



DIGITAL TRANSITION FOR SUSTAINABLE
AND INCLUSIVE CITIES

LOCAL AUTHORITY HANDBOOK TO DIGITAL TRANSFORMATION

A practical guide for local authorities
embarking on a digital transformation journey

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INTRODUCTION

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INTRODUCTION

About the Handbook

If you are reading this, chances are you are interested in digital transformation in local government. You might be someone working in a local authority or a funder interested in how to use digital tools to build sustainable and inclusive cities.

This handbook was developed by the African Smart Towns Network (ASToN) following our flagship programme 2019 - 2022. ASToN brought together 11 African cities into a network aimed at developing digital practices and creating sustainable & inclusive cities.

This is a practical guide of the approach we have taken in the ASToN programme. We have drawn on, and built on, many frameworks and guides that already exist, and we have referenced these throughout the document.

Our hope is that this handbook can prove useful for other local authorities and those interested in city-level innovation. It should be used to provide inspiration, rather than something that must be followed to the letter. We recognise that each city is different and needs slightly different things. The network was based in Africa but the approach we believe is more universal than that.

The document is split into three sections; Explore, Engage and Experiment. These sections offer a way to think about approaching digital transition in your city and include a range of activities and associated tools you can use to conduct the activity. Where possible, we've included an example of how the tool was used by practitioners from the ASToN network.

These sections aren't necessarily linear but overlap and interconnect. While the activities, tools and methods shared here are largely drawn from digital best practice, they can be applied and used in projects across any domain, including non-digital projects.



Key terms

Smart city

A city that is able to sense and respond to the needs of its citizens through a constant process of innovation, learning and adapting, likely drawing on the potential of digital tools and technologies ([ASToN Baseline Study](#))

Local authority

Local government structure with overall responsibility for the provision of urban services

Urban services

Public services that aim to address the needs and improve the lives of urban populations

Integrated and sustainable urban development

An approach that encourages the creation of jobs and growth while promoting a cohesive society and better environment

Digital transformation

Applying the culture, processes, business models and technologies of the internet era to respond to people's raised expectations (Tom Loosemore, Partner at Public Digital, 28 Jun 2017)

Digital inclusion

Reducing inequalities in access to digital tools

Digital literacy

The ability of people to understand, access, manage, create, evaluate and communicate information safely and appropriately through digital technologies (UNESCO, 2018)

Digital maturity

The level of access to, use of, and outcomes from digital technology in society (As outlined in the Baseline study)

Digital ecosystem

A network of stakeholders involved in digital services within a geography, extending across different sectors

Open data

Digitised data that is accessible and can be used freely by anyone.

Smart cities and digital transformation

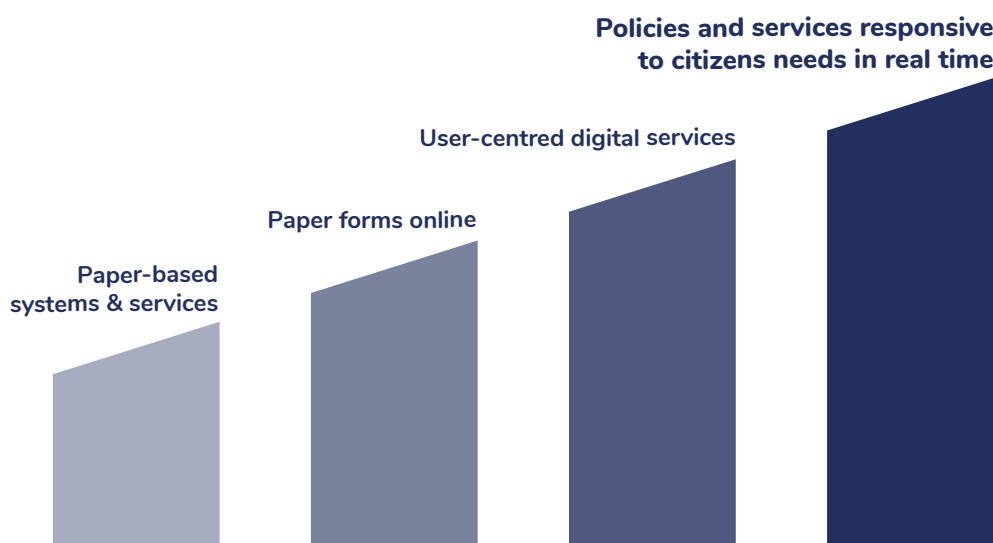
In May 2020, we published a [Baseline Study](#) for the ASToN network which shared our research into the concept of “smart cities”. While there was variety in their definitions and ambitions, we saw that the local authorities in our network were using this idea of a smart city as a way of engaging in technological solutions to transform urban services. Over the course of the project, we have found it more useful to focus on the concept of ‘digital transformation’ than ‘smart cities’ as it focuses on the unique journey of each city rather than an end state.

The term digital refers to the use of technology (like computer technologies, mobile, artificial intelligence, robotics, blockchain, and Internet of Things). It also has a much broader meaning as “applying the culture, processes, business models and technologies of the internet era to respond to people’s raised expectations¹”.

As a network, we remain convinced of the positive impact digital tools can have on cities. Throughout the Covid-19 pandemic we saw the power of such tools, from simple video conferencing software helping to connect people in quarantine, to drones delivering medical supplies to hospitals². However, we’re deeply aware that these positives are not automatic. If technology is carelessly deployed, projects are unlikely to have the desired impact and may even have unintended, negative consequences.

The ability of a local authority to mobilise digital in its full range (technology, mindsets, and ways of working) influences their ability to improve public services. The most ambitious versions of digital transformation don't centre digital and technology at all (see diagram below). Instead they focus on creating services that are user-centred and responsive to citizens' needs in whatever form that might take. In many cases, the most important thing local authorities can do to harness the potential of digital transformation is to reimagine how they engage stakeholders, citizens, and suppliers throughout the process.

Steps of change on the digital transformation scale, measured against ambition and complexity



1. [Tom Loosemore, Partner at the consultancy Public Digital](#)

2. [Coronavirus: How can we make post-pandemic cities smarter?](#), BBC, 11 July 2020

The mindset needed for digital transformation

Navigating this kind of change within your local authority is never straightforward. More important than the individual steps or tools presented is the mindset behind this way of working.

Inspired by the OECD's [12 Digital Government Principles](#) and the [12 Principles of Agile Software](#), we have articulated 4 mindsets needed to enable organisations to innovate with technology.

1. Comfort in not knowing

We must accept uncertainty in our work and have courage to try things out. In order to manage the uncertainty, we must name our assumptions and be intentional about how we're exploring them. This includes being willing to get things wrong and learn from those experiences.

2. Problem focused

Technology is always changing, so we can't be focused on a particular solution, instead we must commit to solving the problem. This means starting by focusing on what is really needed at the local level, then testing our ideas and continuing to iterate and evolve the solution to ensure it really addresses the need.

3. People first

Technology by itself is not the solution and could generate negative consequences. Instead, we must prioritise participatory approaches - focusing on involving the people most impacted by the work. The resulting ownership and long-term accountability for people and teams will ensure the work will have impact.

4. Open and ambitious

Set out a clear vision and use this to bring others in. We must be open-minded, willing to collaborate and pursue opportunities that we may not have initially thought of.

02

EXPLORE

This section is dedicated to understanding the challenges and opportunities within your city. It is essential to properly understand the context in which you are working as it is a foundation from which you can build the project, and should keep returning back to as more insight emerges or things change.

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Identifying a local challenge

The chances are you've come to this point with an idea or focus area already identified, but we encourage you to start by taking the time to really understand the challenge fully and clearly articulate it. This ensures that

you're focusing on a real need and that the project is in full control of the facts, whereafter the next steps can be planned fully.



Baseline study

Develop a baseline understanding of the challenges in your city and identify your focus area

HOW:

- Collect information to answer some key questions:
 - What are the key challenges facing my city right now?
 - What are the current experiences of my citizens?
 - What are the issues they currently face when interacting with public services?
 - What change would you like to see through the project?
- We recommend starting by collecting data that already exists on the issue, including open data, data from previous studies and reports, and government databases
- You can draw further information and insight to complete any gaps you may have by interviewing internal experts or key stakeholders. These could take a traditional interview structure, or use the tools below (Problem Tree and 5 Whys) to facilitate the discussions

EXAMPLE:

The ASToN Network Baseline Study is composed of the 11 cities' profiles. The city profile attempts to present the most important information about each city and the ASToN project, drawing on information gathered through a questionnaire, interviews, and multi-day city visits.

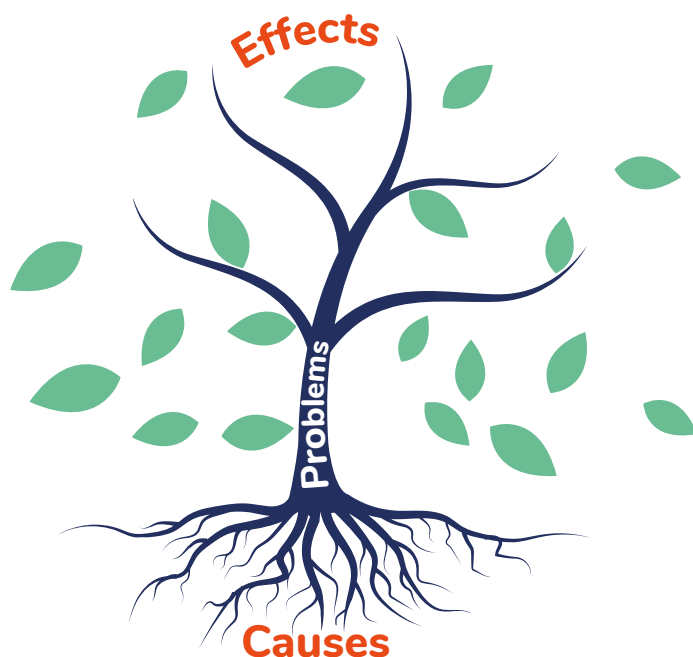
For Kampala, this baseline helped understand the various issues influencing their project to improve traffic management in the city:

- limited dissemination of real time traffic information with citizens,
- multiple actors in the transport sector but not enough coordination,
- limited digital and physical transport infrastructure despite other improvements around the city,
- and limited funding for digital development.



Problem tree

You've identified a problem you want to focus on, use this tool to capture the root causes of your problem.



HOW:

- Have a session as a team to complete the Problem Tree, you can do this with a core group of peers from your institution or invite other key stakeholders to join
- Start with the effects, or symptoms that you are observing and map them to the leaves of the tree
- Ask yourselves “why” these effects occur, what is causing them, and map that to the roots

EXAMPLE:

As part of the ASToN network, Bizerte decided to focus on the issue of waste management. They used the "Problem Tree" tool to highlight the causes and effects of this challenge. As a group they discussed what they were noticing around the city: a significant multiplication of “black spots” with bags of waste beginning to pile up, causing dissatisfaction for citizens. Alongside this, they noticed that there were difficulties in collecting waste and significant wear and tear of the waste collection equipment. The group then discussed the possible causes of these issues and agreed they were due to infrastructure and governance challenges, as well as limited human resources and citizen awareness.

The use of the problem tree allowed them to go into detail about the causes and effects through a series of participatory workshops. They were then able to orient any solution ideas and activities around these detailed causes and effects.

READ MORE:

[ODI Planning tools - Problem Tree Analysis](#)



5 Whys

An alternative way to explore the problem - used to make sure we scratch beneath the surface and have fully identified the true root causes.

HOW:

- Articulate the problem you want to solve in your city
- Ask yourself 'Why?' that is a problem
- Each answer forms the basis of the next question - usually asking 'Why?' 5 times will reach a deeper root cause than initially identified
- When answers are vague or point towards issues outside of our control such as not enough time, or not enough investment, try asking 'Why did the process fail?' to see what else it might surface

EXAMPLE:

The local authority in Matola identified the problem that they didn't collect enough revenue from citizens. By using the 5 Whys framework they were able to dig into the reasons why this might be. Initially the team said the system in place wasn't good enough. On probing, the team agreed this was because there weren't enough staff or computers at the tax collection points to make the current system viable, and that the system relied too much on manual processing and on citizens coming in.

Others said that many citizens were actively avoiding paying taxes. By discussing why, the team saw that this could be for a few reasons. Citizens might not know how to pay because the system is too complicated and there is very little information provided, or it might be because the local authority wasn't able to hold citizens accountable as there wasn't robust data about who needed to pay the tax.

READ MORE:

[URBACT Toolbox - 5 Whys](#)

You should begin to develop a challenge based on this initial work. The challenge will continue to change and evolve as you get a richer understanding of the problem and the local context. Most importantly, these activities will help you understand what questions you still have and what more research you might need to

do. The amount of data available will vary depending on the issue and location of the work. Many African cities taking part in the ASToN network noted the lack of open data or government data available on the urban issues they were working on.

Assessing digital maturity

Understanding the digital maturity of your area, and your local authority is essential to establish the starting point for any digital transformation project. We encourage local authorities to self-assess and identify strengths and weaknesses that may play a role.

Do you and your team have the capacity in-house to lead digital projects? How many citizens are digitally literate? How much of a digital divide exists, and what risk is there of excluding a significant proportion of the population by developing a new digital service? These are all questions you'll need to address when embarking on a digital transformation project.



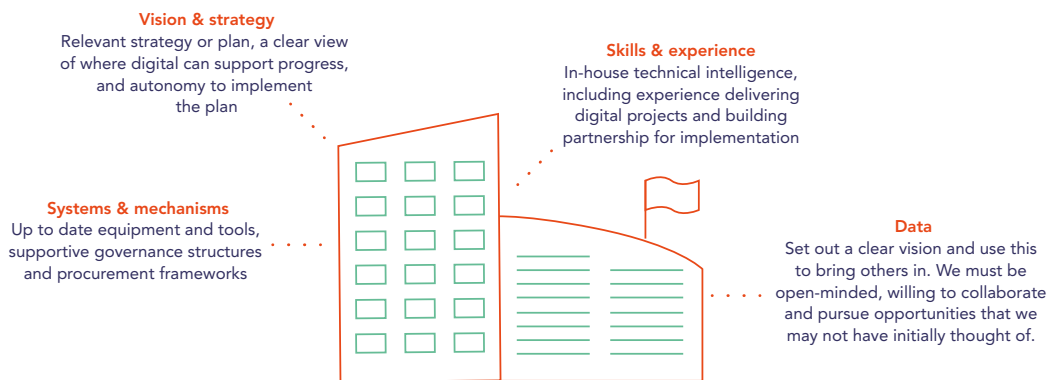
Digital maturity framework

Self-assess your local authority digital maturity to ensure you have fully understood the local context affecting your project

Framework for assessing digital maturity

Local authority with high maturity

Local authority refers to a local government structure with overall responsibility for the provision of urban services. The characteristics of a local authority with high maturity are:



Territory with high digital maturity

Territory refers to the urban area represented by the local authority and all the institutions that have a direct competence/stake in the area. The characteristics of a territory with high digital maturity are:



HOW:

- Review the characteristics of digital maturity included in the framework
- Develop a list of questions you need to answer about your own city in order to assess it against these characteristics. We recommend including the following questions:
 - **Vision & strategy:** Does your mayor strongly support digital transformation? Are there any digital plans / strategies already underway or about to begin in your city or country, and what do they aim to achieve?

- **Systems & mechanisms + skills & experience:** What relevant projects have been done to date, and were they successful? What challenges did they face? How would you rate the capacity of your local authority to conduct a digitisation project? What are some of the limitations within the local authority?
 - **Data:** How is data collected and used by the local authority? Is data readily available on the urban services in your city? Is there a strong culture of data protection?
 - **Local ecosystem:** Is there a thriving digital & tech ecosystem in the territory? Who are the key players and what size are the organisations? Are there any international players? How much investment is there into digital in general, and in gov-tech?
 - **Laws & policies:** What is the role of the national government? What policies and legal frameworks are in place, and are they enabling or restrictive?
 - **Access to technology:** What is the level of connectivity in the city/ country? How widespread is internet coverage and what is the penetration of digital devices?
 - **Citizen readiness:** What is the digital literacy of the population? Do citizens use digital tools already, such as mobile money? How comfortable are citizens using digital tools when engaging the government?
- Drawing on existing information and insights gained from interviews with key stakeholders, answer these questions carefully
 - Then assess the maturity of your local authority and the territory by giving yourself a mark 1 (low maturity) - 5 (high maturity) against each characteristic
 - It is important to avoid the temptation to give yourself a high mark on each characteristic, but instead see this as an opportunity to identify potential challenges you may face when embarking on a digital project. Also, consider the exercise as an assessment of where your city administration currently is, not where you would ideally like to be
 - You might decide to design your project to fit into the context (e.g. ensuring a non-digital option is available to those who aren't digitally literate), or you could include in your plans actions to increase the digital maturity (e.g. provide targeted digital literacy courses to key users of your service)

EXAMPLE:

As part of the ASToN network, the city of Nouakchott assessed the digital maturity of the local institutions as well as the citizens before embarking on their project. Despite estimated percentages of citizens with a mobile phone between 80 and 100%, and of citizens with a smartphone between 60 and 80%, they also estimated that less than 20% of the citizens have 4G mobile connections and a mobile money account. These estimations were later used to inform digital solution ideas. The team committed to ensure the solution is accessible to all citizens.

READ MORE:

[AFD Smart City Guide - Diagnose your digital maturity](#)

[UN Habitat Playbooks - Assessing and addressing the digital divide](#)

Defining the problem

It's crucial to define the scope of the problem well so that you know you are tackling the right thing. This step encourages you to speak directly to your users to further develop your understanding of the challenge and

to make sure you've truly understood the contributing factors. The aim is to have enough data and insight to articulate a clear problem statement which will be key in the next stages of the project.



Problem scope canvas

Map out what you know already about the problem and identify areas for further research.

UNDERSTAND THE PROBLEM

- Why is this important?
- How did you decide this?
- What is wrong with the ways things are at the moment?
- What are the root problems?

CONTEXT & CONSIDERATIONS

- What needs to be true to enable success?
- Which other strategies & plans do you need to consider at local and national level?
- Has any work been done on this in the past?
- Is there any research and literature you need to take into consideration?
- What are the constraints?

CURRENT CITIZEN EXPERIENCE

- Describe how things happen at the moment
- How does a citizen experience this?
- What is the role of the local authority?
- What data do you have already about this situation?

SOLUTION IDEAS

- What ideas do you already have?
- What assumptions are you making about these solutions?
- What solutions exist already & who is providing them?

DESIRED OUTCOME

- What will have changed for citizens?
- How do you define success?
- How could you measure impact on the problem?

WHAT ELSE DO YOU NEED KNOW BEFORE STARTING?

-
-
-
-

HOW:

- Convene your core team, or a larger group of local stakeholders
- Print the tool out on A3, or draw it on a piece of paper
- The questions in each of the boxes are prompts and ideas of what you should know in order to have a really robust problem statement

- Think about what you already know: how do you know it? Do you have any data or evidence to back it up? What are you not sure about, where do you have gaps?
- Discuss how you will conduct the research to get a deeper understanding

EXAMPLE:

For the local group of Benguerir, this tool has helped to better understand the problem of access to health care and the booking of appointments. They saw that patients were travelling great distances to make appointments, and there were other issues with the maintenance and follow-up of medical records. They agreed the aim of the project would be to address these problems and guarantee an inclusive, efficient and local public health service.

Most importantly, by using the problem scope canvas, they were able to highlight the data gaps that need to be filled. They found they were missing key baseline data about the health service, such as numbers of appointments and numbers of patients.



User research methods

Gather insight on your users, their lives, experiences and challenges they encounter. This tends to include both qualitative and quantitative techniques, and a range of methods such as observing users in their real-world setting, interviews, or conducting surveys.

HOW:

- Host a workshop with your core team to plan your user research together
- You should agree on the objectives of this research and what to focus on at this stage. In the early stages, the research will be broad and focus on understanding the problem and the current citizen experience. Later on, you can use user research methods to focus on particular parts of the service and to test ideas with users
- Identify your target research participants depending on what you want to learn and discuss how you might recruit them (do you have existing channels of communications with them, or might you need to work with a partner?)
- Consider which research methods you want to use
- Try to involve your team and local action group as much as possible throughout the user research. Where appropriate, invite them to listen in, and share findings regularly

EXAMPLE:

In Bamako, owners of two-wheeled vehicles are required to pay the annual road tax. In order to better understand the problem related to this procedure (which was previously paper-based and manual) the local ASToN group conducted a survey amongst vehicle owners. The survey focused on understanding the users' experiences and challenges relating to this tax, including the price of the tax, its accessibility, the ease of access to the payment counters, the time required for the procedure, and the physical medium of the sticker.

READ MORE:

[UK government service manual - User research methods](#)

[IDEO - DesignKit Methods](#)



Journey mapping

Understand and visualise your citizens experiences of a service over a period of time, plotting the touch points from their point of view and not the point of view of the local authority.

Journey mapping

What are the steps in this person's journey?	<input type="text"/>
What is their emotional experience - positive or negative?	<input type="text"/>
What is the local authority doing in this process?	<input type="text"/>
Is there any data linked to this step in the journey?	<input type="text"/>

HOW:

- This can be done by the team after conducting individual interviews or as part of a workshop with a selection of citizens and stakeholders with strong experience in the area
- Make sure all contributions are from real personal experiences - ask them to describe the last time they used the existing public service to avoid people saying what should happen instead of what actually does happen
- If data is available from other research, share this and invite people to use it too
- Map their experience on the template: what are the steps of their journey; were there any positive experiences; when was it difficult?
- Get people to identify opportunities for improvements in the journey and discuss any emerging themes across the ideas generated

READ MORE:

[This is Service Design - Co-creating journey maps](#)



Problem statement

Align team and stakeholders around a clear problem to ensure you have a shared view of the desired outcome.

Problem statement

Insight you have gathered
about the problem and
the current citizen experience



Your agreed desired outcome,
with clear measures of success



How might we **so that**

HOW:

- Review the insights you have gathered in the user research and pull out the key elements you want to share with your stakeholders
- While you are sharing the insight with them, ask them to write down things they hear that could be the central problem statement for this project using the 'How might we...' format
- Ask the group to share their statements and discuss any similarities or differences
- Together agree on one statement which describes clearly the problem you want to address and the impact you want to have

EXAMPLE:

As part of the ASToN network, Benguerir developed the following problem statement:

HOW MIGHT WE improve the communication and coordination functions between the hospital and the citizens based on digital solutions and involving the young people of the city SO THAT our medical services are more accessible?

READ MORE:

[Miro - Customer Problem Statement](#)

03

ENGAGE

Digital transformation is as much about people and strategy as it is about technology. In this section, we'll explore how you can engage people to make sure the project will be successful and maximise the chance of the work having buy-in and being impactful. This will look different in every context, depending on where you work and resources available, but we encourage you to build a team and bring in others as early as possible.

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Setting up the team

Before you start in earnest, you'll need to make sure you have a fully resourced team to do this kind of work. We suggest establishing a core team, a small group of

3-4 people working in your organisation that follow on the daily activities of your digital transformation project and make sure operations run smoothly.



Multi-disciplinary teams

Bring together a core team of relevant people across different departments with complementary and multi-disciplinary skills. Forming a team around a problem or services with different skills (instead of more linear team structures) enables cooperation and teamwork and reduces the likelihood of duplication.

HOW:

- Think about who you need in the team:
 - Who is the project lead, who will make key decisions and drive the project forward?
 - Do you have someone able to conduct research, collect and analyse data?
 - Is there someone in the team that is able to take the lead on budgeting and financial considerations?
 - Is there someone able to design and build the technical components?
 - What other skills and expertise do you need to deliver this work?
 - Do people in the team have sufficient time to deliver the project?
 - Do you have people in the team that have experience with agile ways of working, or in delivering digital projects?
 - Do you have someone senior willing to champion the work and team at the higher levels of the organisation?
- Depending on your city administration, you might have to formalise their engagement in the team (invitation letters, requests to the executive level etc.)
- Building internal capacity to deliver digital transformation is essential, but it also takes time. If you don't have the internal expertise, think about engaging external consultants and partner organisations that have experience in these new ways of working and can help you maximise the benefits of new technology

READ MORE:

[UK Government Digital Service. Agile Multidisciplinary Teams](#)

Bringing in key stakeholders

Identify the key stakeholders to this project that you will want to influence or involve as early as possible. When we say stakeholders, we mean any individual, group, institution, or business that may have a significant interest in the success or failure of a project. These could be implementers, facilitators, competitors or beneficiaries. For the group to be relevant and diverse, your stakeholders should come from various sectors: com-

munity organisations, NGOs, startups, local, regional, or national government bodies.

Where possible, we encourage you to bring these stakeholders together to foster a sense of shared commitment. It is important to be intentional about how you engage these groups, and agree together what role they can play throughout.

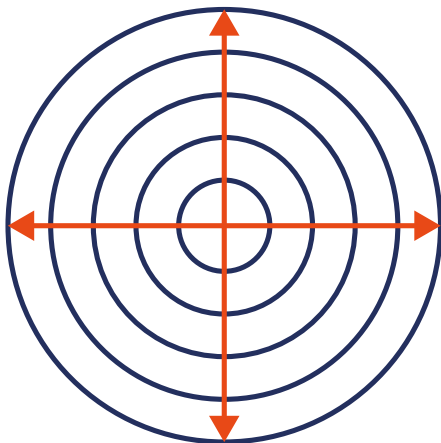


Stakeholder mapping

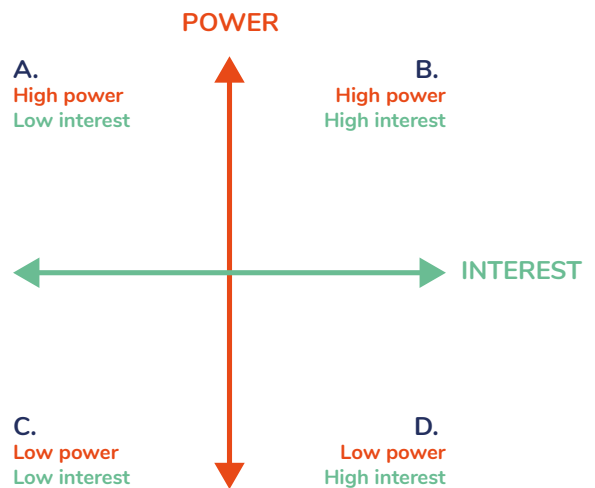
Identify and prioritise stakeholders to involve in the project.

Stakeholder mapping

Option 1



Option 2



HOW:

- List out who your local stakeholders are - this list can be very long
- For each stakeholder consider their interests and how they are affected by the issues, what motivations might they have for bringing about change
- Option 1: Group stakeholders by
 - Their proximity to the problem
 - What sector/ segment they are in
- Option 2: Group stakeholders based on
 - Their level of interest - how interested and engaged are they by changes to the system?
 - Their power - how much are they able to impact the system?
- Use this mapping to identify key people to engage for this work
- You can revisit it throughout the course of the project

EXAMPLE:

In Sèmè-Podji, the local group produced a written map of the local actors currently and to-be involved in their work to digitise land data and procedures. The team already had a good idea of the actors involved in the management of land data, but this process encouraged them to broaden the stakeholder group to include the startup ecosystem and the national Ministry of Technology and Digitalisation.

READ MORE:

[URBACT, Stakeholder Ecosystem Map](#)



Local Action Group

Gather key local stakeholders in a group that meet regularly in order to co-produce city strategies and action plans.

HOW:

- This group should include all different stakeholders relevant to the project - keeping them close from the beginning will ensure success of the project
- Revise regularly, based on the progress of your project, the composition of the group and the skills needed in it. Some stakeholders might join in as the project advances and some might drop out as their role might no longer be relevant
- Convene regularly, involve them in key decisions and make sure they understand the direction you are taking
- Consider:
 - Who should be in this group based on the stakeholder mapping you've done?
 - How do you want them to engage with the work? Should you create an agreement for the group to hold people to account?
 - How could you involve them to identify the challenge, do user research, and co-create the problem statement?
 - What role might they play in identifying and implementing solutions to this problem?
 - Are people participating on a voluntary basis? Do you need to cover travel allowances or other forms of cost reimbursement?

EXAMPLE:

As part of the ASToN network, the team in Niamey established a local action group which met regularly. The group included individuals from across the local authority, elected representatives, the urban transport city department, the police, local startups and the bus drivers association.

They met once a week for a few months until they understood their different roles, after which they met less frequently. The local action group worked together on some preliminary research to ensure they had a shared understanding of the issues related to mobility and the management of public transport.

READ MORE:

[URBACT, Local Action Group](#)

Collaboration and teaming

Bringing together very different people and stakeholders can be challenging. You can consider using agile and open ways of working developed in the dig-

ital sectors, which offer new ways to manage projects smoothly, run effective meetings, and get the most out of groups of people.



Agile ways of working

Agile is a project management approach developed for software engineering and based on delivering work iteratively and incrementally. The values and principles of agile can be applied beyond software, and promote new ways of working based on more motivated, empowered and productive teams.

HOW:

- Consider if you have the expertise in the group to run the project following a particular type of agile method (e.g. Scrum, and Kanban), or if you might bring in an expert that can lead the process
- There are 4 regular meetings which facilitate communication across the team you can consider using
 - **Sprint Planning:** Regular meeting to discuss key upcoming tasks for the team, who will lead on them and by when. This is a chance to adapt the plan and activities as you learn more about what needs to be done
 - **Daily standup:** Short 15-minute meeting designed to quickly inform everyone of what's going on across the team (traditionally taken standing up to encourage speed)
 - **Review:** A time to showcase the work of the team, discussing what you're learning with key stakeholders
 - **Retrospective:** Bring the team together to give rapid feedback, discuss what's not working and find creative solutions to keep improving how your team works

READ MORE:

[Atlassian, What is Agile?](#)

[Atlassian, 4 Agile Ceremonies](#)



Collaboration Checklist

Use this checklist ahead of your meetings to plan effectively and ensure the time spent together is as useful as possible.

Cover the basics

- Are you respectful of time?
- Did you introduce everyone?
- Set clear objectives for the meeting, why are we here?
- Have you covered the logistics?
 - Room or Zoom
 - Air and food

Create common purpose

- Did you establish objectives for working together?
- Do you have shared interests in improving things for citizens?
- What is the “give-get” between different groups?

Listen and learn together

- Are you listening to everyone’s perspective and genuinely inviting feedback?
- What expertise do other people bring that you don’t have?
- Are you taking time to reflect together on what you’re learning?

Plan carefully

- How will you use the time well?
- What are the strengths of the individuals in the room?
- Is the physical space and room set up making people feel comfortable and encouraging them to participate?

Spend time on relationships

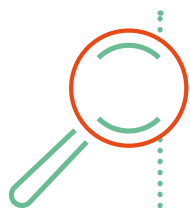
- How can you build trust so that everyone feels able to participate?
- What can you do to share power and ownership across the group?
- Can you work on something together to get to know them?

Follow up

- What information might you share with people after meeting?
- Is everyone clear on their actions?
- Think about how you could improve for next time!

HOW:

- Before scheduling a meeting, consider if a physical meeting is the best way to achieve your goals - might there be another way to get what you need from people?
- When planning a meeting, no matter the size, consider the questions in this checklist when developing the agenda for your time together.



“Yes, and...” warm-up

Build energy at the start of a meeting and encourage a new mindset of additive creativity and cooperation.

HOW:

- Organise the group into pairs. Together each pair will discuss how to make bread
- Person 1 starts by making a suggestion, like “To make bread, we could start by weighing the flour”
- In round 1, Person 2 will respond by starting their sentence with “No, but...”
- Continue for a few minutes
- In round 2 they will do the same again but instead Person 2 will start the sentence with “Yes, and...”
- Ask the group to compare the two rounds - what did they notice about the different ways to start a sentence?
 - Usually participants notice that “Yes, and...” opens things up more, allows for more building and collaborative ideas, while “No, but...” tended to be more negative or shutting down ideas
- Encourage the group to take the “Yes, and...” approach into the meeting, to listen to each other’s contributions and think about building on those rather than shutting them down



Red & Green Feedback

Get quick and honest feedback from people about a plan.

HOW:

- Gather your team or a group of stakeholders you want feedback and input from
- Explain the purpose of the session is to get honest feedback and so they are encouraged to say anything at all - you won’t be offended
- Present your plan or proposal
- Ask the audience if there are any clarifying questions
- Green feedback: The group tells the team what they liked or loved about the proposal
- Red feedback: The group shares worries or doubts about the proposal. This must be constructive feedback!
- Tip: Consider having a separate facilitator so that those presenting can focus on taking notes and answering any questions.

READ MORE:

Source: [This is Service Design Doing](#)



Reflection sessions

Reflect on the activities you have done recently, making space for the team to speak openly about what didn't work and how things could be improved.



What did you plan to do?

What actually happened?

Why was it different, and what have you learnt from it?

How might this affect what you do next or your plans?

HOW:

- This tool can be used individually, within your Core Team, or with the Local Action Group
- If you are working in a group, give everyone some time to consider their answer to these questions, then discuss your answers together
- Consider using a whiteboard (real or virtual) so you can see each other's contributions and identify any similarities
- Don't forget to think about any actions that result from this activity

EXAMPLE:

At the end of each quarter, the ASToN network's cities were invited to fill in this table in order to reflect on the previous 3 months. As a Core Team or a single project coordinator, this helped to take stock on what happened and how this compared to what was planned. This tool also allowed cities to surface and discuss issues causing delays in their work, such as challenges in collaboration between stakeholders. They were then able to consider mitigations and alternative approaches to tackle these challenges or avoid them in the future.

Identifying solutions

Bring together your understanding of the problem and insight from your stakeholders to start creating or finding solutions that will address the needs of the user. The more ideas you generate early on the better, so you can quickly iterate, refine your thinking and identify something both innovative and well thought through.

We encourage you to think about how you can involve as many stakeholders and citizens in the process as possible. The people with the most power tend to make the decisions, and by using participatory methods and co-design we can begin to shift some of that power and give others a voice. This also leads to more democratic, innovative, and impactful solutions.



Co-design workshops

Develop solution ideas from diverse groups of stakeholders and citizens.

Concept cards

Who is this solution for?

What problem will it solve?

What is the solution?
What exactly will it do, and how?
(Drawings encouraged!)

How will this be paid for?

HOW:

- Schedule a workshop with your Local Action Group or a group of citizens
- Start by making sure everyone is clear what problem we are trying to solve (see Problem statement), sharing any key insight for those who may not already have been involved
- First help people warm up by generating as many ideas as possible (10x10 method)
 - Invite participants to come up with 10 ideas in 10 minutes
 - Discuss as a group which ones you prefer and why - make note of the key characteristics of ideas that stand out
- Then give participants more time to create a more mature solution idea (Concept Cards)
 - Invite participants to flesh out the questions in this tool and encourage drawing!
 - To read more about this method visit the [Board of Innovation](#)

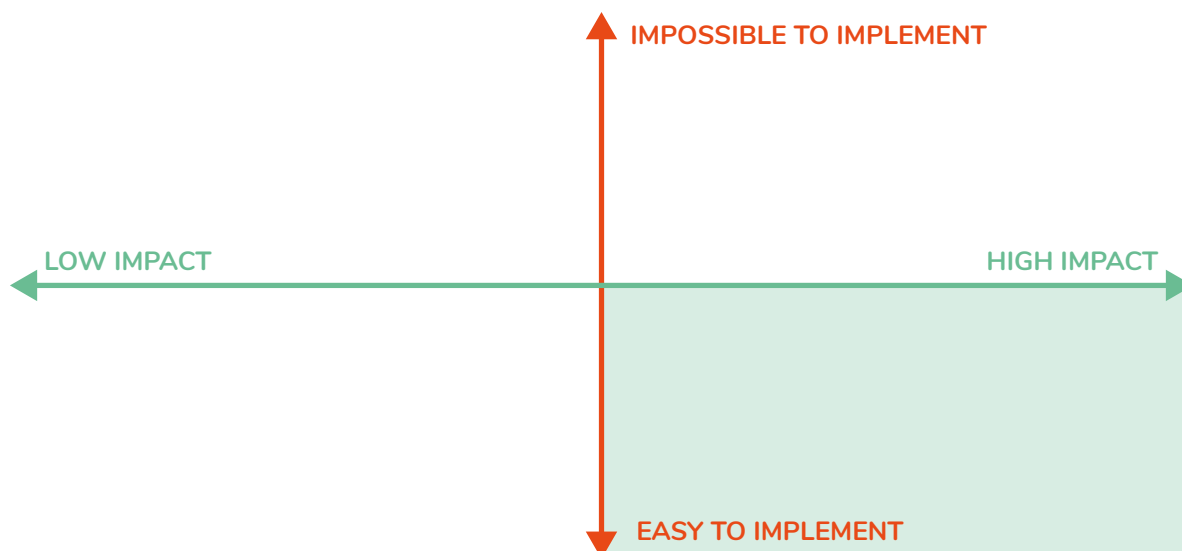
READ MORE:

[Beyond Sticky Notes, What is co-design?](#)



Effort - impact matrix

Prioritise ideas generated in co-design workshops or by the team



HOW:

- You can do this with the individuals in your workshop, or as a smaller core team
- Review the ideas that were generated and map them on the matrix - would it be easy to implement? How likely is it to have an impact on the problem?
- If more than one solution is in the bottom right square, discuss which one you'd like to take forward, or how to combine them

Tip: This matrix can be used for prioritisation

READ MORE:

[ThenSomehow.com](https://then-somehow.com) - [How to work out what to prioritise](https://then-somehow.com)

Defining your vision

Your vision is what enables you to stay anchored around the problem you're trying to address and the impact you want to have. It provides a clear sense of how your

solution ideas connect with the purpose of the work. It also enables you to clearly communicate the purpose of the work to others and get their support.



Vision statement

The vision statement outlines how you believe that your idea will contribute to tackling the problem.

HOW:

- Bring together your Local Action Group
- Ask each of them to think about the relationship between the problem and idea, and to write their own version of a vision statement using this format:
 - If we [do X] then we will [achieve Y] which will [have Z impact on the world]
- Bring together the different versions of the vision statement, compare and contrast, and re-draft so that you have a singular vision for the idea based on the collective understanding
- The vision statement is iterative and live. As you learn more about your idea, you can shift it in service of the impact of you want to achieve

EXAMPLE:

As part of the ASToN Network, Niamey develop the following vision statement:

IF WE develop an online payment system for taxi and 'vehicules de place'
THEN WE WILL better manage the licence system and streamline tax payment and collection
WHICH WILL improve public transport management and increase tax revenues.

Sourcing solutions through partners

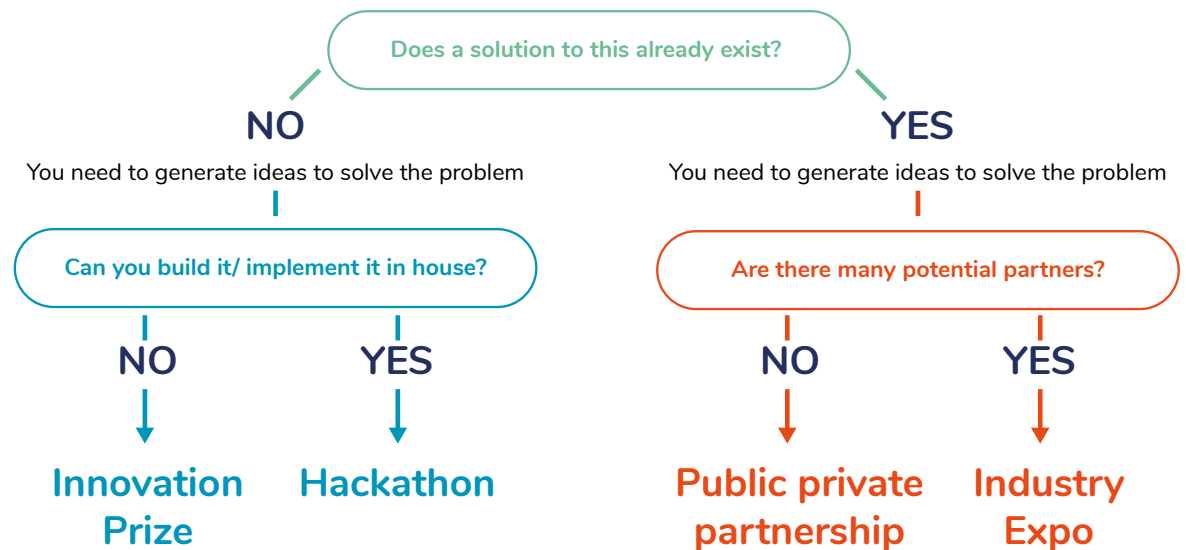
You may have already identified some potential solutions and ideas you want to pursue, or you might want to invite the local ecosystem to put forward ideas. Either way, we encourage you to think carefully about the best way to involve partners in the project, whether that's local innovators or global suppliers.

If you are still in the stage of generating ideas, the science shows there are strong links between how many ideas we generate and the final quality of the solution.

For testing and implementing the solution, it's a question of whether you have the capability or preference to build the digital tech, buy it, or borrow it before you commit to buying.

In this section, we explore just a few different approaches you can take depending on if the solution already exists, if you are able to implement it in-house, and if there are many potential partners in the ecosystem.

Deciding how to source solutions



Innovation Prize

Use the problem statement or vision statement to clearly define a challenge and invite people to address or meet this challenge. A reward (financial or other) is offered to whoever can first or most effectively meet that challenge.

This is for you if:

- There is no solution to your problem already out there and you want to invite ideas from anywhere
- By providing a reward you are stimulating the ecosystem to come up with solutions and respond to the problem you have identified
- Someone else will implement the work if given the financial support and other forms of support by you

Hackathons

Host an event that lets policy makers collaborate with experts from across the public and private sector to work together and create solutions to a problem. This often involves competing in teams to come up with the best solution ideas.

This is for you if:

- This problem affects and requires buy-in from many different groups
- You want to bring people together that don't usually collaborate
- There is no solution to your problem already out there
- You have the skills and resources to deliver the work afterwards, and have a clear plan of how this work will be taken forward beyond the hackathon

Industry expo

Invite companies in a specific industry to showcase and demonstrate their latest products and services to the government. This then often leads to some being invited to tender for a project.

This is for you if:

- Solutions to your problem already exist and there are established organisations in the sector to choose from
- You want to generate interest in the work
- You need support to implement the work and after the expo will invite a closed group to tender

Public private partnerships

Identify a company to collaborate with directly and establish an official partnership in order for them to finance, build, and operate the project.

This is for you if:

- Solutions to your problems already exist or are known
- You need support to implement the work
- There is a key player in the ecosystem who can help design, test and implement solutions.

Procurement in government

Procurement requirements and policies aim to ensure that anything that is bought is done so based on value for money, often requiring suppliers to be identified through some form of competition.

Particularly in procurement of information technology and digital service development, traditional approaches to procurement are being replaced with more modern practices that focus on:

- awarding smaller contracts to smaller companies
- developing open source software that can be reused among departments
- contract management by individuals internally that have sufficient expertise to provide effective oversight

However, these approaches to procurement are not yet the norm, and digital transformation projects still have

to work within the procurement constraints that exist in that country or institution.

Find out as early as possible how procurement works within your city as this will impact the decisions you make. You need to know:

- What is the process for procuring something? Is there any difference in the process when procuring a single consultant versus procuring an entire solution?
- Are there any limits or restrictions to be aware of?
- Who needs to approve the spend?
- What are the timelines for getting approval and being able to start work?
- What are the reporting expectations? Could you focus on delivery and learning rather than quantitative outcomes?

Communicating about your work

Strategic communications are essential for the success and sustainability of your work. It's likely that your local authority already has a communications department, so you should think about how best to involve and engage them throughout the project.

Consider all the stakeholders you want to target, from the internal leadership team to the general public, and develop a clear plan for why, when, and how you'll communicate to them about the work.

The idea is to understand how you want to share not only your results but also your journey. Citizens often lament the lack of visibility of projects underway in their cities. To avoid this and to ensure full citizen ownership of the project from start to finish, plan your communication activities throughout the project and keep updating them as things change. Do not forget to be inclusive, using local languages, for example.

Getting political support

Political support and personal involvement of individuals such as the mayor will contribute to the success of your project. Think carefully about how you will generate support for your work, who you'd like to champion your work, and how they might do this.

In Bamako and Bizerte, for instance, the mayors have participated in some meetings to demonstrate approval. In Kigali and Kampala, the municipality appointed specific people to work on the project and ensure human resources needs are met.

04

EXPERIMENT

This section is focused on testing your ideas and ensuring that your plans are as robust as possible. Projects rarely go totally to plan, and the more uncertainty there is, the more important it is to start small and build evidence of what will work in your particular context.

Many practitioners will be familiar with monitoring and evaluation as a mechanism to measure and assess the outcome of a project. Rather than waiting until the end of a project to review the impact and if a solution worked, we encourage you to conduct small experiments and build more certainty from the outset. This sort of approach should continue throughout implementation, using data about what's working to inform iterations and changes. This can complement any monitoring and evaluation processes in place.

Creating a plan of action	p.32
Testing through experiments	p.33
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Creating a plan of action

A plan of action outlines how your city will reach its desired impact at scale. It provides clarity on what you believe you will need to do, and what resources (human and financial) you will need. The plan of action should include a view on how the idea will be environmentally, financially and systemically sustainable.

Plans in government have traditionally taken a 'water-fall approach' - a linear approach in which a plan is

developed at the beginning of a project, and then the plan is followed through to implementation with limited opportunities to change the plan. Digital projects tend instead to take an 'agile approach' which allows for more ambiguity and flexibility in the plan. These plans have 'test-learn-iterate' cycles baked into the design and create the space to adapt the plan throughout implementation.



Local Action Plan

Create a document that sets out how you aim to achieve your vision.

HOW:

- Bring together your Local Action Group to develop the plan together
- Revisit the vision statement you created to guide the actions and resources you'll plan for. A vision statement is the big picture of what you want to achieve.
- Working backwards from that vision, invite the group to draw out some specific, quantifiable objectives. Objectives are the ways that you're aiming to achieve that vision.
- For each of these objectives, map out the following:
 - What actions do you believe need to happen to achieve your objective?
 - What team and budget will you need to implement these actions?
 - What evidence will you need to see to know that you have achieved your objective?
 - How will you collect the data needed to build this evidence?
- There is always a level of uncertainty in a Local Action Plan, and plans in general. Your plans should acknowledge the areas of uncertainty and assumptions being made, and set out clearly how you'll gather data to test these assumptions throughout (read more in 'testing through experiments').
 - What experiments might you be able to run early on to test assumptions and help determine the design of the product/service?
 - What feedback loops could you establish in the service while it's being implemented, to ensure you can continue to iterate as you implement?
- The plan should be a live document that is iterated regularly based on what is learnt.

Testing through experiments

An experiment is a test we set up to learn something, with the aim to incrementally build certainty around the idea that you are developing. You should start experimenting with the most uncertain elements of your plans at a small scale, and increase the size and complexity of the experiments you undertake in line with that certainty.

This process of testing, learning and iterating should continue throughout the implementation of your plan so that you can continuously improve the service or product.

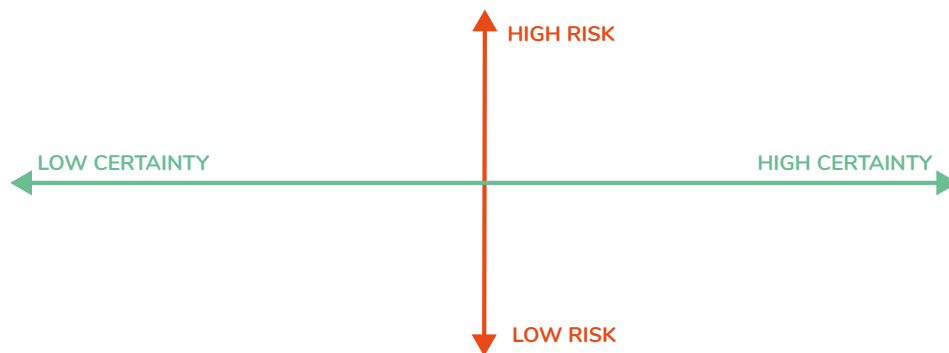
READ MORE:

- [ASToN network, Experiments Catalogue](#)
- [Frontier Technology Hub, Thinking in Experiments](#)



Identify your critical assumptions

Intentionally name the beliefs or assumptions you have about the idea you are developing and prioritise those that you need to test most urgently .



HOW:

- Bring together your Local Action Group to collectively surface as many assumptions as possible about the idea
- An assumption is a belief we have about the idea and how it'll work. When we look at assumptions, we group them into four categories: People, Solution, Resources and Impact.
- Using your vision statement as the anchor for the conversation, ask your local action group to consider the following questions:
 - **People:** Will citizens and stakeholders want it and engage with it?
 - **Solution:** Is the solution feasible and does it work?
 - **Impact:** Will the plan have its intended impact?
 - **Resources:** Is the work financially and environmentally sustainable?
- Ask participants to write down the assumptions they are making within each category with sentences that start with "we believe..."
- "We believe people want this" isn't going deep enough, ask yourself and the group 'why' we believe this and what needs to be true for the idea to work
- Not all of these assumptions are equal. We're more confident about some than others and, equally importantly, being wrong about some would be a bigger problem than others. The Critical assumptions are those we know the least about, which would also have the biggest negative impact on the idea we're testing if proven to be false.
- Rank each of the assumption based on two questions:
 - How much do you know about this idea? Or how much certainty do you have about it? This can

range from: 'I have a lot of evidence and no doubt that this is true' to 'I believe this but I am not sure at all'

- How risky is this assumption to the idea? This can range from: 'if this assumption is false, it would be impossible for this idea to work' to 'If this assumption is false, it wouldn't have any impact on whether the solution works'

- Based on this ranking, build a list of the most critical assumptions: those that are least certain, and most risky

EXAMPLES:

As part of the ASToN Network, the Niamey team identified the following critical assumptions within their plan to develop an online payment system for taxis.

- **People:** we believe taxi drivers have a mobile money account that they are familiar with using
- **Solution:** we believe the tax collection platform can effectively collect and pay the taxes to the municipality
- **Resources:** we believe that mobile money operators will be long-term partners to the city's tax payment plan
- **Impact:** we believe the tax collection platform will increase tax collection over time



Design experiments

Design a series of experiments to test the most critical assumptions for your idea

Start / end date: <input type="text"/>			
Experiment			
Describe what you'll do for experiment one. This could be a small activity or a pilot.			
Assumption		Minimum proof	
What do you believe is true about the solution that you need to test?		How will we know if we've validated the assumption?	
Experiment details			
Activities: describe the activities we will do within this experiment	Schedule when they will happen.	Resourcing: What people and funding is needed to do this? Does this experiment have an associated budget? Use the Experiment Budget template as needed	Framework for delivery (including partners): Describe the stakeholders you'll work with and their role in the experiment.

HOW:

- Start from your list of critical assumptions
- Think through the following questions to design an experiment for each critical assumption
- What are you testing? What is the specific assumption you're looking to validate or invalidate?
 - How will you test this? What is the specific and lean action you can take that will enable you to test the specific assumption?
 - How will you prove it? What is the minimum, specific evidence you need to see to know whether the assumption is valid?
- Develop the experiment and exactly how you'll deliver it in detail using the canvas

EXAMPLE:

Niamey designed an experiment to address the assumption that the taxi and faba-faba drivers have a mobile money account that they are familiar with using. They designed an experiment where they would test the tax payment process and platform with a randomly selected group of 100 taxi- and 20 'faba-faba' drivers.

They found that 60% of selected drivers already had a mobile money account, and 50% used it on a regular basis. However, drivers used a different mobile money provider than previously assumed. Of the pool of selected drivers, all were able to pay their tax through the platform. These findings were sufficient to validate using mobile money for the new online payment system.

READ MORE:

ASToN network, Experiments Catalogue



Managing and using data

Data and evidence are essential for guiding decision-making. The amount of data needed will vary at different stages of the work, with early stages typically characterised by testing early ideas through short sharp experiments, which require less robust data. Later on, you might consider more rigorous data collection mechanisms to inform your work on an ongoing basis.

<p>What would you need to see to know if you're having impact/ achieving your vision?</p>			
<p>What data would show this?</p> <p>Not everything is measurable, and that insight from people is just as powerful. You need to find just enough, specific data to show you what you need to make decisions, in a way that enables you to iterate at pace</p>			
<p>How can you collect that data?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Existing database <input type="checkbox"/> Run a survey <input type="checkbox"/> Observation <input type="checkbox"/> Stories <input type="checkbox"/> Other... 	<p>Details on how you will collect data</p> <p>This includes who will collect it, following which process, and around which timelines</p>	
<p>How will you make sure that you are collecting, analysing and storing the data in a way that is ethical?</p>			

HOW:

- Review your plan of action, which includes your planned experiments, and identify the evidence you need to collect around your vision, objectives, and experiments
- For each of these pieces of evidence think about:
 - What would you need to see, to know if you're having impact/ achieving your vision?
 - What data would show this? Note: not everything is measurable, and that insight from people is just as powerful. You need to find just enough, specific data to show you what you need to make decisions, in a way that enables you to iterate at pace
 - How can you collect that data? This includes data you might already have, such as national statistics, budgets, or numbers on service provision. Nationally collected data is not always reliable or centrally available. If this data is not easy to access, think about how you can collect data yourselves.
 - What other insight or info might you want that's not easily measurable?
- Note: when we talk about data, we mean a range of things, including: numbers, observations, stories, and facts.

EXAMPLE:

Bizerte needed to understand whether the new solution they had developed was increasing the amount of waste collected over time. To do this, they observed and noted how much waste was collected on a weekly basis by a truck with the existing system. In the new solution, they embedded a way to collect this data. They then compared how much waste was collected in the existing systems with the new digital solution.



Learning and iterating the action plan

Learning and iterating is at the core of ensuring that you achieve your vision. As you build certainty about how your solutions work in the real world, you'll need to reflect on your learnings and iterate how you plan to scale and sustain your idea over time.

HOW:

- We know that plans don't go according to plan, which is why we embed experiments and data at the core of the action plans. It's important to create space to learn and reflect on what the evidence is pointing to and what this means for the action plan
- When you are designing your plan, decide on a rhythm for how you're going to reflect. For example, this could be monthly or quarterly.
- During these sessions, go back to the evidence you have collected, and reflect on the following questions:
 - What does the evidence tell us about the assumptions, objectives and vision we had?
 - What have we learnt from implementation? What do we think needs to stay the same, and what needs to change?
 - What elements of our action plan need to be adapted? This can be the idea itself, how it's being implemented, the data we're collecting, or the timelines we had assumed
- Once you have reflected on this, embed these changes in your action plan
- Repeat these sessions at the rhythm that you agreed at the start

EXAMPLE:

By testing the tax platform with taxi drivers, the city of Niamey learnt that the mobile money platform used by most taxi drivers was different from the one previously anticipated. Therefore, the city pivoted to develop a partnership with a different mobile money operator.

Conclusion

It can be very easy to talk about the potential of digital transformation but it's much harder to turn that potential into action and make it happen. Digital transformation comes in many forms, depending on what is needed as well as what is possible within a local authority. Local authorities will need to think carefully about how to focus this work to make sure there are quick wins leading to more momentum and acceleration behind the work. We hope that the tools and approaches outlined in this handbook are useful to practitioners who are considering digital transformation in their work, and

provide some clarity and awareness about how they can be used. Remember these are suggestions, and it's really up to you to decide how you mix and match them depending on your level of digital maturity and confidence.

Whatever the stage of digital maturity within your local authority, keep in mind that digital transformation isn't about deploying technology. It is about adopting a mindset, having vision, and changing the way we work. And most importantly, it's about people.



Network representatives during the transnational meeting in Kigali in November 2021.

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