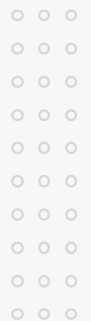
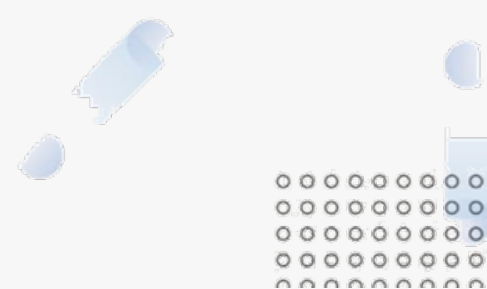
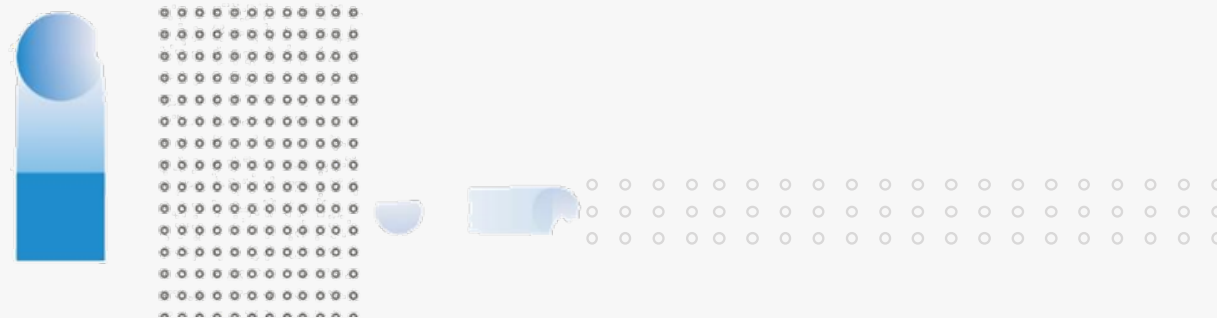


**Politecnico
di Torino**



Applied Data Science Project

L 17 – The stakeholders' map (hands-on)



STAKEHOLDERS' MAP



Any person, group, or institution that, positively or negatively, affects or is affected by a particular issue or outcome of your project is a stakeholder.

According to the HCD, stakeholders (people, institutions, or social groups) shall be **involved in the process** from the **early stages and during** the design activities (especially testing and validation)

Stakeholders' map aim and use

When starting a new project, it's important to **identify who else has a stake in the outcome**, whether that's **someone directly invested** in the project or **people you have to work with** to reach our goal.

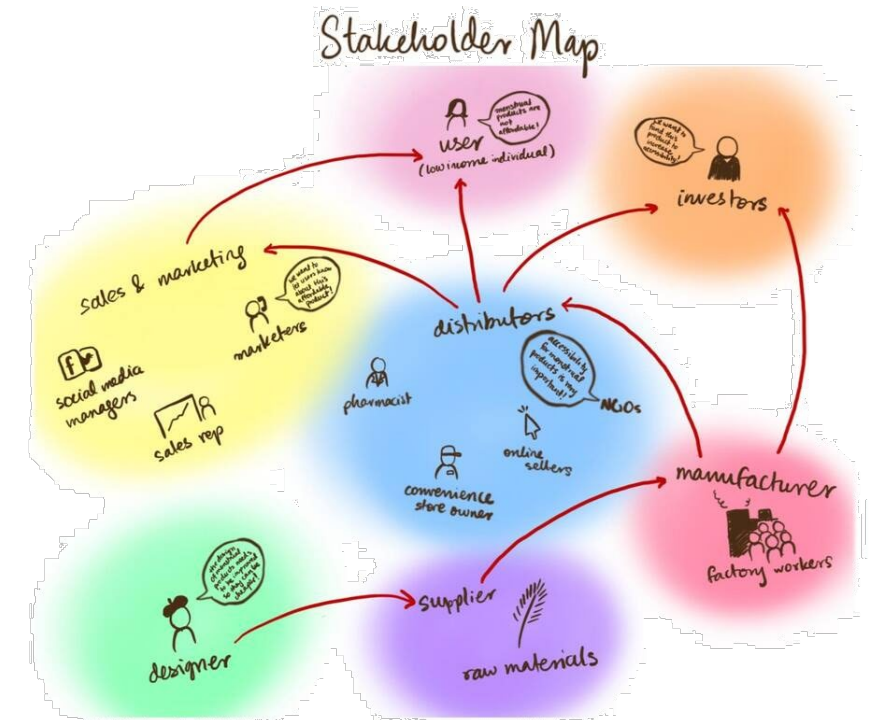
Identifying them early will help steer you in the right direction and give you a **network** to reach out to for support and help prevent unforeseen barriers.

Stakeholder analysis and map are a **tried-and-true method** for driving out project specifics:

- **Who** is involved in a project
- **Who** is invested in the outcome
- **Who** has right of refusal
- **Who** will support the team
- **Who** are the key decision-makers
- **Who** the team should meet with to help get context

It gives an overview of all the actors and organizations involved and allows to develop a clearer picture of how different actors and interact with your project and each other.

This tool can be a great resource when used to share what you do with the community of stakeholders.



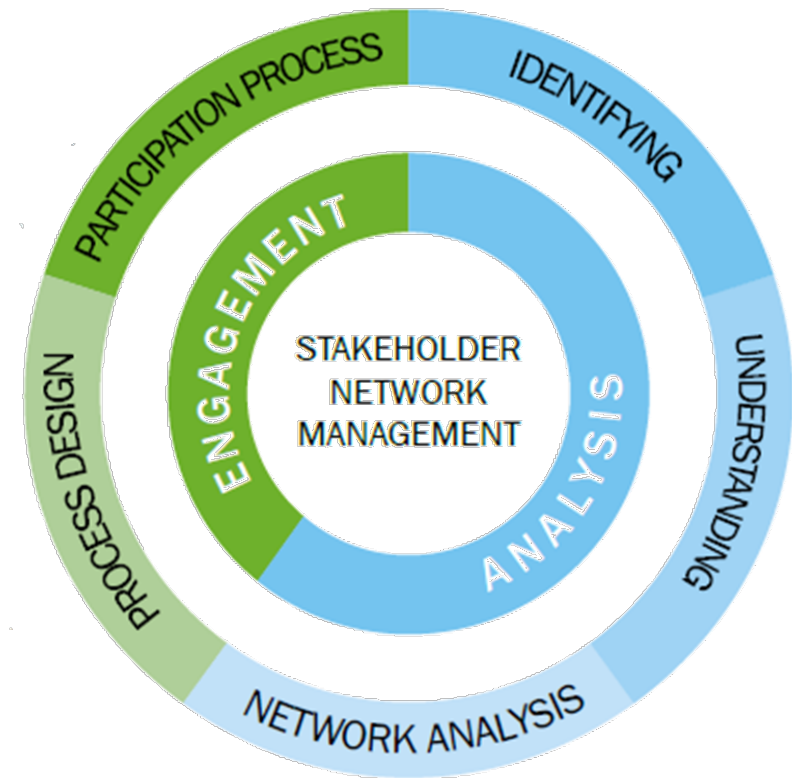
Why and how to use it?

Maps are **dynamic supports** to be updated according to the real scenario (spatial/temporal).

They enable **different activities**: design, testing, trials, experimentation, distribution and marketing, communication, maintenance...)

They provide quick representation of complex information such as:

- **Target users real goals**
- Different **interests**
- **Success** metrics
- **Communication** hints
- Potential **risks**
- **Engagement** of users to be involved in testing activities
- Engagement of **key people** to be informed
- **Negative stakeholders** as well as their adverse effects on the project....



Stakeholders' management process



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Analysis before mapping

Stakeholders' mapping grounds on **data collection and analysis activities**, based on different sources.

- **Documents** (reports, scientific literature)
- **Ethnographic research** (based on observations, diaries, digital web-ethnography)
- **Ad-hoc research** (questionnaires, interviews, continuous surveys)
- **Collaborative** activities (mapping workshop)

**Blend both
quali and quantitative data,
big and small data.**



*“Data is not the goal to aim for, but a way to forward.
Data are lenses through which we can look at the world,
count what surrounds us, give it a weight, a measure,
interact with objects, activities, situations and events.”*

[Dataninja](#)



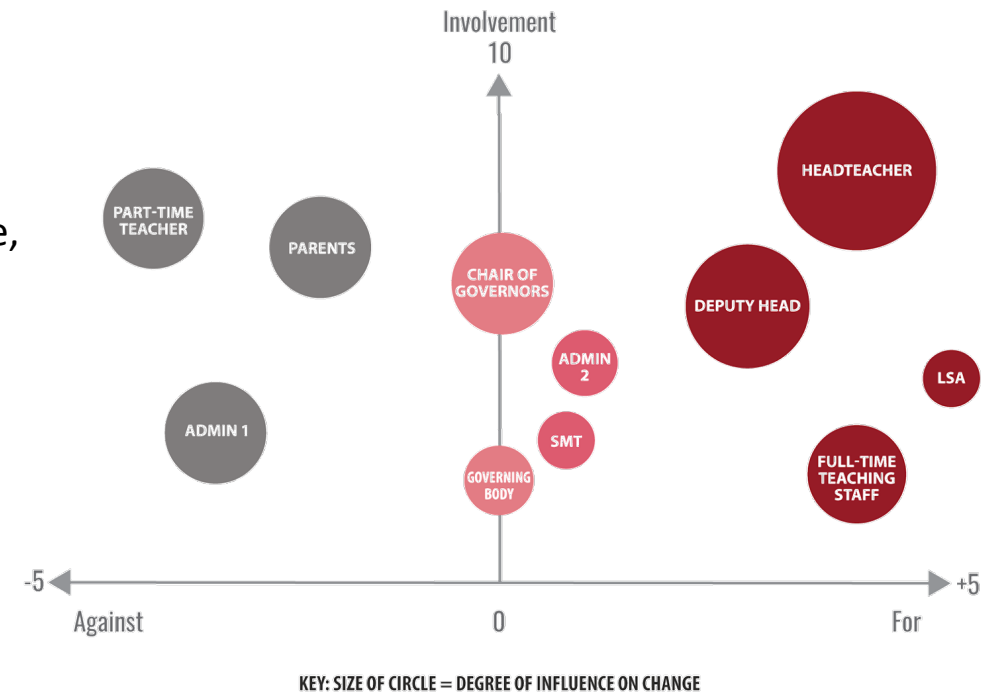
Stakeholders' map

The stakeholders mapping is a **visual representation** commonly used to set up design-related activities that incorporates data and information collected from primary and in-field research and activities.

A stakeholders' map includes the different types of players characterising the **domain of interest** and describes their relationship.

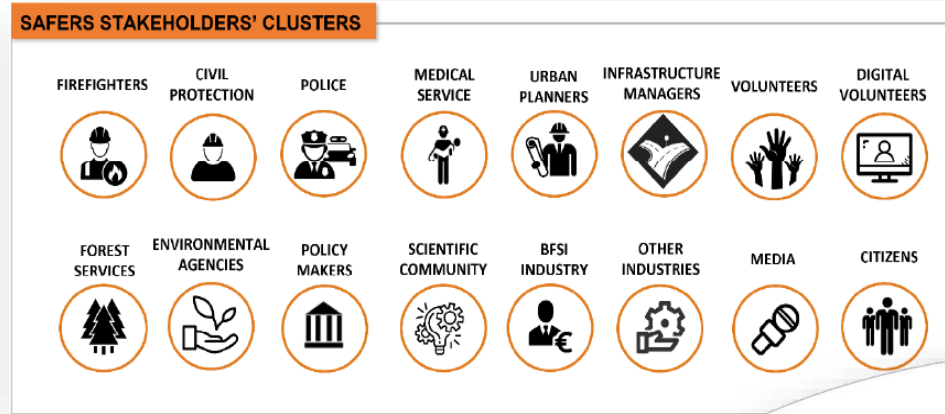
A stakeholders map usually identifies:

- **Direct or Primary users (CORE players)** are those subjects that because of role, power, authority, responsibilities, or claims over the resources, are central to the system. As end-users or enablers, they will directly affect the final results and their participation in activities is a requirement.
- **Indirect or Secondary users (INVOLVED players)** are subjects that may be not directly interested in the system use but can play the role of enablers or barriers.
- **External stakeholders (INFORMED players)** are subjects that can positively contribute to adopting the system, such as media and policy-makers.



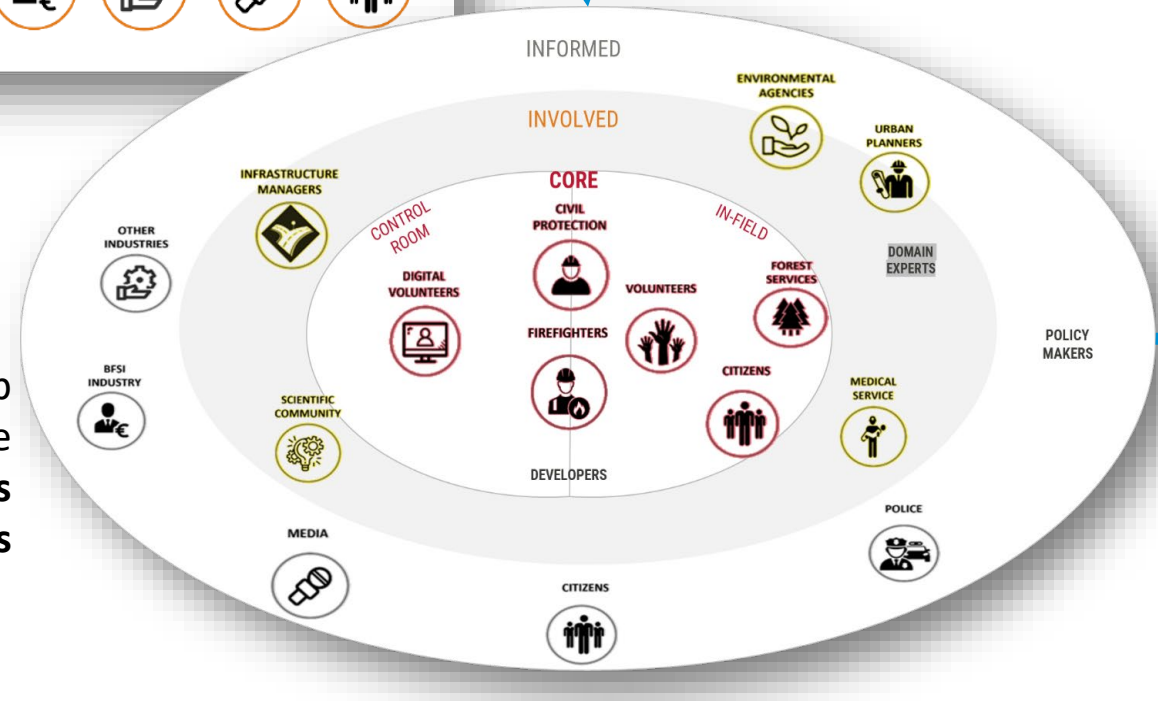
Dolfing, H. A Step by Step Stakeholder Mapping Guide. 2018.

Stakeholders list



Emergency management stakeholders' map

Stakeholders' map supporting the **User Requirements collection and specifications**



Stakeholders' map to support the **Pilot design and exploitation**

Stakeholder category	Role in SAFERS
Firefighters	End-users of SAFERS platform and smart services.
Civil protection	<p>Their contribution revolves around the definition of end-user requirements, the co-design SAFERS solutions, the realization of pilots for testing and demonstrations for validation, and the provision of feedbacks.</p> <p>They will benefit from SAFERS during the emergency management phases: prevention and preparedness and detection and response.</p>

Sponsors are often those who initiate the project by mobilizing resources and managing activities. Sponsors own the requirement for the project, and if the requirement changes, they must direct the project accordingly.

Which role for clients?

- **Direct or Primary users (CORE players)**
- **Indirect or Secondary users (INVOLVED players)**
- **External stakeholders (INFORMED players)**

Which role for sponsors?

Which role for developers?

The Stakeholders' map is a **visual representation** of actors (people in their roles) who can influence the project and how they are connected (to each other and to the project).

It may include individual and collective subjects.

Different visual canvases allow you to display an overview of a complex ecosystem (and then share, process, communicate on and with) of who and how you are trying to reach.

Radar chart

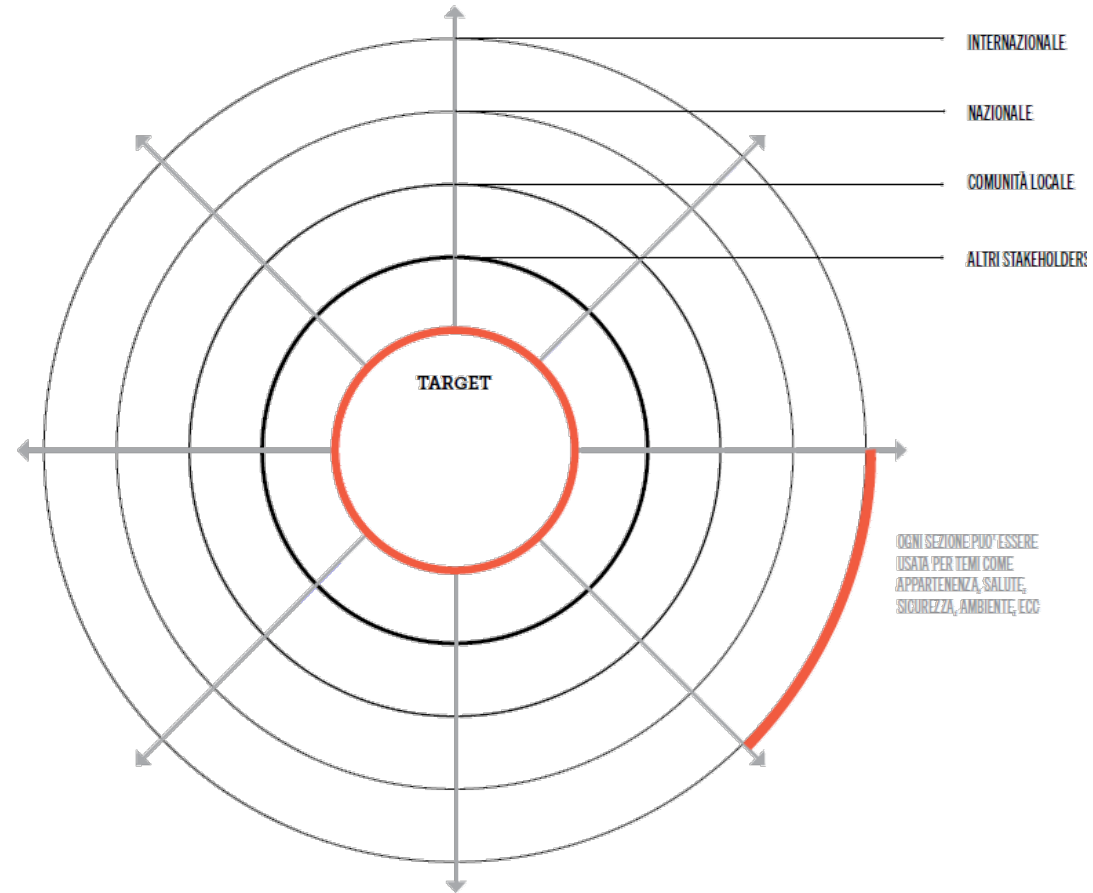
Useful to organize groups on one variable dimensions:

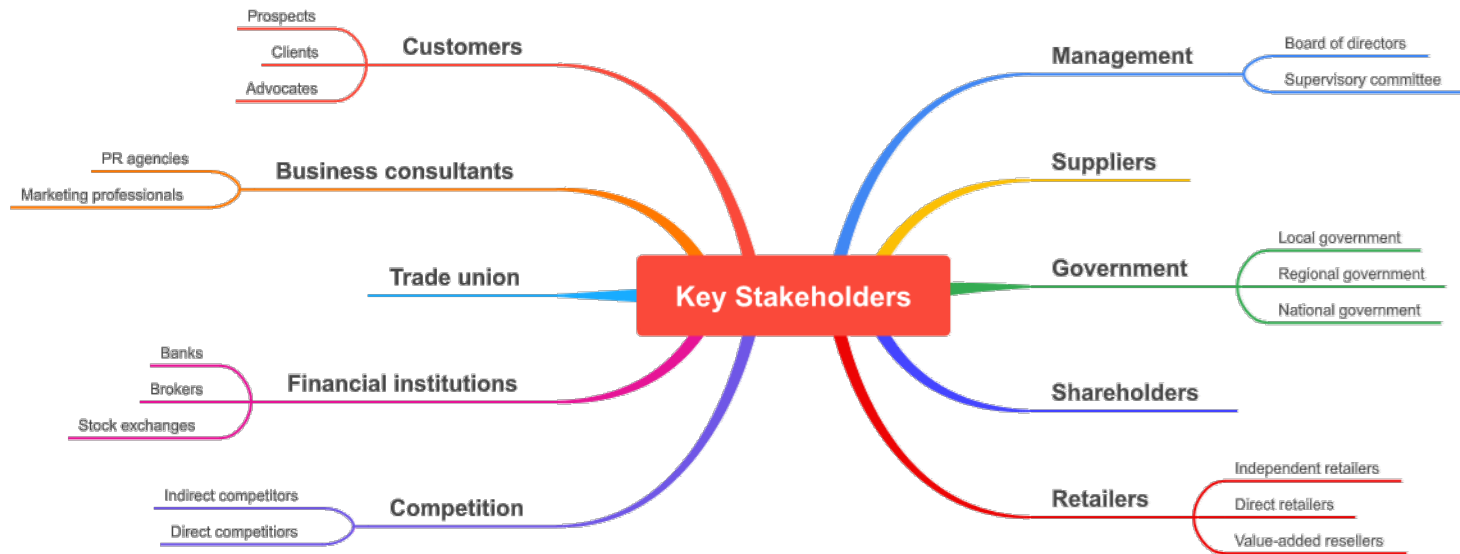
- responsibility
- influence
- proximity
- dependence, involvement
- ...



Radar chart

Original chart developed from the Helsinki Design Lab .





Hub & spoke

In the centre is the key group and around the other actors of the ecosystem.

It highlights the relationship between the various nodes with different visual encoding:

- **Lines:** continuous, dashed or more marked depending on the type of relationship
- **Colors:** type of target
- **Size:** type of target

It is useful for mapping the width of the ecosystem.

For each branch, quantitative data that complete the picture shall be added and kept updated.

ECOSYSTEM CANVAS

Group:

City:

Which are the main actors of the scenario?

HOW TO USE IT: identify and describe the stakeholders in 3 main roles: Peer Consumers, Peer Producers, Partners.
Each role can have a specific interest in the service success, in controlling externalities and outcomes, in regulating it or in exercising rights in the service governance: they can be public actors or bodies dealing with regulation and control of service on a local basis, representatives of communities of peers and partners involved in the value creation, pre-existing institutions, associations, citizens.

Scenario

Ecosystem canvas



Canvas customised from:
www.platformdesign toolkit.it



Diagram
Bubble chart

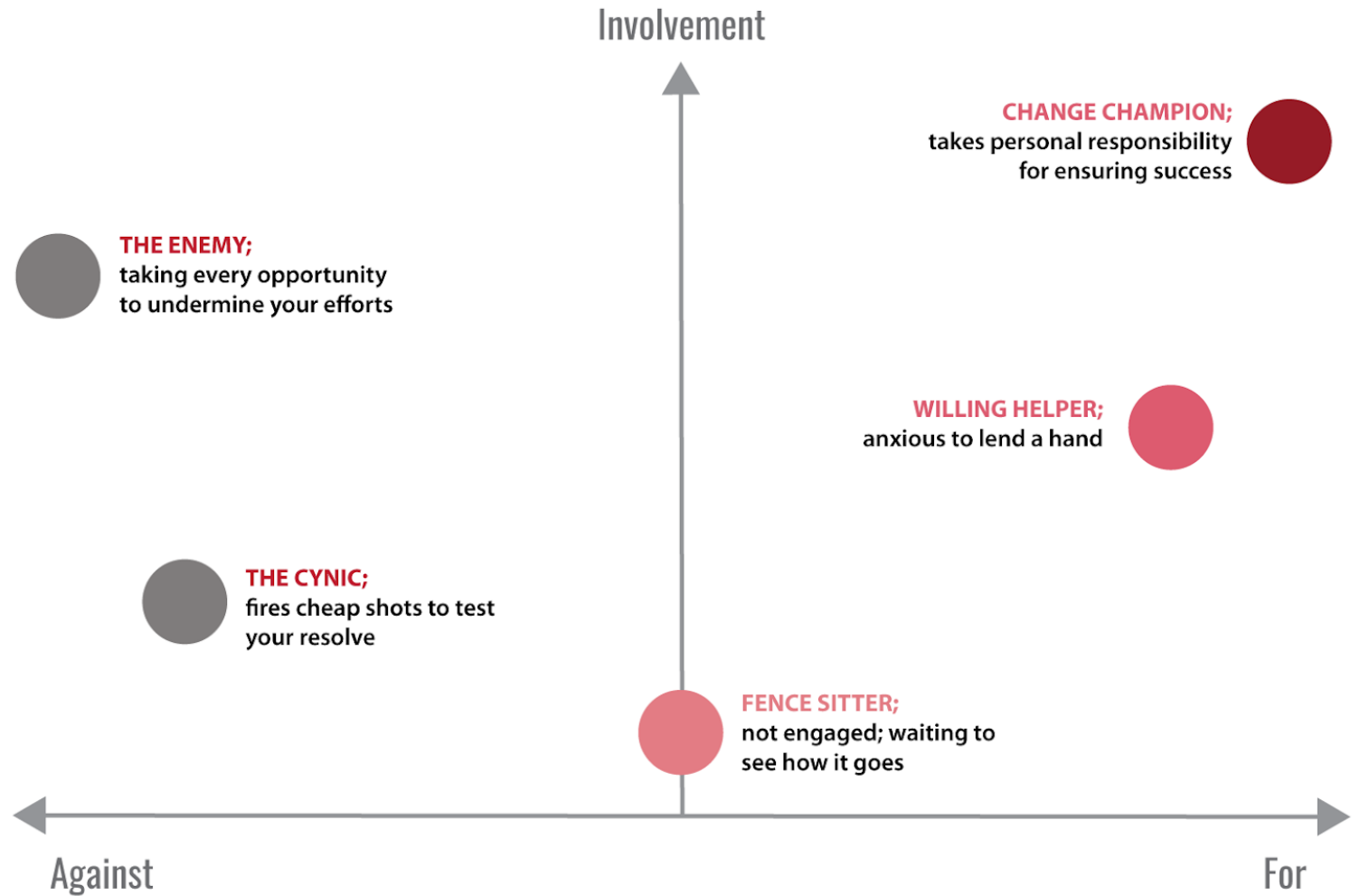
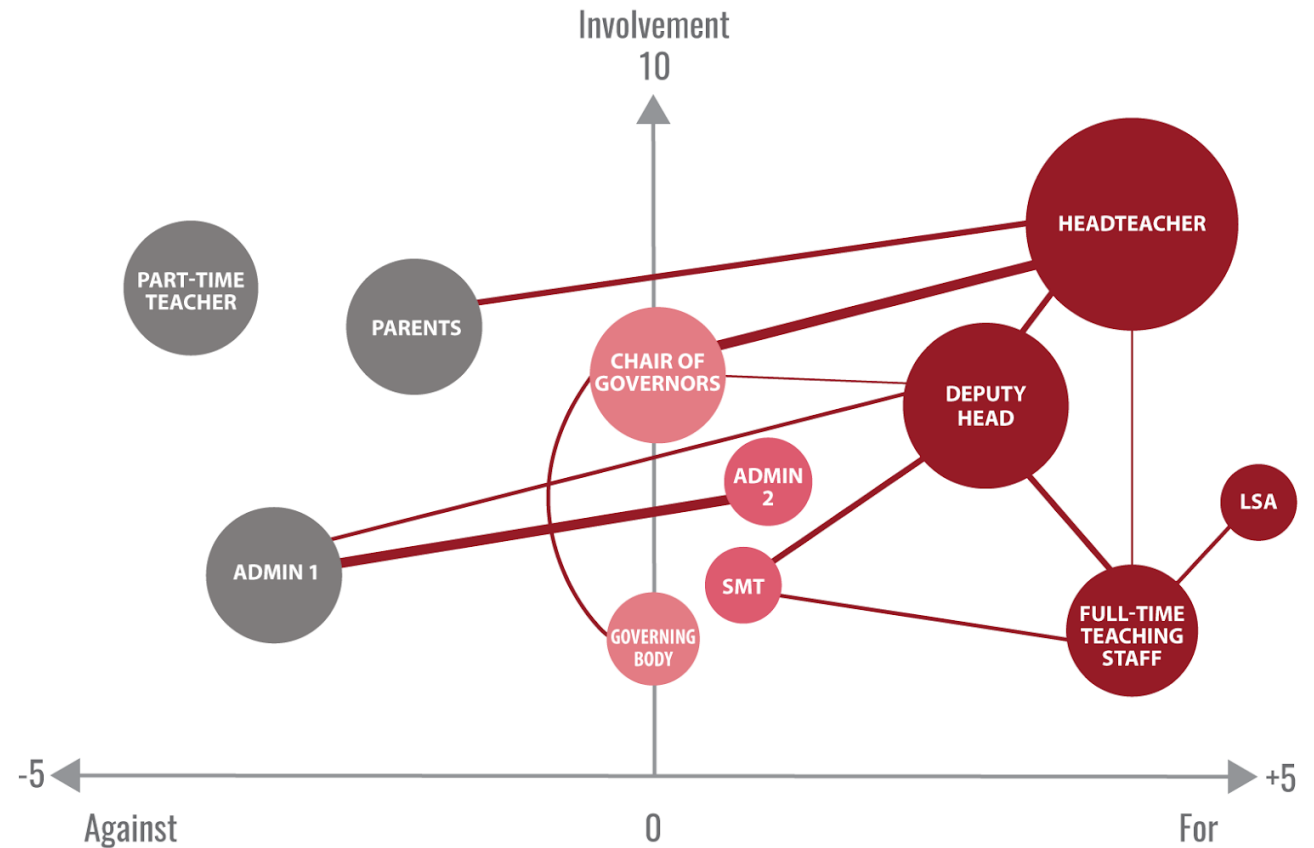


Diagram Bubble chart

You can also visualize proportions and relations among groups and goals



Different visual canvases allow you to display an **overview of a complex ecosystem** (and then share, process, communicate on and with) of who and how you are trying to reach.

There are no standard maps.

You can find many different canvases and labels (ecosystem canvas, players map, ...), made available in wonderful existing toolkits.

You can also create yours for ad-hoc purposes and specific needs.

The golden rule is:

Keep it

- . **simple and clear**
- . **stick to data (real world)**
- . **updated**

HCD | THE STAKEHOLDERS' MAP

HANDS-ON

Starting questions for stakeholders' analysis

- What are the main contexts of use of the solution?
- Who are the end-users and customers today?
- Who should be in 3 or 5 years?
- Who promote/deliver similar solutions nowadays?
- What are the most urgent needs the end-users encounter?
- Today, how do they cope with it?
 - Organisations/companies
 - Professionals
 - Informal groups

Stakeholder mapping process

Starting from the desk analysis (Demographic dataset, Reports, Research papers, Newspaper articles) **and the user research**

1. **MAKE A LIST OF ALL STAKEHOLDERS**

Identify all the stakeholders who have any interest in your project's outcome.

- Who is interested in the project
- Who are the direct beneficiaries that will use the output?
- Who are the indirect beneficiaries that will benefit from the outcome?
- Who can refuse or obstacle the project/adoption?
→ **Identify** which population segments or user groups that (live, work, visit, act...) in the reference context

2. **Per each actor**, describe expectations, needs and skills they bring to the project

3. **Systematize** stakeholders, **moving them to the map**: place each stakeholder on the matrix, reflecting on the type of interest that each of them has about the project and the level of influence they can exert.

4. **Prioritize** groups and relevant issues to be addressed by the systems/service, in a user-centred perspective



Desk research

- **Official Websites**
(International institutions, research bodies, and companies involved in the field. Search for events, press releases, strategic plans)
- **Scientific publications, white papers, conferences**
Applied research can provide useful hints on projects, trials and experiments conducted in the field and involving real users.
- **Companies active in the field**
Crunchbase, LinkedIn and other social media may provide useful information on expertise and initiatives. Products and stakeholders involved in their conversations
- **News e Media**
specialised in innovation can provide useful information on the context where emerging trends develop

Domain, Goal	Starting Resources
1) Predictive model for Humanitarian Aid	<ul style="list-style-type: none"> • https://www.unhcr.org/emergencies/sahel-emergency • https://www.weforum.org/agenda/2021/11/how-stakeholder-capitalism-aid-recovery-sahel-region-africa/ • https://www.csis.org/programs/humanitarian-agenda/archive/conflict-sahel • https://www.cipe.org/blog/2020/11/24/volatile-ethnic-conflict-in-the-sahel/
2) , 3) Object Recognition and Object Collision Detection	Explore applications in different fields, e.g. Education, Business and Industry, Architectural Design, Circuit Design, Medical Record Digitization, Reporting Services, Content creation, ...
4) Cross-modal Retrieval Project	Explore existing applications, such as: Digital Assistants, Autonomous Vehicles, Healthcare and Medical Imaging (diagnostic decisions) Recommended systems like Netflix and YouTube, Social Media and Content Moderation, Automated Customer services (chatbots), ...
6) Urban Air Quality Assessment and High-Resolution Temperature Mapping	<ul style="list-style-type: none"> • https://www.clarity.io/blog/air-quality-management-2-0-introducing-a-model-for-collaborative-partnerships-that-effectively-fight-air-pollution • https://wedocs.unep.org/bitstream/handle/20.500.11822/8728/Urban_quality_management_toolbook.pdf?sequence=3&isAllowed=y • https://ec.europa.eu/futurium/en/system/files/ged/5.ua-paq-communication_toolkit_on_communicating_on_air_quality_and_health.pdf
7) Heat Forecast	<ul style="list-style-type: none"> • https://e3p.jrc.ec.europa.eu/node/190 • https://www.unido.org/stories/what-energy-management-system
8) Pre-training language model on Electronic Health Records	<ul style="list-style-type: none"> • https://www.emerald.com/insight/content/doi/10.1108/JOSM-06-2021-0239/full/html
9) Incorporating Patient Preference Studies into clinical research and decision models	<ul style="list-style-type: none"> • https://www.scnsoft.com/healthcare/ehr/artificial-intelligence • https://nix-united.com/blog/how-ai-medical-diagnosis-changes-the-industry-benefits-examples

1

GATHER ALL STAKEHOLDERS

Identify which population segments or user groups are (live, work, visit, act...) in the reference context

MAKE A LIST: add 1 sticky notes per every stakeholder's type you met during the analysis

- **Then look at them and identify possible groups**
(search for evidence in the data and documents)
- **Provide them clear labels (you can refine them afterwards)**


1. Gather All Stakeholders


Gather All Stakeholders


10 min


This stage is to identify all the stakeholders who have any interest in your project's outcome. They are typically actors that will be able to have an influence or might be affected by the project: their input can directly impact the outcome.





TYPE	WHICH IS THEY'RE MOST URGENT NEED?	WHICH DATA CAN THEY PRODUCE / BENEFIT FROM?
	<div style="border: 1px dashed black; height: 150px;"></div>	<div style="border: 1px dashed black; height: 150px;"></div>

TYPE	WHICH IS THEY'RE MOST URGENT NEED?	WHICH DATA CAN THEY PRODUCE / BENEFIT FROM?
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Example Stakeholders table



Questa è una mappa degli stakeholder ad alto livello sviluppata da un'impresa farmaceutica britannica

Categoria di Stakeholder	Sottogruppi	Categoria di Stakeholder	Sottogruppi
Dipendenti	Consiglio di amministrazione ed esecutivo Management Staff Sindacati Nuovi assunti Potenziali assunti Dipendenti che hanno lasciato l'impresa	Concorrenti	Società Farmaceutiche Società Biotech
		Governo e Enti Regolatori	Ministero della Sanità Autorità regolatrice dell'Attività Farmaceutica Food and Drug Administration (US) Organizzazione Mondiale della Sanità (UN)
Investitori	Investitori istituzionali Fondi Pensione Gestori e analisti di fondi Agenzie di Rating Movimento per l'Investimento Socialmente Responsabile	Partner d'impresa	Licenziatari Partner in R&S Altre società farmaceutiche Cliniche/Università
Clienti	National Health Service Trusts Medici, Pazienti Cliniche Private Ospedali Farmacisti Venditori all'ingrosso Coloro che possono avere influenza sulle prescrizioni mediche (ad es. infermieri, assistenti sociali, insegnanti, psicologi) Clienti interni	Comunità Locali	Aziende vicine Autorità locali/Ministero della Pianificazione Istituzioni benefiche e organizzazioni di volontariato
		Mondo Accademico e Comunità Scientifica	Associazioni ambientaliste Centri Universitari Ricercatori Studenti
Fornitori	Fornitori di materiali e componenti Fornitori a contratto Medici (come consulenti in R&S) Centri clinici di sperimentazione Volontari e pazienti in sperimentazione Fornitori di servizi ed infrastrutture	Mezzi di comunicazione	TV e Radio Pubblicazioni medico/scientifiche Giornali nazionali/locali Giornali finanziari
		ONG e Gruppi di Pressione	Organizzazioni per i diritti del malato Organizzazioni per i diritti umani Organizzazioni per la salvaguardia degli animali

2

ANALYSE THEM

- Which **roles** do they play (with reference to the specific context you're focusing on)
- What are the **NEEDS**?
- What are their **GOALS**?
- **Did you forget any** stakeholder group?
- Do you need for **different groups** or labels? Refine the first list, no problem.

3

COMPOSE THE MAP

- **Select relevant dimensions to display your stakeholders**
- Use the space to visualize proportions and relations among groups and goals
- Place the groups into the corresponding category

2. Move Stakeholders to the Map

Move Stakeholders to the Map

30 min

Understand how each stakeholder can help the team, how involved they should be and who to contact when things come up.

Core

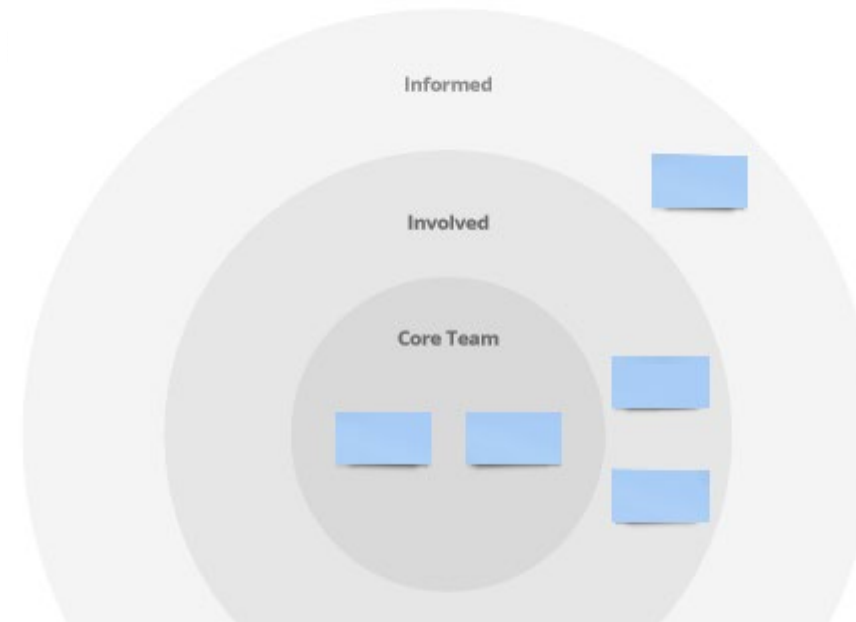
End users, Direct beneficiaries

Involved

Facilitators that can help to promote and encourage the adoption

Informed

Supervisors or experts to keep informed

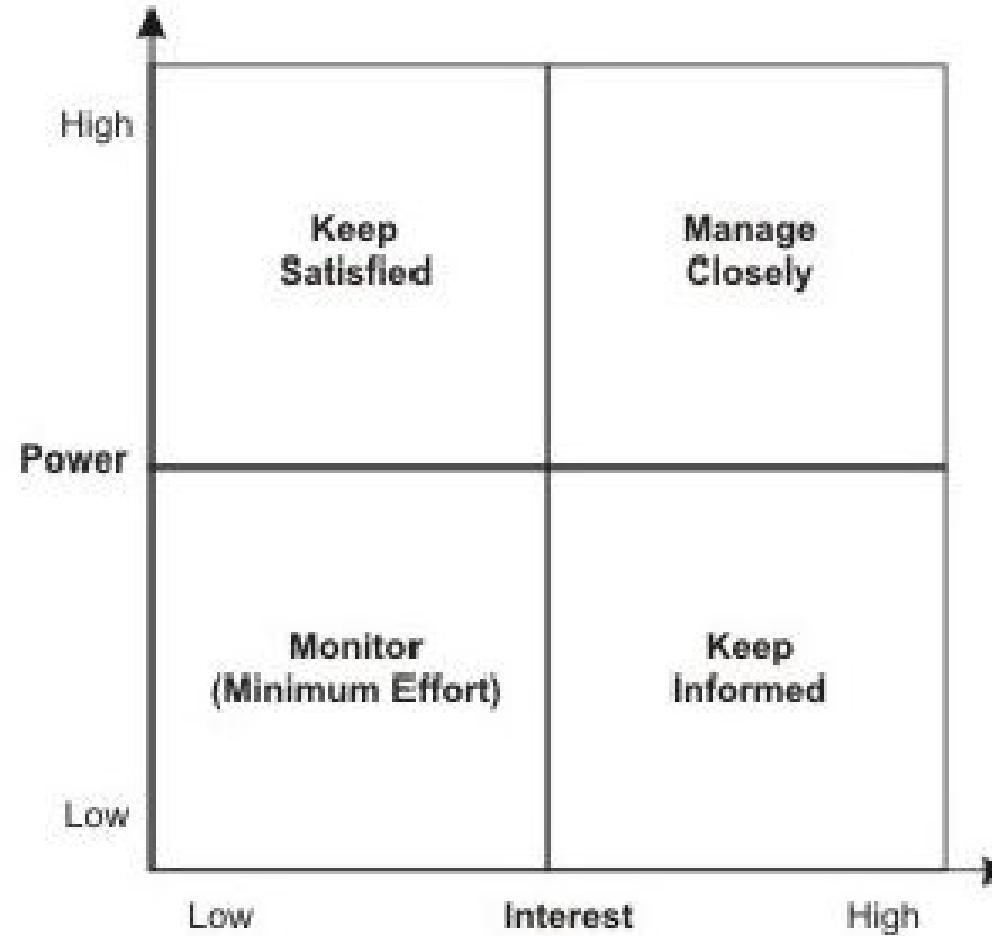


The relevance x interest matrix influence x power

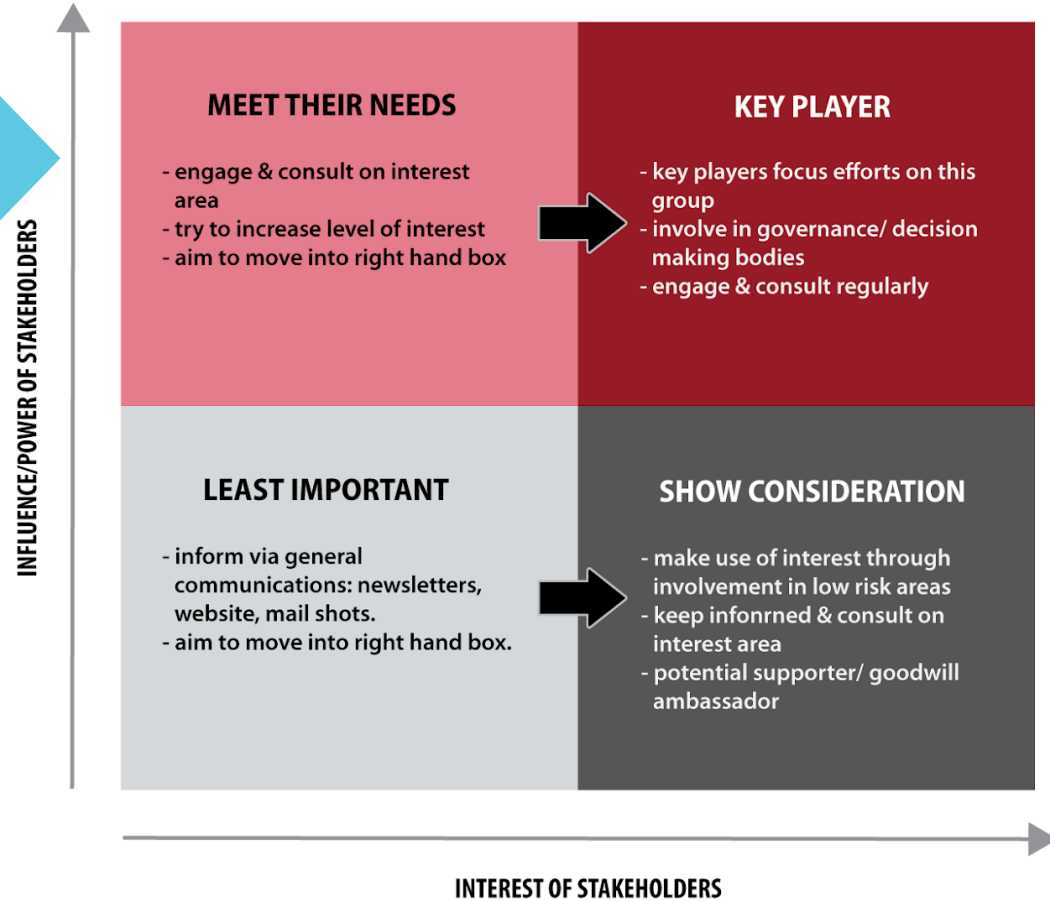
4

Prioritize groups and relevant issues to be addressed by the systems/service, in a user-centred perspective

→ MATRIX



Power x interest matrix



Dolfin, H. A Step by Step Stakeholder Mapping Guide. 2018.

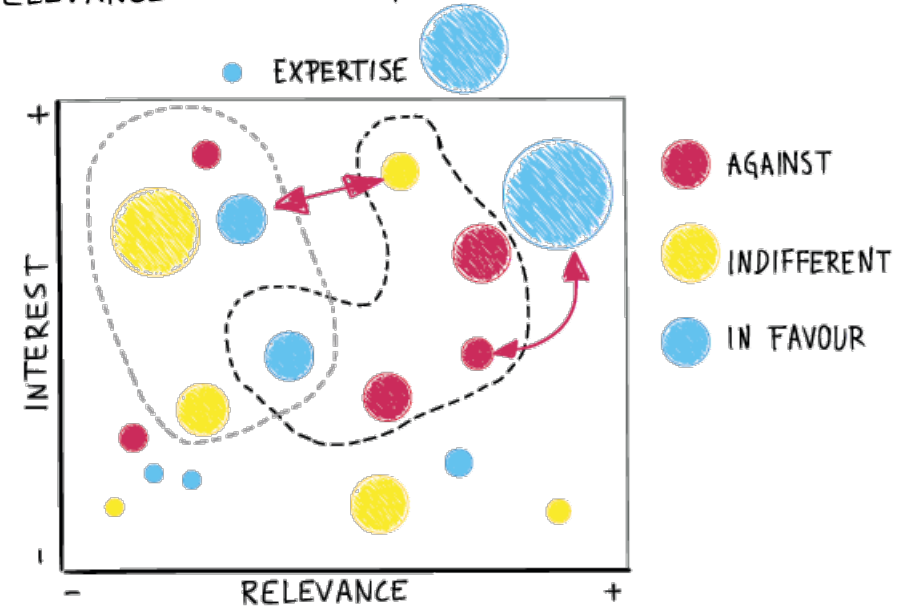
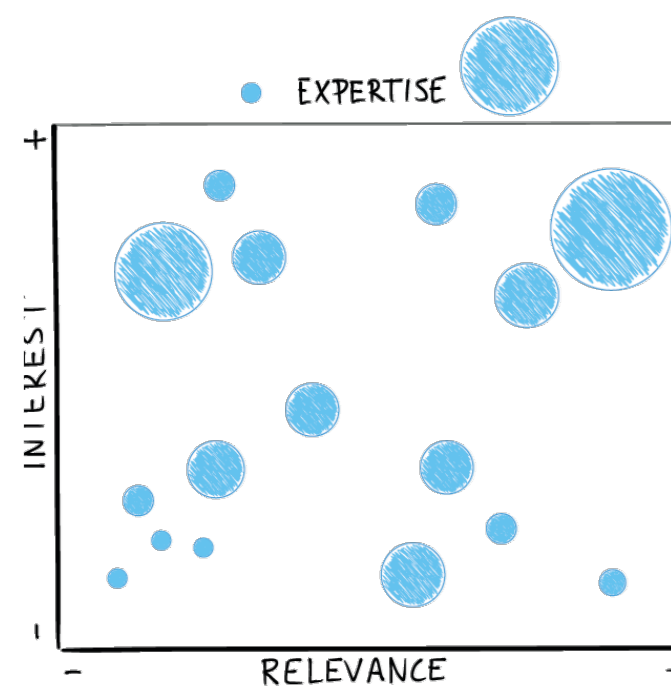
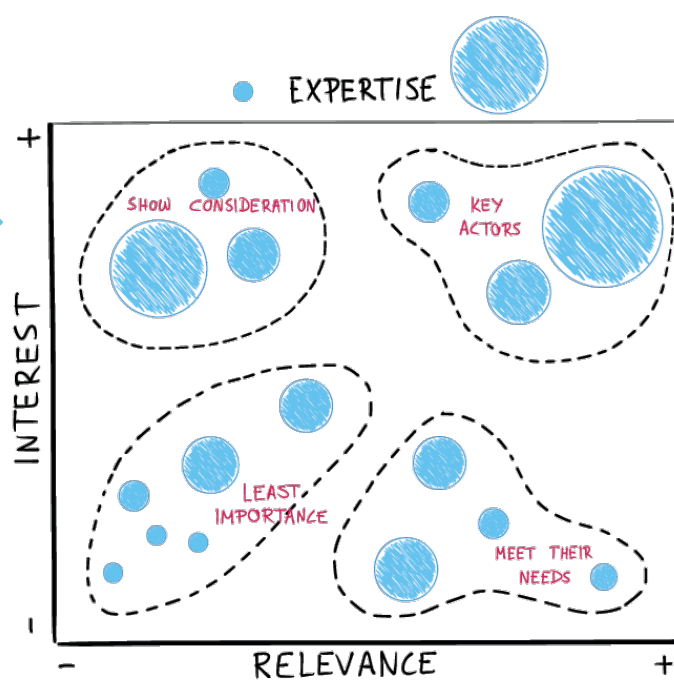
POTERE	Alto	STAKEHOLDER ISTITUZIONALE <i>Es.: altri PM, fornitori esterni minori</i>	STAKEHOLDER CHIAVE <i>Es.: membri del team, committente, fornitori partner</i>
	Basso	STAKEHOLDER MARGINALE <i>Es.: logistica, acquisti, controllo di gestione</i>	STAKEHOLDER OPERATIVO <i>Es.: utenti finali, altri consulenti</i>
		Basso	Alto
		INTERESSE	

Stakeholder prioritisation

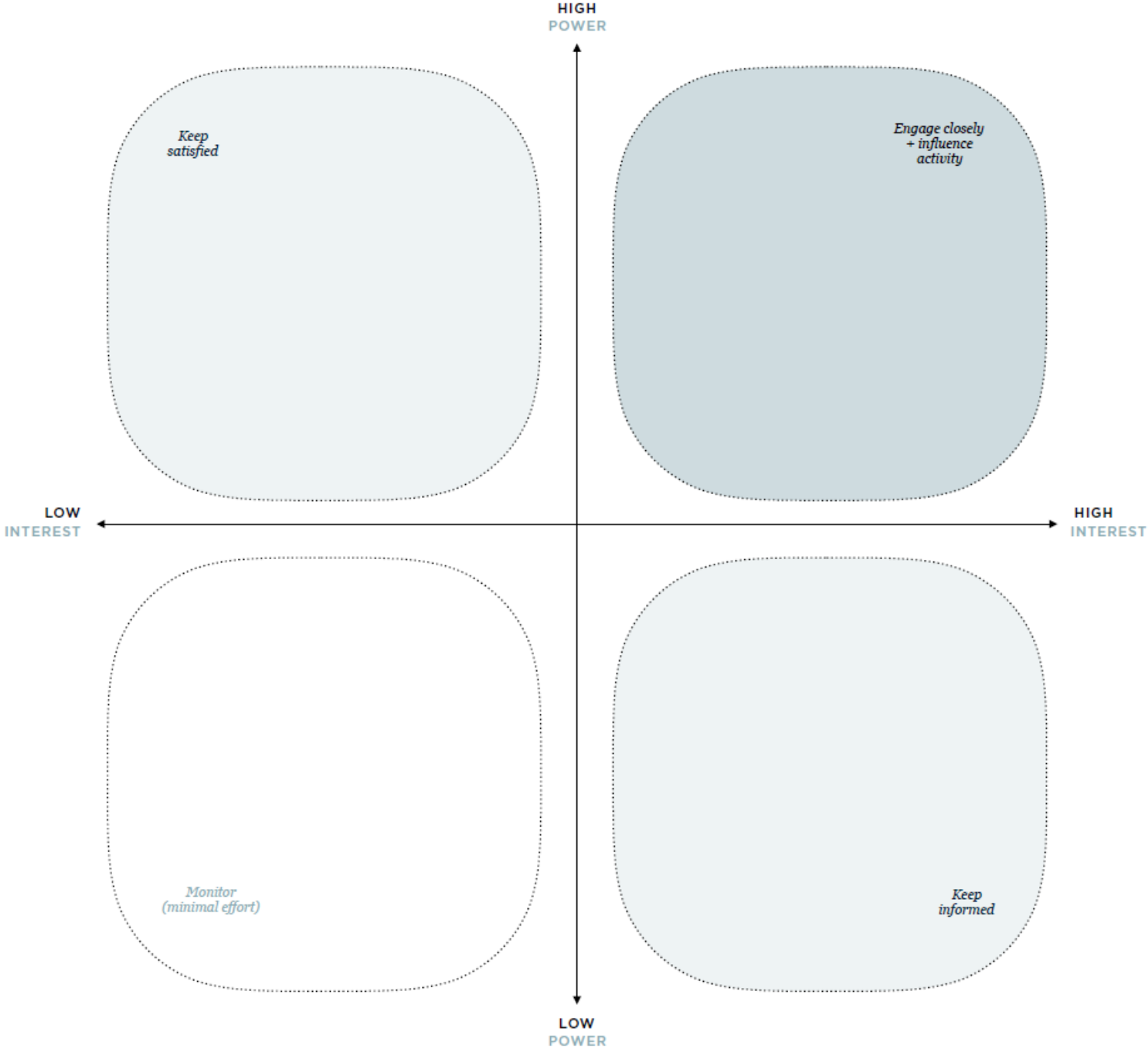
Use this to understand which stakeholders are most important and how you should best interact with them.



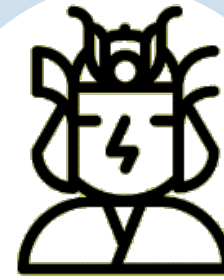
Power x interest matrix



Analyze the level of interest and influence of each stakeholder involved in the project:



4



Let's share and discuss

New questions?

Confirmations?

Difficulties?

Applicability?



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