technical content details the customized method developed to design Freewheel Theory of Change. The shared vision of Freewheel by 2022 is the following: **“People with physical motion limitations (temporary and permanent) have a more autonomous and inclusive mobility experience in their daily life.”**

In building the Theory of Change, the following key results have been achieved:

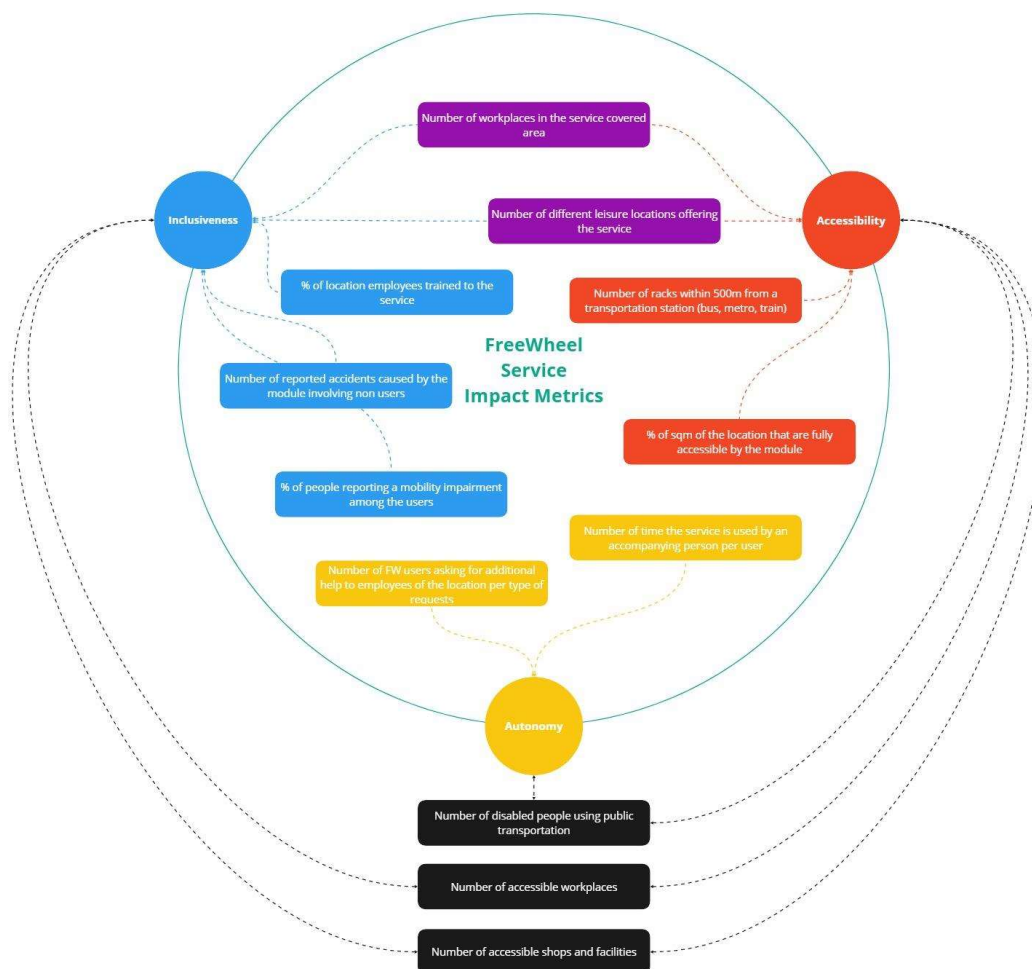
1. [The location assessment matrix](#): a 2 dimensions tool to assess locations once their accessibility has been checked
2. [The stakeholder map](#): a representation of the generic key stakeholders of a location where Freewheel will be implemented
3. [The pathway to outcomes](#) providing an adaptive roadmap to the shared vision of success we have defined

The process of collectively building the project Theory of Change fostered a **better alignment** among the partners, a **wider understanding of the targeted end-users** and a **discovery of other potential customers**.

The main outcomes of this process are defined into a [first set of social impact indicators](#) to measure the change sought with FreeWheel. They are synthesized in the following visual representation¹ making the distinction between direct and indirect social impact indicators as well as the 3 main areas of impact (accessibility, inclusiveness, and autonomy).

¹ A larger version of all figures in the document is available in [List of the figures and tables](#)

Indirect impact indicators



The results of this deliverable are going to nurture the following Deliverables:

- **Deliverable 2.3** dealing with the definition of service and technical objectives for the prototype as the Theory of Change has created a shared understanding of the social impact we want to create with the fully operating service;
- **Work Package 4** as the preconditions of change and the outcomes identified in the Theory of change are providing guidance for defining and prioritizing the service features;
- **Work Package 9** (especially Deliverable 9.3 about Exploitation Program Definition) as in the process of mapping stakeholders, a broader spectrum of potential customers for this service has been identified : city authorities (departments dealing with touristic area promotion and public transportations) as Free Wheel could be part of their Smart Mobility initiative and employers in the service covered area as part of their mobility plan together and their CSR policy regarding employment of people with disabilities.

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Introduction

When submitting the research project in 2017, the partners agreed on an initial vision of what Freewheel will be:

“A Lifecycle-reconfigurable Smart Mobility Platform to enable autonomous and cost-effective personalized solutions for social inclusion of disabled and elderly while leveraging AM technologies”

With this project, the intended impact is to provide **autonomous and cost-effective personalized mobility solutions for social inclusion of disabled and elderly people**.

To evaluate the social impact of the project, we initially defined the following impact metric coming from IRIS² impact reporting framework: **“Number of unique individuals with disabilities who were clients of the organization during the reporting period”** (metrics PI6266). When choosing these metrics, we were then conscious that it was a very limited and limiting perspective on the effective social impact of Freewheel. For instance, this wasn't taking into account relatives of the end-users who actually benefit from their greater autonomy. This was neither defining what disability means and the potential overlap in counting the 2 initial target groups: people with disabilities and elderlies.

Six months after the actual launch of the research project, co-creating Freewheel Theory of Change is a way to **clarify a common vision of success of the project** and get a clearer **shared picture of the social change to achieve** now that end-users' needs have been clarified thanks to the definition of User archetypes (cf. Deliverable D2.1), and the Experience Journey Map (cf. Deliverable D2.2).

Why using a theory of change is relevant when measuring the social impact of a project?

When initially writing the research project, a Logic model was tentatively planned to be used to define the social impact objectives of Freewheel and Evaluation Model. However, after a deeper investigation (cf. figure 1 for a comparison of the 2 ways to measure social impact), it was replaced with Theory of change impact model for the following reasons:

- **Adapting to the timeframe in 2 stages of the project:** from Horizon 2020 funded initial research in 2017-2020 to a second stage funding in 2020-22 before market launch
- **Making the evaluation model flexible and adaptive to the challenges** identified during the research phase to reach a market launch by 2022;

² IRIS is an initiative of the Global Impact Investing Network (GIIN), a nonprofit organization dedicated to increasing the scale and effectiveness of impact investing

- **Taking into account the diversity of actors involved in both stages**, starting with the consortium members during the first stage (2017-2020).

Method	Time frame of the change?	Results and indicators of success	How it fosters collaboration	How it fosters accountability
Logic Model	Short term projects with limited clearly defined objectives, indicators and outcome	Quantitative indicators based on specific outputs	Really focus on the outputs of 1 organization	Internal reporting on the activities performed
Theory of change	Long term change. Allow flexible and adaptive strategies in complex situations	Quantitative and qualitative indicators in a pathway to change. Track changes in behavior, attitudes, relationships and capabilities	Allow different actors to plan and track their collaborative contribution to shared outcomes	Public reporting reflecting shared learning

Figure 1: Differences between Logic Model and Theory of Change

The Theory of Change (ToC) is a conceptual roadmap to envision how the project is expected to achieve its intended impact. In long-term project aiming at bringing social changes, a ToC is a powerful alignment tool for all the project members. It is also the basis for choosing relevant social impact objectives and define indicators to measure them. Last but not least, this framework provides guidelines on how to adapt the service to any new location by bringing some criteria to assess the context and understand the specificities of its ecosystem of stakeholders.

Presenting the chosen methodology to build Free Wheel theory of change

To create Freewheel Theory of change, we adapted a framework coming from [Keystone Accountability](#)® that best suited the needs of the research project while being a reference

framework for building a ToC³.

Being active for more than 10 years in measuring and reporting practices for social change, this organization has developed a comprehensive and practical approach to Theory of Change. A complete guide can be downloaded [here](#). An example of their own theory of change can be found [here](#).

We adapted this framework to meet several constraints of the project:

1. The co-design process had to be performed remotely (as opposed to in-person workshop)
2. The inputs from participants were to be collected at different moment (as opposed to synchronous collection)
3. Participants came from the various organizations of the consortium (as opposed to one common organization)
4. The dual horizon of the project as the research phase should end in 2020 but the success will be once the service is implemented in a location as a fully operating service (as opposed to a prototype in a test environment).

With these set of constraints, we developed a renewed approach of ToC, proposing a methodology with the following benefits:

- A wider variety of perspectives on the project through the diversity of consortium partners;
- Optimized economic and environmental cost from 2-days in person workshop to remote workshops with 14 people using a maximum of 2 hours of their time to perform the activities.

An example of adaptation is how the transformed the “Develop a vision of success” (step 1 of this method) leveraging on remote-working technologies and the co-creation activities previously led during in-person meetings (cf. the work on stories performed during the First General Assembly):

Objective of the activity	Keystone proposed activity	Customized activity for Freewheel project
Build an initial vision of success	The big picture of change <i>2 hours in-person workshop</i>	The Newspaper <i>Asynchronously 10-15 min</i>
Build a shared precise vision of success	The precise picture of change <i>0,5 day in-person workshop</i>	The on-site visit <i>Asynchronous exercise (15-30 min) or online codesign session (1,5 hour)</i>

³ A good synthetic review of the various existing frameworks (in French only) has been done by F3E and could be downloaded [here](#).

Technical Content

A Theory of Change is co-created with all actors in the project both as a way to increase the probability of success and ensure adaptability to the challenges the consortium may face during the initial phase of the project and after, once the test has been run and funding period is over.

We adopted a 3 steps approach:

1. Envisioning the success
2. Mapping the pre-conditions of success
3. Identifying the key elements to measure the social impact of the project

The graph below represents each steps with its purpose.

STEP 1	STEP 2	STEP 3
Envisioning success	Mapping preconditions of success	Key elements for measuring social impact
Building a common vision of success	Identifying the conditions for success to happens	Defining a series of impact indicators to measure the impact

A set of co-design activities are conducted in step 1 to create the Theory of Change. The following paragraphs describe the key results achieved at each step of the method. The [Theory of Change](#) is the synthesis and the outputs of the 3 steps.

Step 1: Envisioning Success

This step aims at creating a shared vision of success for FreeWheel. A space is created to discuss the change collectively sought by collecting various point of views of consortium members on what does the success of the project means from their perspectives.

Two activities are submitted to all partners for building a “vision of the future”:


- 1) The newspaper exercise
- 2) The virtual on-site visit

Two facilitation techniques are applied to collect as many perspectives as possible while being time and cost efficient:

- 1) Exercise with a template and instructions sent by email
- 2) Remote co-design session using a digital board of post-its notes

Activity 1: The Newspaper

Instruction: You open the newspaper in 2022 (2 years after the service has been tested) and discover an article about FreeWheel. What do you read?

<p style="text-align: center;">MORNING EDITION - 17 May 2022</p> <hr/> <h2>Stop sweating while hanging out! FreeWheel service is now live</h2>  <p>A new smart pay-per-use service is making power drive for manual wheelchairs finally accessible to everyone</p> <p><small>"It feels like being on a Tesla with autonomous drive!" - people already tried FreeWheel are excited by some of its advanced features - "And every module's configuration match my needs."</small></p>	<p>What's the headline? → This catchphrase tells us what the most important change achieved with the service is.</p>
	<p>What's the header? → This sentence tells us what the key features of the service are.</p>
	<p>What quotes do you read? → These quotes are giving us the point of view of the actors involved and how the service is changing their behavior/life.</p>

Preliminary conclusions on the newspaper exercise

All newspapers focused on **the future users** and benefits experienced using FreeWheel: **accessibility** to all kind of places, the **autonomy** and an improved experience of mobility and life. Other factors mentioned are related to the **affordability of the service** (thanks to the pay-per-use business model) and its **customization**.

In addition to the final use, two other key stakeholders are mentioned for a successful implementation of the service: the **manufacturers** using the engineering platform to deliver customized piece in quick and affordable price and **city authorities (infrastructure owners)** integrating the service in their broader smart mobility strategy.

Activity 2 : The On-Site Visit

Instruction: Having read this article in 2022, you now visit a site where FreeWheel is offered as a service. What do you see?

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Facilitation: To gather inputs from a maximum of partners, this activity was facilitated in 2 different ways:

Method 1: Template sent by email

Participants were asked to answer two questions using a specific template:

1. What kind of site are you visiting?
2. Who do you see in the site you are visiting?

Method 2: Online co-design session

Participants joined an online meeting room with a shared screen projecting a Realtimeboard⁴ and the facilitation team capturing all inputs with post-it notes with the following agenda:

Duration	Activities
5 min	Introduction of the session (context + instructions)
15 min	Newspaper exercise (warm up) <ul style="list-style-type: none"> - Sharing by Keen Bull - Asking feedback from consortium partners
20 min	Q1 - Context (Brainstorming and clustering) <i>What kind of site are you visiting?</i>
20 min	Q2 - Stakeholders (Brainstorming and clustering) <i>Who do you see in the site you are visiting?</i>
20 min	Q3 - Key outcomes from key stakeholders (Brainstorming) <i>You stop three people (the most important for you), and you ask the question: "what is the biggest change you have experienced since Freewheel is implemented?" What do they tell you?</i>
10 min	Conclusion Feedback on the exercise (what have you learned, what is puzzling you?) Wrap up and next steps

⁴ Real time board is an online collaborative tool simulating a board allowing team members to interact real-time, remotely as if they were in the same room with post-it notes and blank board.

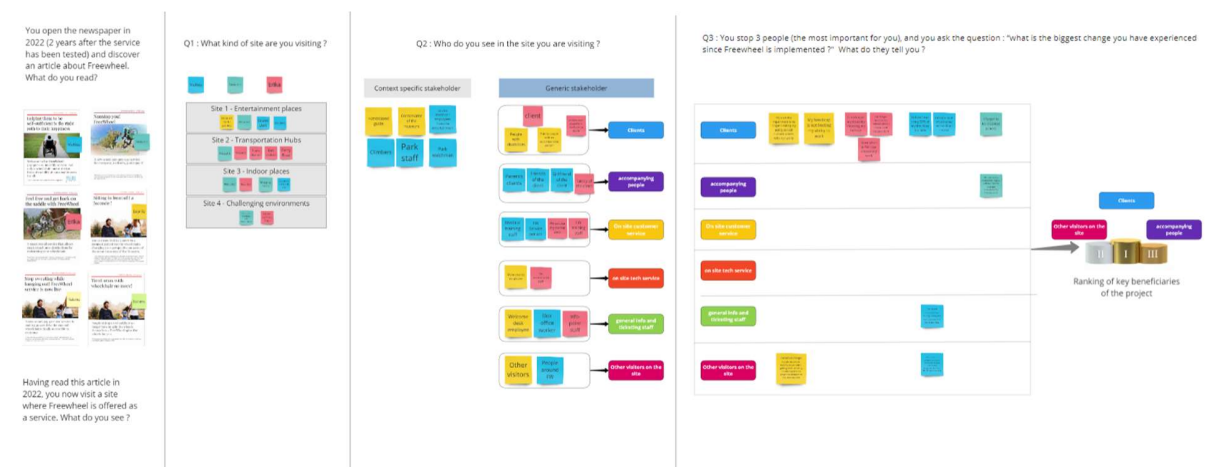


Figure 2: Example of the final board created with a team of 3 people

All inputs were gathered using a shared spreadsheet detailing:

- The various envisioned contexts
- The various stakeholders depending or not on these context
- The key stakeholders
- The outcomes of changes for this stakeholder

NB: This activity is different from the work previously done with user stories during the First General Assembly as explained in the table below.

	User Stories	Vision of the future activities
Purpose	Identify needs to validate with potential users and prioritize with technical constraints	Define precisely the change they seek with the service
Perspective (point of view)	Key stakeholders of the service (Client, Accompanying Person, Service Provider, Manufacturer)	Freewheel Partners
Question asked	What needs should the service address?	What has the service changed for the stakeholders we target?

Figure 3: Difference between “User stories activity” and “Vision of the future activities”

Preliminary conclusions on the on-site visit exercise

- Envisioning the future helped to identify hints on various rolled out options of the service: on-site or online customer service, roles of the employees from the location (touristic location or not).
- The various context envisioned helped setting **a list of criteria to rank locations** to facilitate the service implementation in a new location by capitalizing on experiences in similar locations ([cf. key result n°1](#)).
- A key success factor before rolling out the service in a new location will be to adapt **the generic stakeholder map with local stakeholders** and identify who are the most critical stakeholders in each specific context. Identifying some common behaviors and relationships between context-specific stakeholders and the generic categories of the ToC can increase the chance of a successful implementation by capitalizing on previous experiences acquired in other locations ([cf. key result n°2](#)).
- After discovering a potential business-to-business option for the business model (employers paying for the service for their disabled employees), it was decided a necessary **shift from calling the beneficiaries of the service “Client” to “Users”** to clarify the difference between the stakeholder paying the service and the one using it.
- Partners contributions pinpoints a **variety of profiles fitting into the “Users” category**. The most quoted was disabled people; but there were also elderlies; and an important distinction was made between temporary and permanent disability. As a synthesis of all these possible profiles of users and to adopt a more inclusive mindset, the following terminology is proposed: **“People with physical motion limitation”** (PML).
- Using both general perspectives from the newspaper and key words from the on-site visit, **a shared vision of the change** was created ([cf. key result n°3](#)).

The analysis conducted to obtain key results from both activities are detailed in the three following sections.

Key result n°1: Location assessment matrix

By analyzing all different envisioned contexts, a common criterion is discovered to assess the location.

The **accessibility criteria** should be assessed first as **a necessary condition for the implementation of the service**. This criterion refers to the level of accessibility to reach the location (as opposed to accessibility in the location itself which could increase over time in the location as an indirect impact of Freewheel).

The two other criteria listed in figure 4 (location setting and purpose of the visit) help to define the profile of location associated with design and technical specific challenges. Examples of possible locations based on partners contributions are classified according to these two dimensions in figure 5.

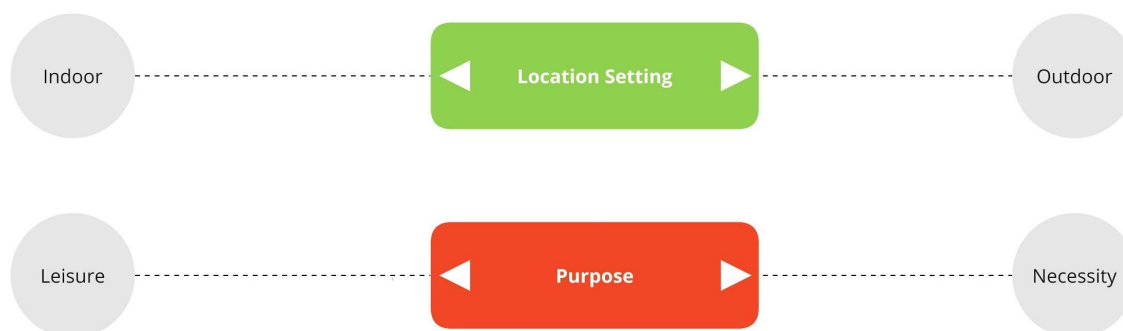


Figure 4: Criteria to assess a new location to implement Freewheel

By positioning locations according to **weather conditions (indoor or outdoor)** and the **purpose of the visit (necessity or leisure)**, the following observations are made:

- 1) Some locations have a dual purpose: the shopping mall and city center can be both visited for life necessity and leisure.
- 2) The most quoted locations are actually the one located in the center of the matrix (transportations, shopping malls, fairs, city center).

In conclusion, this location matrix could be used in the implementation of the project for a dual purpose:

- 1) **Prioritize locations where to implement the service:** locations at the center of the matrix tend to address more diverse needs thus enabling a bigger impact.
- 2) **Capitalize on the experience of previous implementations** in “similar” locations.

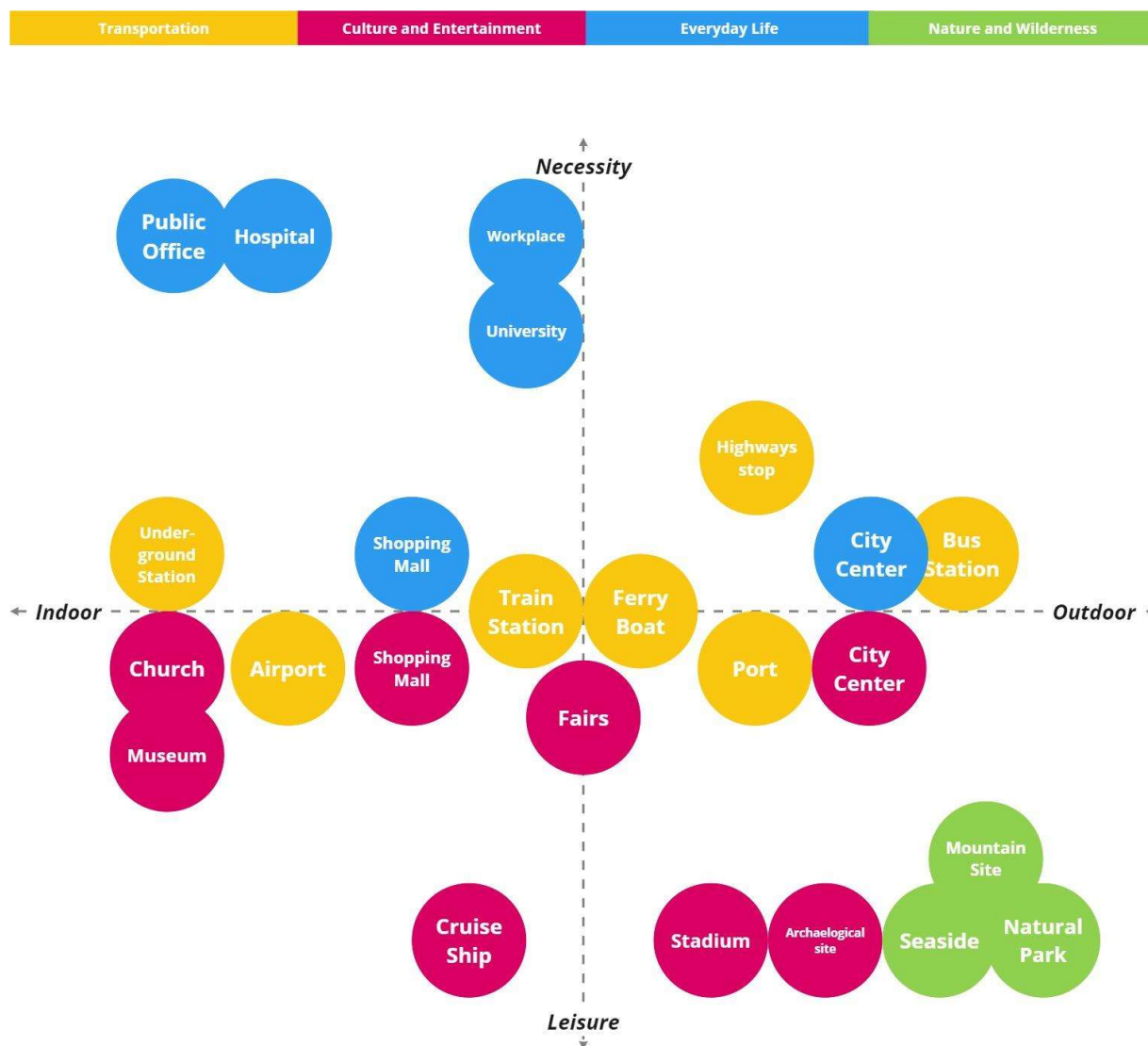


Figure 5: The Location assessment matrix

Key result n°2: Stakeholder map

By listing three key stakeholders mentioned by each partner during collaborative sessions, the following ranking of stakeholders is obtained:

GENERIC STAKEHOLDER ANALYSIS Nb of occurrences		% of total key stakeholders
Users	18	45%
Employees of the location	7	18%
Accompanying persons	5	13%
FW on-site employees	4	10%
Other visitors	4	10%
On-site service providers	2	5%
TOTAL	40	100%

NB: FreeWheel on-site employees may have several roles: giving information about the service, helping register and attach the module, training people on how to use the service, performing maintenance and cleaning tasks. These roles can be in some cases also performed by the employees of the location. This potential overlap should be taken into consideration in the roll-out phase of the service.

In addition to this table, the stakeholder map (cf. figure 6 below) is developed with inputs from the newspaper exercise to have a global vision of the ecosystem including indirect players that could be critical at some stages of the implementation.



Figure 6: FreeWheel Stakeholder map

In this representation, stakeholders are ranked from the most often quoted to the least quoted by partners. The colors represent their importance in achieving the vision of success.

- **Red:** quoted by more than 40%
- **Orange:** quoted between 10 to 40%
- **Green:** quoted by less than 10%

Additionally, **blue stars** are stakeholders that will be critical in the launching phase of the service.

Key result n°3: Shared vision of success

The first synthetic view is derived from the Newspaper exercise with all the key changes stated by participants in the “on-site visit” activity. In some cases, conversions were made to state them as outcomes. An outcome statement describes a result – a change that has taken place, not as a need statement or an activity that is still in process.

After clustering them, the following synthetic shared vision of success is formed:

People with motion limitation (temporary or permanent) have a more autonomous and inclusive experience of mobility in their daily life.

Step 2: Mapping preconditions of success

Having identified the common vision of success above and the associated key stakeholders, all the outcomes are analyzed by first decomposing them in key topics and then clustering and rewriting some outcomes. To do so, all outcomes are ensured to be **Mutually Exclusive and Collectively Exhaustive**⁵.

All components in a visual board (cf. figure 7) are analyzed to map the link between stakeholders and their related key outcomes. The color indicates the level of importance of the stakeholders according to the stakeholder map (cf. figure 6). All outcomes related to FreeWheel employees were removed as their perspectives are not existing prior to the implementation of the service. Some of the associated outcomes are reintegrated in another existing stakeholder's perspective: the Employees of the location.

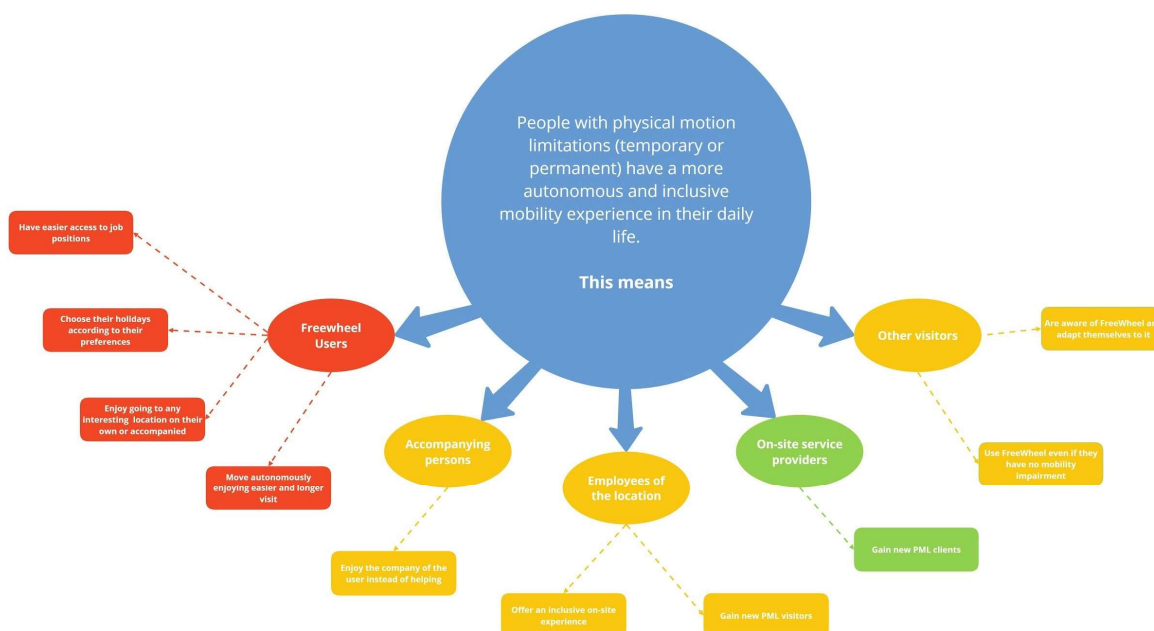


Figure 7: Vision of success with key stakeholders and key outcomes⁶

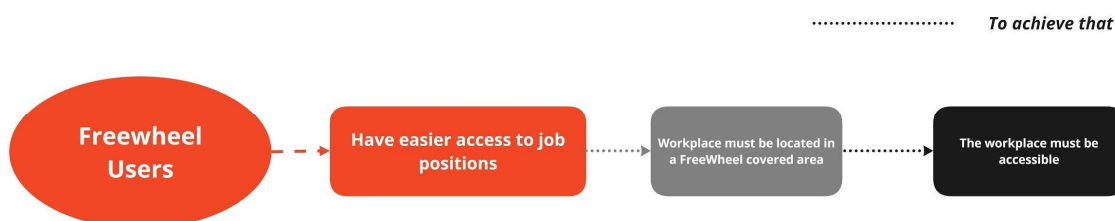
For each outcome statement of the vision of success (cf. figure 7), a series of pre-conditions are determined for this change to happen. These conditions formed "the pathway to outcomes".

⁵ Cf. MECE principles: https://en.wikipedia.org/wiki/MECE_principle

⁶ A larger version is available in [Appendix](#)

Here are 2 examples of two different outcomes:

1) From the “User” perspective:



2) From the “Other visitor” perspective:



For each condition, the following checks were made:

- It is achievable and plausible
- It is a necessary stop on the path to the change (vs. a nice-to-have)
- It is in the logical order compared to the precondition coming before
- It is not a feature

We then applied the MECE principles to make sure that all preconditions were Mutually Exclusive and Collectively Exhaustive. This is how we obtained the pathway to outcomes.

Key result 4: Pathway to Outcomes

By mapping the pathway to the shared vision of success, the progress steps to measure were identified. These are intermediary goals towards the change sought to be made. The detailed preconditions of success are listed in figure 8 below.

Stakeholder	Key outcomes	Precondition - level 1	Precondition - level 2
Freewheel Users	Have easier access to job positions	Workplace must be in a FreeWheel covered area	The workplace must be accessible
		FreeWheel must be interconnected with public	

	Choose their holidays according to their preferences	transportation (bus stop, bus, train, train station)	
		The service must cover a wide variety of leisure locations	
	Enjoy going to any interesting location on their own or accompanied	The service must work with and without an accompanying person	The user must be able to switch to different modes (increase height, park, etc.) with minimal physical effort.
	move autonomously enjoying easier and longer visit	FreeWheel must enable them to access any spot of a location	
Accompanying persons	Enjoy the company of the user instead of helping	The module must have a list of features according to locations	
		The service must work with and without an accompanying person	
		The service must cover a wide variety of leisure locations	
		The service must solve all the basic inquiries (location map, services, etc...)	
Employees of the location	Offer an inclusive on-site experience	They must be trained about FreeWheel	The location must be accessible
	Gain more PML visitors		Their facilities/shops must be accessible
			The service must solve all the basic inquiries (location map, services, etc...)
Other visitors	are aware of the mobility service and adapt themselves to it	The service must be seamlessly integrated into the usual routine of other visitors	FreeWheel must be properly advertised on-site for safety and inclusive purpose
	Use the service even if they have no mobility impairment	FreeWheel must be opened to anyone (no restriction to people with certified mobility impairment)	

On-site service provider	Gain new PML clients	They must be trained about FreeWheel	The location must be accessible
			Their facilities/shops must be accessible

Figure 8: Preconditions of success per key outcomes and key stakeholders

The preconditions influencing several outcomes of change are illustrated with a visual representation of the pathway to outcome with 2 set of colors:

- The light grey items are preconditions to the key outcomes of change (level 1)
- The dark grey items are preconditions of the preconditions (level 2).



Figure 9: Pathway to outcomes⁷

Step 3: Key elements for measuring social impact

After identifying the preconditions for the change, the final step was to define the associated indicators to measure this change.

Ten preconditions of change were focused upon (in light grey in figure 9) and for each of them an indicator was made with the following characteristics⁸:

- Measuring a direct social impact of the service

⁷ A larger version is available in [Appendix](#)

⁸ Inspired by Rexel Foundation and (IM)Prove methodology to impact measurement in [Guide to Social Impact Measurement](#) (in French only)

- The measurement is easy and reliable
- The social impact will appear in a certain time frame (short/medium term)
- The indicator is based on quantitative data

The identified social impact indicators are listed in figure 10.

Ref.	Pre-conditions of change	Indicators
I01	Workplace must be in a FreeWheel covered area	Number of workplaces in the service covered area
I02	FreeWheel must be interconnected with public transportation (bus stop, bus, train, metro station)	Number of racks within 500m from a transportation station (bus, metro, train)
I03	The service must cover a wide variety of leisure locations	Number of different leisure locations offering the service
I04	FreeWheel must work with and without an accompanying person	Number of time the service is used by an accompanying person per user
I05	FreeWheel must enable them to access any spot of a location	% of sqm of the location that are fully accessible by the module
I06	FreeWheel must solve all the basic inquiries about the location (orientteering, basic and additional services, etc...)	Number of FreeWheel users asking for additional help to employees of the location per type of requests
I07	Employees and on-site additional service providers must be aware and trained about FreeWheel	% of location employees trained to the service
I08	FreeWheel must be opened to anyone (no restriction to people with certified mobility impairment)	% of people reporting a mobility impairment among the users
I09	Freewheel must be seamlessly integrated into the usual routine of other visitors	Number of reported accidents caused by the module involving non-users

Figure 10: Impact indicators associated with preconditions of change

Comments on the above indicators:

- **I01:** the service covered area is the perimeter within a given distance of the racks. This perimeter will be defined with the pilot phase based on the module autonomy and other

relevant criteria. A definition of workplace should be identified based on the most easy and reliable data about employers for all kinds of location.

- **I02**: this should be a key measurement when choosing the location of the racks.
- **I03**: the [location assessment matrix](#) provides some examples of the variety of possible leisure locations in the culture and entertainment category.
- **I04**: over time, this indicator should decrease as a result of the increased autonomy of the user that is less relying on the accompanying person’s help to use the module
- **I05**: a possible way to measure this data is to use a heat map to identify blind spots where no users go, thus indicating some potential obstacles to accessibility
- **I06**: the in-app feedback system is key in collecting directly this data from the users. The pilot phase will help identify the most frequent type of requests and build some categories.
- **I07**: Location employees encompasses both the employees of the location and the employees of the additional service providers (shops, restaurants). The type of training should be more precisely defined during the implementation phase to clarify this indicator.
- **I08**: the easiest way to collect the needed data for this indicator is to include a profiling question during the registration process that is respectful of the privacy of the user.
- **I09**: a protocol to register accidents could be integrated in the user feedback system as a way to easily track the data needed for this indicator.

Looking at the preconditions of the preconditions, **three others social impact indicators measuring the indirect effect of the implementation** of the service were identified:

- **I10**: Number of accessible workplaces in the service covered area.
- **I11**: Number of people with disabilities⁹ using public transportation.
- **I12**: Number of accessible shops and facilities in the service covered area.

Twelve indicators in the three categories of social impact are sorted by **autonomy, inclusiveness and accessibility**. Grey color helps identify the indirect social impact indicators (cf. figure 11).

Ref.	Pre-conditions of change	Indicators	Categories of impact
I01	Workplace must be located in a FreeWheel covered area	Number of workplaces in the service covered area	Inclusiveness
I02	FreeWheel must be interconnected with public transportation (bus stop, bus, train, metro station)	Number of racks within 500m from a transportation station (bus, metro, train)	Accessibility

⁹ We use in that case “people with disabilities” instead of “People with Physical Mobility Limitation” as it is an easier data to collect for the external party that will provide the data.

I03	The service must cover a wide variety of leisure locations	Number of different leisure locations offering the service	Inclusiveness
I04	FreeWheel must work with and without an accompanying person	Number of time the service is used by an accompanying person per user	Autonomy
I05	FreeWheel must enable them to access any spot of a location	% of sqm of the location that are fully accessible by the module	Accessibility
I06	FreeWheel must solve all the basic inquiries about the location (orienteeing, basic and additional services, etc...)	Number of FreeWheel users asking for additional help to employees of the location per type of requests	Autonomy
I07	Employees and on-site additional service providers must be aware and trained about FreeWheel	% of location employees trained to the service	Inclusiveness
I08	FreeWheel must be opened to anyone (no restriction to people with certified mobility impairment)	% of people reporting a mobility impairment among the users	Inclusiveness
I09	Freewheel must be seamlessly integrated into the usual routine of other visitors	Number of reported accidents caused by the module involving non users	Inclusiveness
I10	The workplace must be wheelchairs accessible	Number of accessible workplaces in the service covered area	Accessibility / Inclusiveness
I12	Their facilities/shops must be accessible	% of accessible shops in the service covered area	Accessibility / Inclusiveness
I12	FreeWheel must be interconnected with public transportation (bus stop, bus, train, metro station)	Number of people with disabilities using public transportation	Inclusiveness

Figure 11: Social impact metrics table

Key result 5: Social impact measurement metrics

Starting from the outcomes of change and their preconditions, **a set of indicators that are relevant, exhaustive and realistic** were identified. This is represented in a visual model illustrating the direct impacts created by the project and the indirect impacts forecasted as possible consequences of the implementation of Freewheel in a given area (cf. figure 12). Those impact metrics were clustered according to the 3 areas of impact of our vision: accessibility, inclusiveness and autonomy.

Indirect impact indicators

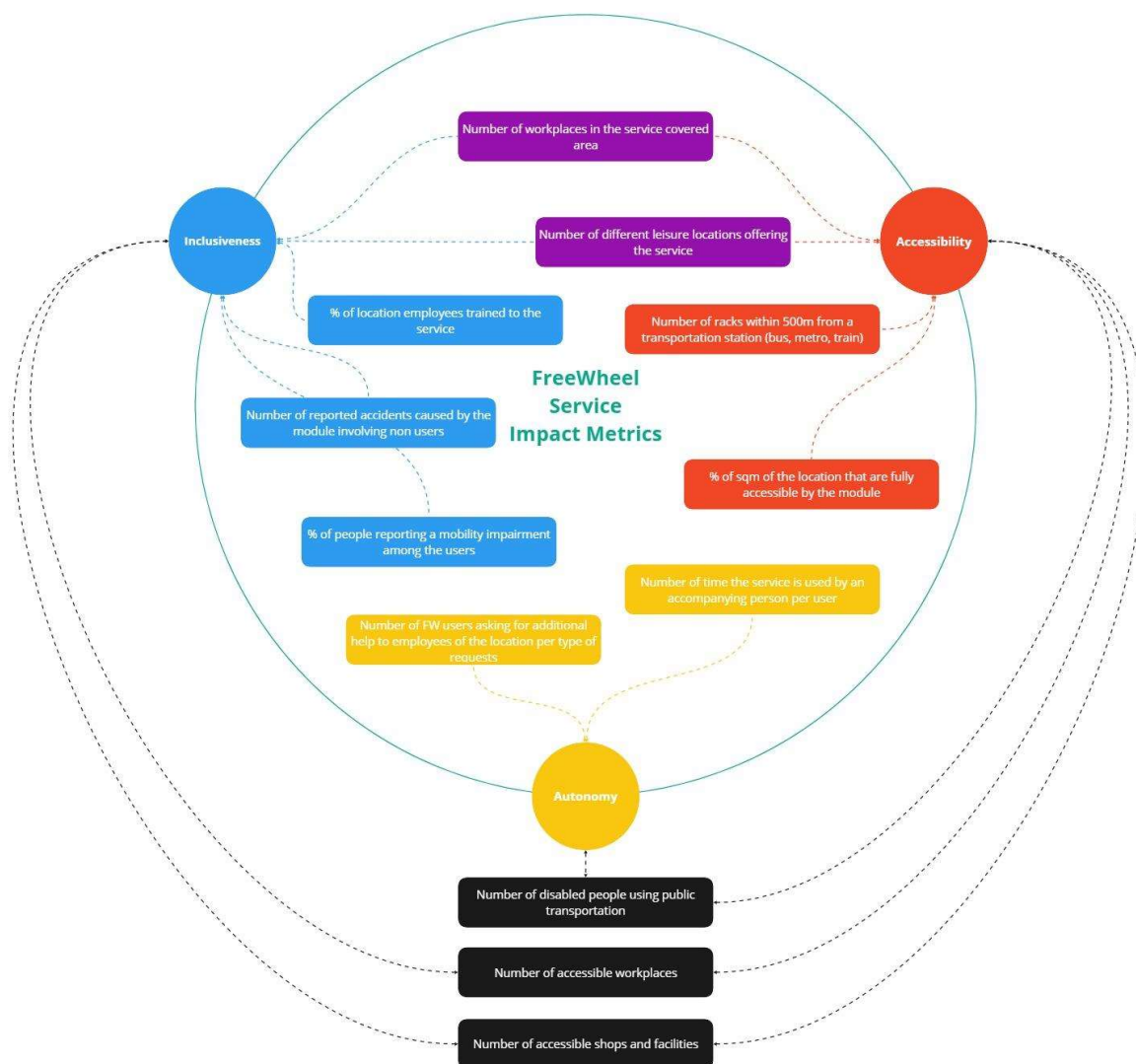


Figure 12: Social Impact measurement metrics¹⁰

These impact measurement metrics should be completed by a set of qualitative indicators to be defined after designing the service when there is a clearer view of what quantitative and qualitative data that can be collected from the users and other key stakeholders, in particular the accompanying persons as they are also benefiting from the service.

¹⁰ A larger version is available in [Appendix](#)

Synthesis: FreeWheel Theory of Change

The following vision is aimed to be achieved by FreeWheel by 2022:

People with physical motion limitations (temporary or permanent) have a more **autonomous** and **inclusive** mobility experience in their daily life.

To achieve it, the following key stakeholders and key outcomes of change have been identified:

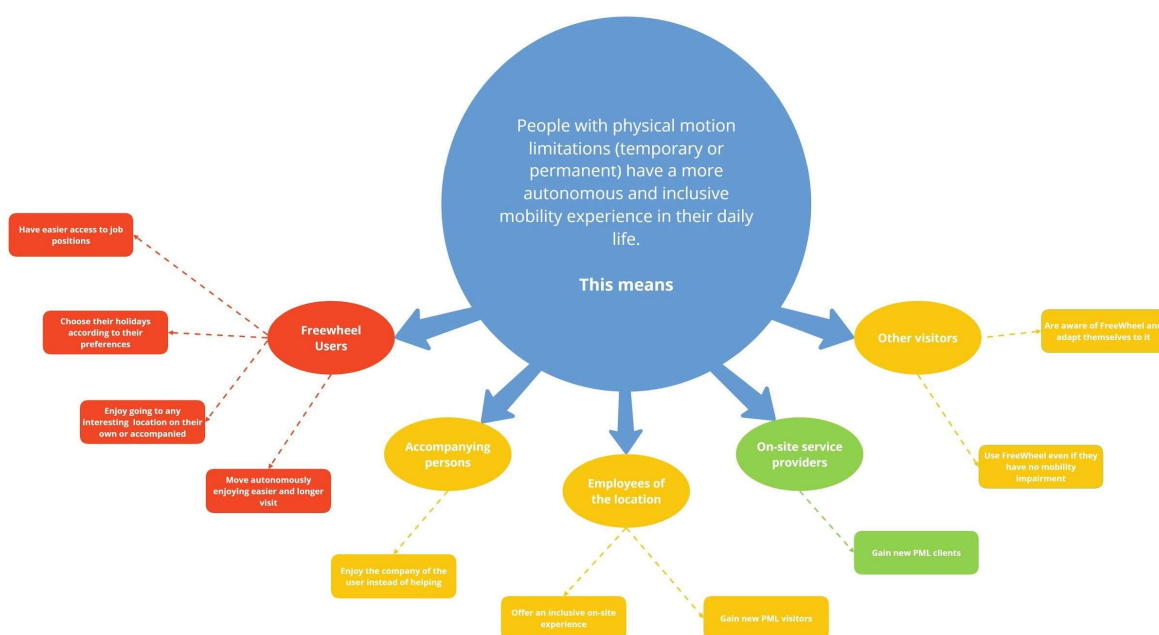


Figure 7: Vision of success with key stakeholders and key outcomes

To reach those outcomes, the following pathway has been defined:



Figure 9: Pathway to outcomes¹¹

The conditions represented in grey in the above board provide the following indicators to measure the social impact created by the service:

¹¹ A larger version is available in [Appendix](#)

Indirect impact indicators

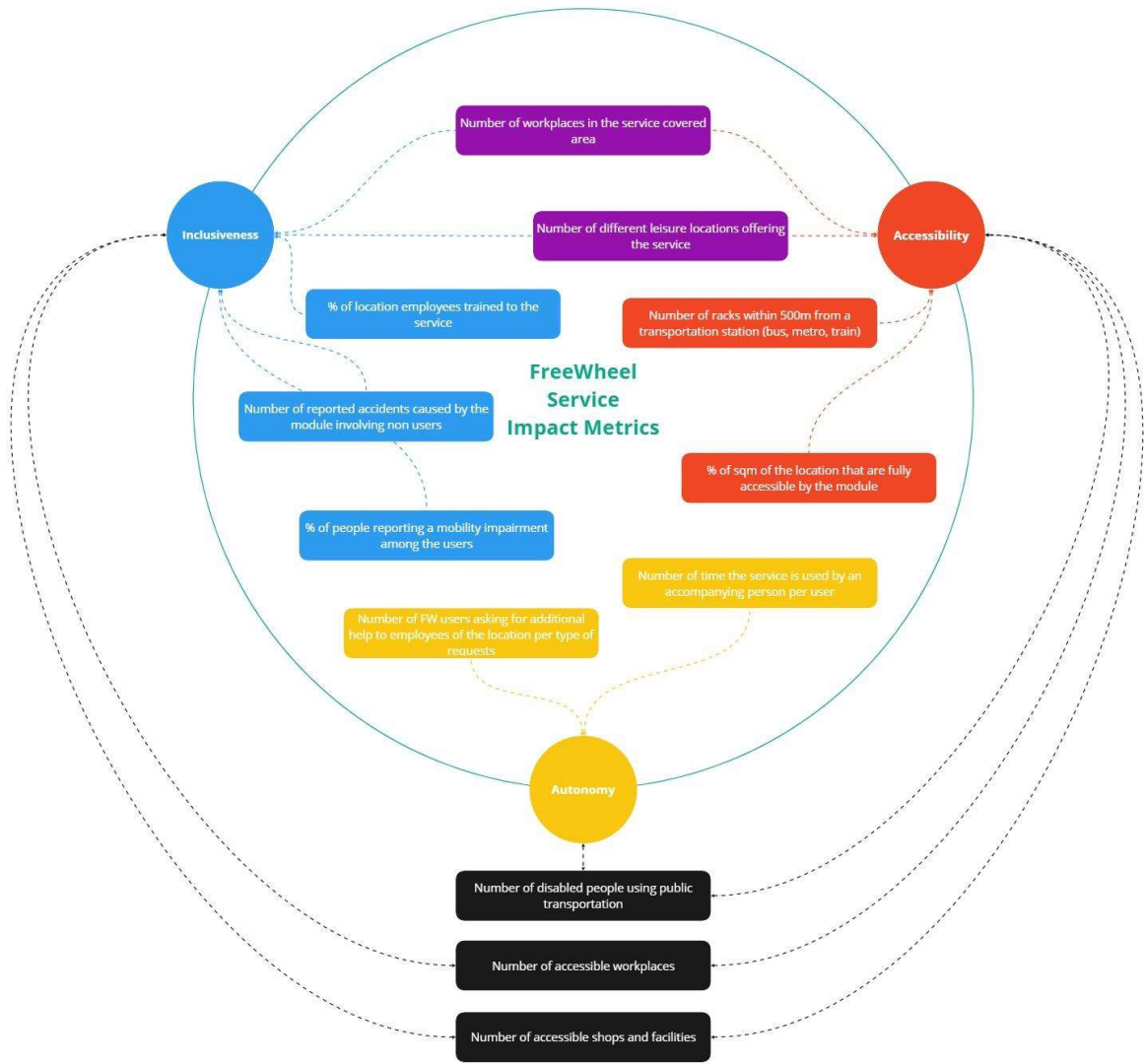


Figure 12: Social impact measurement metrics

Conclusions

Building FreeWheel Theory of Change at the early stage of the project provides a **powerful internal tool to align** all partners on the social impact to create with this project. Beyond telling what FreeWheel is as a service, it gives the vision of the change it seeks to contribute to:

“People with physical motion limitations (temporary and permanent) have a more autonomous and inclusive mobility experience in their daily life.”

The Theory of change is a **shared roadmap** guiding the measurement of the social impact of the project for the implementation phase. In the co-creation process, an initial roadmap with some additional tools are created and can be evolved during the pilot and most certainly after the first successful implementations of the service:

- The **location assessment matrix** to assess every new location where the service can be implemented, the fundamental prerequisite to assess in the first place being the accessibility of the location;
- the **stakeholder map** to better engage with the ecosystem of the project in a given location;
- The **social impact measurement indicators** to track the change created by the implementation of the service.

As the vision of the Theory of Change was built on the current status of the project, it is likely to **evolve over time** with new perspectives identified by partners on stakeholders, key outcomes and the preconditions of change. The design of the service in Work Package 4 will bring additional perspectives on the preconditions of change and the social impact metrics. This initial set of indicators should be completed and evolved with qualitative indicators to be defined during the pilot phase based on observed behaviors and first feedback from beta users. The Theory of change will also **influence the orientations for the various business model plans and exploitation strategies** to be defined in Work Package 9.

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Keen Bull

