HOW TO CREATE A NEW APP

GRAB YOUR POTENTIAL
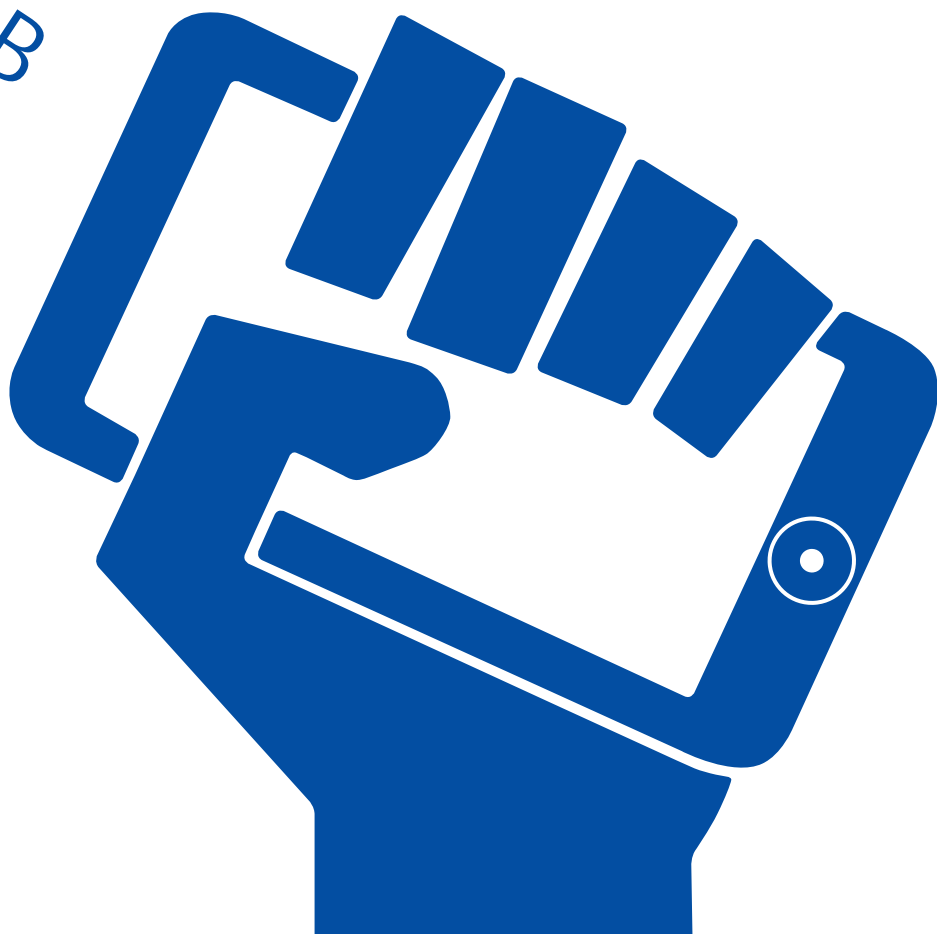
Plant a Tree App

Freie und Hansestadt Hamburg

This app allows citizen to make their own proposals for planting new trees and provides automatic feedback on its suitability. It will be able to provide additional information, like estimated CO2 reduction and cost calculation.

Nicole Schubbe

Landesbetrieb für Geoinformation und Vermessung, Freie und Hansestadt Hamburg

Urban Gardening App

Roma Capitale

The Urban Gardening App engages citizens and community groups to identify where new urban gardens should be established in their neighbourhood. The immediate feedback allows users to check if a parcel is available for urban gardening and if there is a water source in close proximity.

Claudio Bordi
Roma Capitale

3D Planning App

Royal Borough of Kensington and Chelsea

Our app allows people to see a planning application in 3D so they can easily understand what effect it will have and they can share this using social media so that more people can see what is being proposed.

Joanna Hammond
Royal Borough of Kensington and Chelsea

Preface

Hello smart implementer!* Probably you already have a fantastic idea how to make your city more liveable, greener or smarter. Do you think that creating an online app could take your idea further? Welcome to the smarticipate family. Nicole, Claudio and Joanna are also building their own apps for their city. They are not programmers or software developers but they share an enthusiasm and ambition to create new public services for their fellow citizens. They do this with the help of the smarticipate platform. Making your own version of smarticipate is easy! This manual explains to you step-by-step how to create your own app. What are you waiting for?

*Smart implementer = friend of smarticipate who wants to create his or her own app within the smarticipate platform.
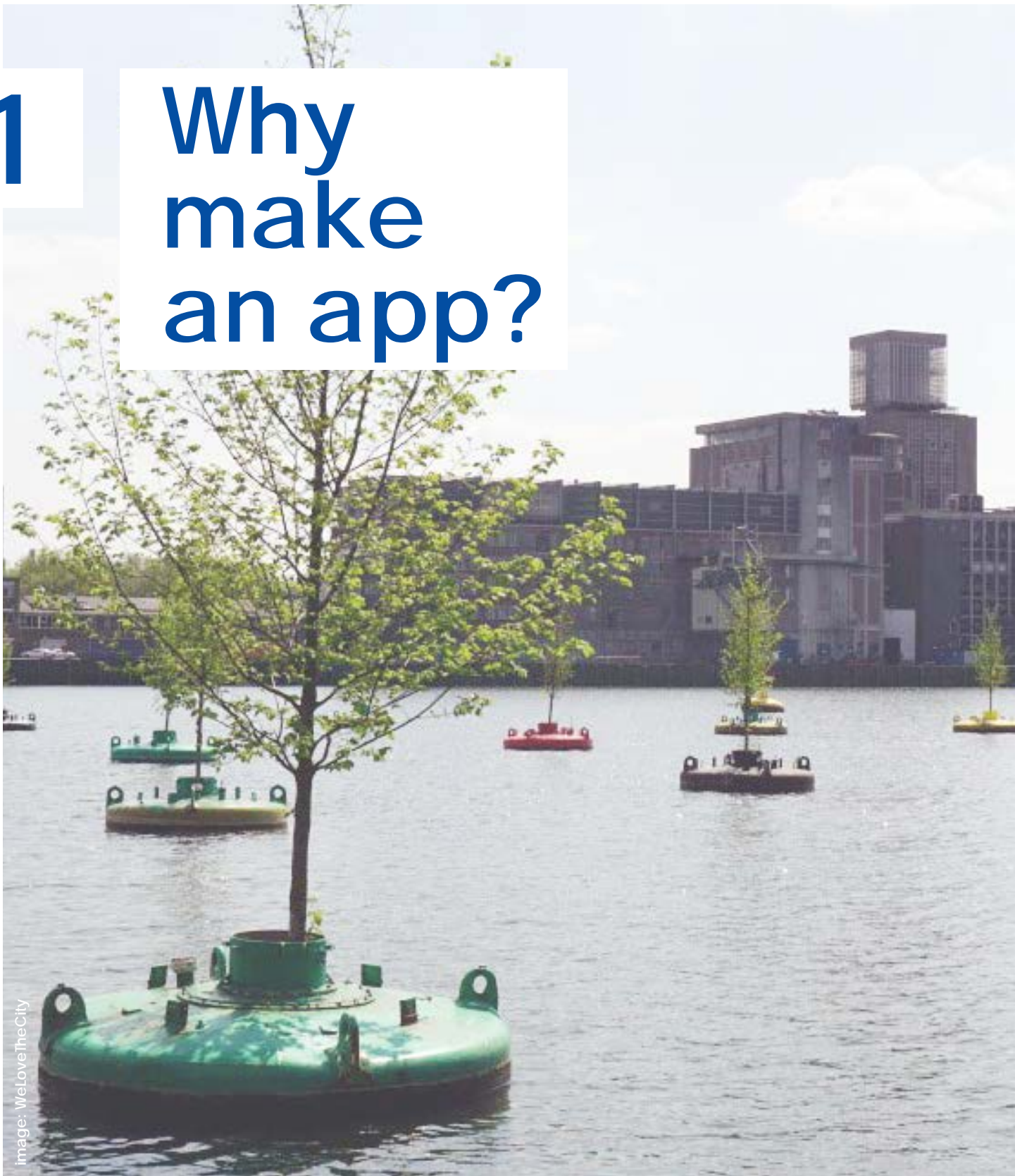
TABLE OF CONTENT

1 Why make an app?

If you are wondering if smarticipate is the right tool for your idea, here are some irresistible reasons to use it. Creating an app is not only great if you are a city administrator, but also if you are a citizen or organization. And don't worry about the requirements, it is easier than you might think.

WHAT YOU DON'T NEED TO MAKE AN APP

To use smarticipate you need less than you think. Here is an overview of the things you can easily do without:

>> IT knowledge; the smarticipate platform provides you with the necessary built-in features, so there is no need to do the programming yourself. It is just a matter of putting the features you want to use together.

>> Design skills; the smarticipate platform contains a user interface that is compatible with PC, tablet and smartphone, so there is no need to design your own operating system.

>> A big network; the app will help you to broaden your network of collaborators and supporters.

>> All the data in the world; only specific data that is of value for your idea is needed. If you don't have access to it right now, this manual will give you tips and advice how to collect it.

I use apps regularly, but I could not have imagined that I could build one myself. It was surprising for me that it is not that difficult. What is most important that you have a great team and an open mind set.

Patricia Hernandez
Roma Capitale

WHAT YOU DO NEED TO MAKE AN APP

The most important ingredient to make an app is an open mindset. The final app will probably be different from your initial idea. Be open for the people who want to get involved, listen to their comments and be guided by the information you'll find along the way. The result will be worth it.

Other things you need to make an app:

>> A computer with an internet connection and an up-to date browser such as Chrome, Safari or Firefox to put your app together. Later you can use the app on any device - desktop, laptop, tablet or smartphone.

>> A profile on the smarticipate platform; to make an app and also to comment on other ideas, you need to be logged in on the platform. You can sign up at www.dev.smarticipate.eu.

>> The first outline of an idea; the starting point of each app is a clear idea of what you want to achieve. This manual helps you to sharpen your idea and to develop it into an app.

3 REASONS TO MAKE AN APP AS A CITY ADMINISTRATOR

Make use of the open data
Publishing data on city portals as open data is a growing trend, which is also promoted by the European Commission (EC). However, in many cases it is dump of raw data that was created partly for technical reasons. It is hard for non-experts to interpret the data sets and even impossible to determine if the content is usable. An app makes open data more usable for a defined purpose, increasing the use of your open data and the quality of information you make public.

Get more people involved
An urban app is an easy way to get more people involved in planning and decision-making processes. It especially targets citizens who prefer to interact digitally. Having more users leads to informed citizens increasing the chance of success of a project. It allows you to be open and transparent about how and why decisions are made. Finally, it results in lowering planning failure costs during the process which can be up to 15% of total investment in urban projects.

Provide better public service with less work
An app helps citizens and businesses to participate and understand what is going on in their city. Expert knowledge gathered and administered by local government is transferred to citizens. Thus, empowering citizens, entrepreneurs and non-governmental organisations to help to shape governmental services, turning the city administration into a partner. Services that are co-created by citizens can result in high quality proposals and support informed, well-balanced decisions that reduce workload for city officials.

The city of Hamburg has huge amounts of open data accessible to citizens and entrepreneurs via our Transparency Portal. A great first step! However, our ambition is that more people use the data and transform it into usable applications which support the decision-making.

Nicole Schubbe
Landesbetrieb für Geoinformation und Vermessung
Freie und Hansestadt Hamburg
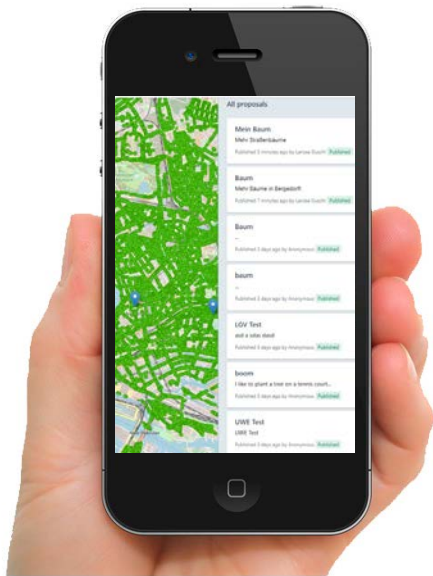
smarticipate prototypes

Check out the existing apps for inspiration at www.dev.smarticipate.eu

Plant a Tree App

Freie und Hansestadt Hamburg

This prototype allows citizen to make their own proposals for planting new trees and provides automatic feedback on its suitability. It will be able to provide additional information, like estimated CO2 reduction and cost calculation.

Urban Gardening App

Roma Capitale

The Urban Gardening App engages citizens and community groups to identify where new urban gardens should be established in their neighbourhood. The immediate feedback allows users to check if a parcel is available for urban gardening and if there is a water source in close proximity.
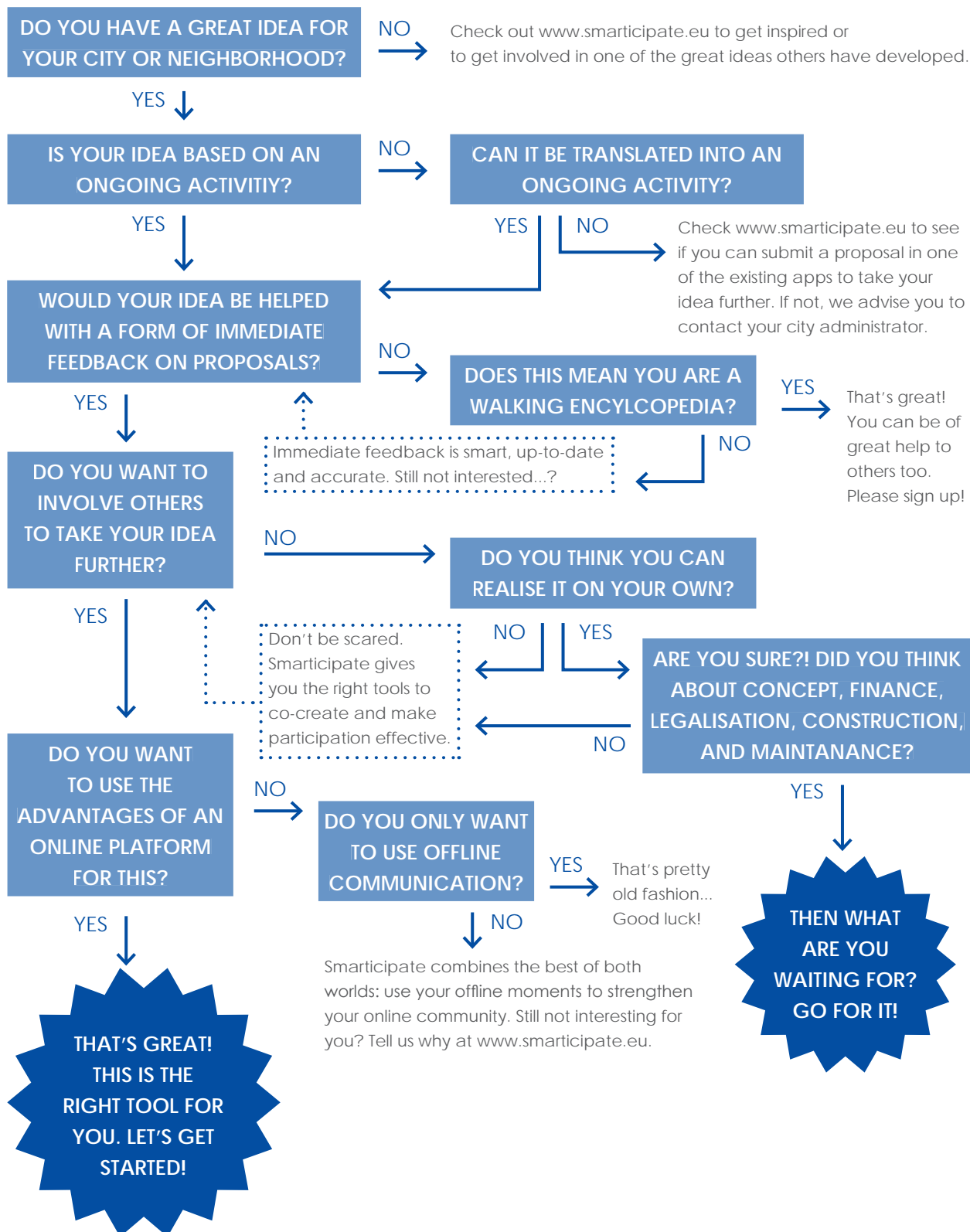

3D Planning App

Royal Borough of Kensington and Chelsea

This prototype allows citizens citizens to view a proposal for a new building in 2D / 3D. So they can better understand the impact it will have from different views and the shadow it will cast. Residents can comment on the proposed ideas and share what they have seen via social media.

IS A SMARTICIPATE APP THE RIGHT TOOL TO TAKE YOUR IDEA FURTHER?

DO YOU HAVE A GREAT IDEA FOR YOUR CITY OR NEIGHBORHOOD?

NO → Check out www.smarticipate.eu to get inspired or to get involved in one of the great ideas others have developed.

YES ↓

IS YOUR IDEA BASED ON AN ONGOING ACTIVITIY?

NO → **CAN IT BE TRANSLATED INTO AN ONGOING ACTIVITY?**

YES ↓   YES   NO → Check www.smarticipate.eu to see if you can submit a proposal in one of the existing apps to take your idea further. If not, we advise you to contact your city administrator.

WOULD YOUR IDEA BE HELPED WITH A FORM OF IMMEDIATE FEEDBACK ON PROPOSALS?

NO → **DOES THIS MEAN YOU ARE A WALKING ENCYLCOPEDIA?**

YES   YES → That's great! You can be of great help to others too. Please sign up!

NO

Immediate feedback is smart, up-to-date and accurate. Still not interested...?

DO YOU WANT TO INVOLVE OTHERS TO TAKE YOUR IDEA FURTHER?

NO → **DO YOU THINK YOU CAN REALISE IT ON YOUR OWN?**

YES ↓

NO   YES

Don't be scared. Smarticipate gives you the right tools to co-create and make participation effective.

ARE YOU SURE?! DID YOU THINK ABOUT CONCEPT, FINANCE, LEGALISATION, CONSTRUCTION, AND MAINTANANCE?

NO

DO YOU WANT TO USE THE ADVANTAGES OF AN ONLINE PLATFORM FOR THIS?

NO → **DO YOU ONLY WANT TO USE OFFLINE COMMUNICATION?**

YES → That's pretty old fashion... Good luck!

NO

YES ↓

Smarticipate combines the best of both worlds: use your offline moments to strengthen your online community. Still not interesting for you? Tell us why at www.smarticipate.eu.

YES ↓

THAT'S GREAT! THIS IS THE RIGHT TOOL FOR YOU. LET'S GET STARTED!

THEN WHAT ARE YOU WAITING FOR? GO FOR IT!

3 REASONS TO MAKE AN APP AS A CITIZEN

Quick information supply, easy and fun to publish your idea
Residents and entrepreneurs have plenty of ideas for the neighbourhood in which they live, work and play. Unfortunately, they don't always have access to the right information to develop their ideas into a concrete proposal. An app provides a quick information supply based on data and gives immediate feedback if a proposal is feasible or not. This means everyone can get involved and make a proposal for their neighbourhood, even those who have never interacted with local government before.

Get more supporters
Every citizen or organization who is involved in making their city better knows it is crucial to have your own website and use social media to spread your idea and win supporters. Social media is an easy way to reach out to more people. An app builds up on this. Citizen who create a proposal within the app can share it on their favourite social media or send the link via an email to their neighbour to ask for feedback. That creates a snowball effect and mobilize a critical mass to support your idea. More and more people create proposals, comment, share and like making easy interaction possible.

Check the viability of your idea
Probably you are convinced of your ideas, but do others think so, too? An app allows you to check if your idea is relevant for a wider group of people. It creates confidence if a lot of people support the idea. If not, perhaps you should re-think your idea or sharpen your story. Hence, an app is a good way to understand if your idea can mobilize a critical mass of support which makes it easier to approach the city administration and come one step closer to realising your idea.

The ADFC Hamburg sees the potential of smarticipate to improve the cycling infrastructure and is especially keen on the immediate feedback function. Hamburg's Transparency Portal provides the open data for our app. A win-win situation.

Jens Deye
ADFC Hamburg

2 What's your urban story?

The starting point of each app is a clear idea of what you want to achieve. Writing an urban story helps you to make this first idea more tangible. It explores the complex relationship between the generic and the specific and it has an important role in inspiring others to take your idea further.

WHAT IS AN URBAN STORY?

An urban story describes the development of a proposal, from initial idea to final implementation. Built from a sequence of scenes, it reflects the enthusiasm, dynamics, procedures, obstacles and consequences for different stakeholders.

SPECIFY YOUR TOPIC

The urban story is based on a topic, which is relevant for you. You're probably convinced of the fact that it is also relevant for others. Then it is important to make that as clear as possible. Describe your idea by answering these four questions:

What do you want to achieve?
Describe the action you want to take. Try to be as precise as possible. In the final app users should be empowered to make new proposals in their city. What can people propose with your app? It can be things like electric charging points for e-cars or playgrounds for children.
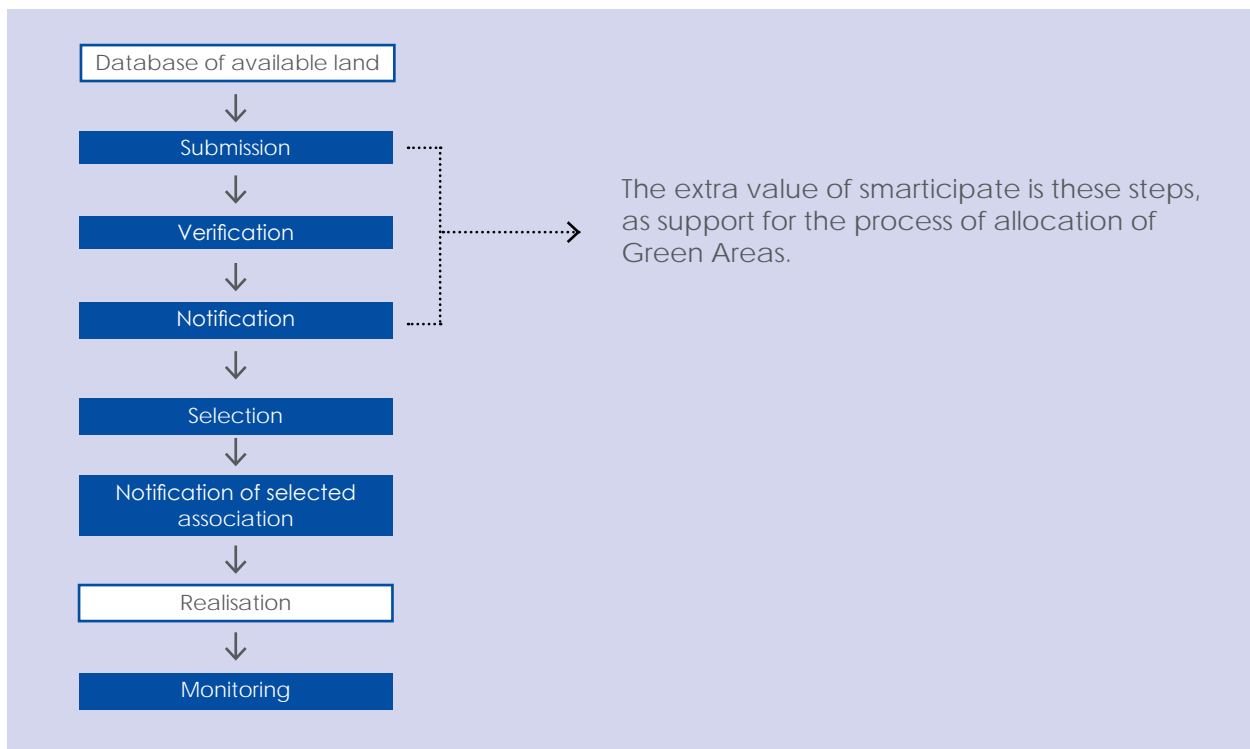
Why do you want to achieve it?
Write down your main goal and benefits your app has for your users and the city. Think about direct and indirect factors, so your app can mobilize more people, it is democratic and a easy and fun way to improve your neighbourhood? Does it also supports, for example, the climate goals of your city?

When do you want to achieve it?
Some urban projects need a long-run, but some have to be realized in the short-term. Make clear if your topic is related to a certain time frame. If for example, your city has to install 7.000 electric charging points, within three years, then your app

Rome has thousands of residents' associations. This includes groups focused on urban gardening, one of the most popular uses for the city's plentiful green spaces. The municipality is very positive about such initiatives, as urban gardens bring a variety of social benefits to communities and reduce public maintenance requirements. In practice however, it also creates a lot of work for the city administration.

Claudio Bordi
Roma Capitale

```
┌─────────────────────────────────┐
│   Database of available land    │
└─────────────────────────────────┘
              ↓
┌─────────────────────────────────┐
│          Submission             │ · · · · · ·
└─────────────────────────────────┘         :
              ↓                             :
┌─────────────────────────────────┐         :
│          Verification           │ · · · · · · · · · · · · →
└─────────────────────────────────┘         :
              ↓                             :
┌─────────────────────────────────┐         :
│          Notification           │ · · · · · ·
└─────────────────────────────────┘
              ↓
┌─────────────────────────────────┐
│           Selection             │
└─────────────────────────────────┘
              ↓
┌─────────────────────────────────┐
│    Notification of selected     │
│         association             │
└─────────────────────────────────┘
              ↓
┌─────────────────────────────────┐
│          Realisation            │
└─────────────────────────────────┘
              ↓
┌─────────────────────────────────┐
│          Monitoring             │
└─────────────────────────────────┘
```

The extra value of smarticipate is these steps, as support for the process of allocation of Green Areas.

Planning steps belonging to 'Regulations for the Management of Green Areas for Urban Gardens' in Rome

is bound by this time frame. Other projects such as finding the best locations for cycle racks can be an on-going activity and not related to a specific time frame.

How do you want to achieve it?
Cities are complex organisms and believe it or not cities have many procedures they must follow from installing cycle racks to planting trees. That's great because it makes it easy for you to understand how your app can support, or be integrated into the existing planning steps. What you have to do is figure out the existing processes and how your app brings extra value.

SIZE DOES MATTER

In an urban app the impact of an initial idea is always related to a physical location on the map. This is the so-called area of interest. Choosing the right size and setting the right borders is important in understanding the impact of your idea and defining your target group. Bigger doesn't always mean better. An idea for a specific street can be as powerful as an idea for the whole city. An urban app can be useful in both situations. You can start with a smaller location, but keep in mind that in a
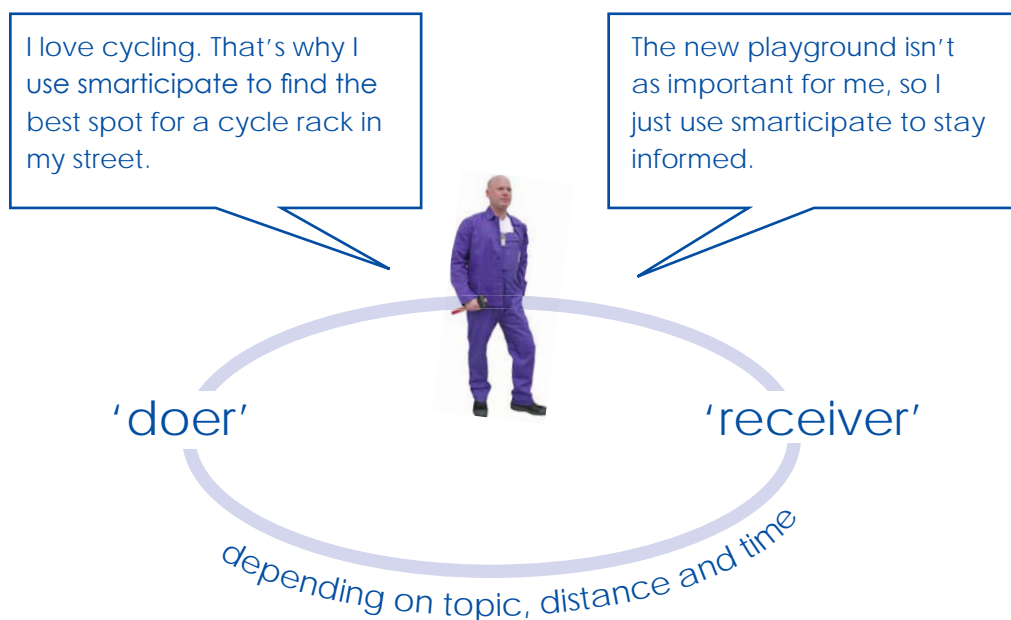
later phase you might also like to apply the app to some other location. In this case, think what is specific and what is generic on this location. For example, are there special regulations for this location or is it possible to apply the app to another site easily.

IDENTIFY YOUR TARGET GROUP

When you have a clear understanding of your topic and your area of interest, it is time to define your target group. In other words: who is going to use your app? In one way or another, these people will probably be affiliated with your topic or your area of interest. For example, they may care about green spaces or playgrounds or they live, work or study within the designated area.

Besides the question *who* is going to use your app, it is also important to think about *how* people are going to use it. If you only want to focus on active people who want to change their neighbourhood, you're aiming for the so-called 'doers'. Be aware that this is a small group. The majority of citizens care equally about their surroundings, but expresses that in a more passive way. These 'receivers' are more likely to like or comment on existing proposals. It is extremely important to receive feedback from them to gather a critical mass of users for your app. People can be both 'doers' and 'receivers' based on their interest.

A clear target group helps you to get a better understanding of your audience. It makes it easier to invite people for your Smartathon (chapter 4) and your Official Launch (chapter 8).

I love cycling. That's why I use smarticipate to find the best spot for a cycle rack in my street.

The new playground isn't as important for me, so I just use smarticipate to stay informed.

'doer'   'receiver'

depending on topic, distance and time

HOW TO DEVELOP AN URBAN STORY?

You have specified your topic and have some clear thoughts of the how and why. However, you may find it difficult to puit it down on paper. An urban story can help you with that. An urban story is a story board explaining a scenario in which your app is used. This can be done with text, images or both. Start with identifying fictional or real people who fit your target group. Imagine the possible actions they could take to realize their goal and write this down in a sequence of scenes. Don't forget to mention who's involved in each scene and the role the app fulfils within the story. Also think about existing tools, websites and platforms and how they can be incorporated. You can use as many scenes as you like, but keep the following criteria in mind:

Criteria for your urban story
- Your urban story should describe a special effort to reach out beyond usual suspects and broaden the group of participants.

- Your urban story should not be based on a one-off or periodic event, but should be based on an ongoing activity.

- App users will receive immediate feedback that is customised to his or her own proposal. Your urban story should be able to provide the possibility for this kind of interactive relationship.

- Take into account the availability of data. The data needed for your urban story has to be available and to be easily transformed into usable information.

- Your urban story shows how the app supports citizens in helping government to understand what people think or in developing entirely new public services.

The scenes on the following page are part of the urban story 'Associations want space for urban gardening'. This urban story was developed by the smarticipate team and city officials in the field of open data, participation and urban planning from Rome. In total six urban stories were developed, two per pilot city; one citizen and one city initiated. The first ones elaborate the process of initiating a football field, planting trees for CO_2 reduction and identifying space for urban gardening. The city initiated stories are explaining the process of introducing or presenting plans for an urban regeneration with the help of an urban app. The six urban stories are available on www.smarticipate.eu/resources.

(!) **Your urban story doesn't have to be all said and done. The story line should be an invitation for others to reflect and comment.**

[URBAN STORY]
'CITIZEN-INITIATED'

**ASSOCIATIONS
WANT SPACE
FOR URBAN
GARDENING**

Citizen-initiated Initiative: Urban Gardening — SMARTICIPATE
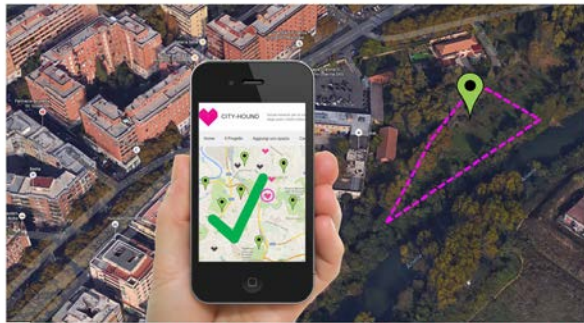
Pietro discovers the Smarticipate app and finds his favorite plot.

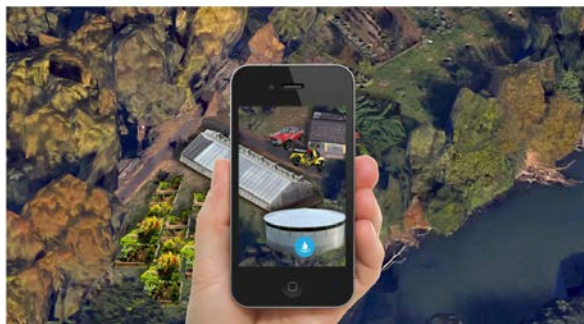Rome I Use Case Scenario 2 · © 2016 smarticipate Consortium · www.smarticipate.eu · 2

SCENE 2

Laura tells her father
Pietro, the chairman of association 'I Vicini
Verdi', about smarticipate. She shows him an
overview of the available plots, which are
marked as potential sites for urban gardening.
He receives all the information necessary
to make a good plan: size, soil, sunlight,
electricity, accessibility and availability of
water.

*Technical note: Smarticipate is linked to the available
data from City-Hound, Reter, etc. in order to compile
available land and present possibilities for the sites.*

Citizen-initiated Initiative: Urban Gardening — SMARTICIPATE

Pietro discovers the 3D scenario generator in the app.

Rome I Use Case Scenario 2 · © 2016 smarticipate Consortium · www.smarticipate.eu · 3

SCENE 3

Pietro works with other members of his
association to make a plan that includes a
water tower, as the plot has no access to
drinking water and the water from the nearby
river is too polluted. For that he completes
the information in the easy-to-use format
smarticipate, allowing him to have a finished
sketch in only 15 minutes.

*Technical note: The format has to be designed in this
way, such that underlined anybody can make a plan. Simple Yes/No
questions are important so that it will not take too much
time. Without this, many citizens will be excluded.*

Citizen-initiated Initiative: Urban Gardening — SMARTICIPATE
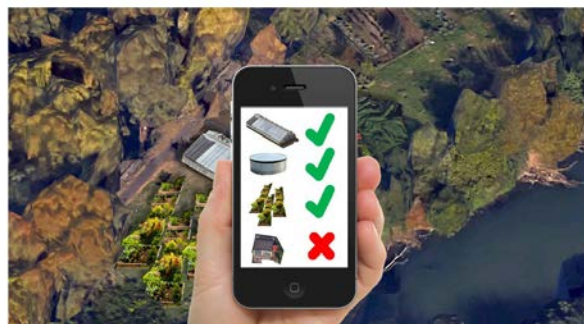
Automatic feedback on the proposal in relation to the regulations.

Rome I Use Case Scenario 2 · © 2016 smarticipate Consortium · www.smarticipate.eu · 4

SCENE 4

He receives automatic feedback on his
proposal. The greenhouse and the water
tank add extra value to the site in terms of
environmental quality. Also, the proposed
planting beds fit the permitted uses of the site.
However, he receives negative feedback on
the proposed garage, which is intended to
repair the cars and scooters of association
members. He is not allowed to build this here.

It's more fun together!

GET OTHERS INVOLVED

A city is not built in one day and not alone either. Working on the city is something you do together. That's why it is important to get others involved to sharpen your urban story. Here are some reasons why co-creation is important:

Find out if your topic is relevant for your neighbourhood. By involving others you get to know if there is a need for your topic or if the demand is already satisfied.

Discover if your topic is interesting enough to inspire others to participate. Your topic might be relevant but are others keen to get involved too?

Check if your idea is feasible as well as being relevant and attractive. The most relevant and beautiful app does not help if in the end it is not possible to realize it because information or data is not available.

BROADEN YOUR NETWORK

Don't worry, you don't need a big network to start with; the co-creation process will help you to broaden your network with other collaborators and supporters. But where can I find supporters who join me?

Get in contact with (non-profit) organizations that are already working on the topic or with urban participation.

Find out which local organizations are involved in the area you want to develop your urban story for and approach them.

Involve city departments which are responsible for the topic, the participation process and for the area itself.

Zoom in and out: also look outside your project area. Contacts from other cities dealing with the same topic can share their experience, knowledge and ideas with you.
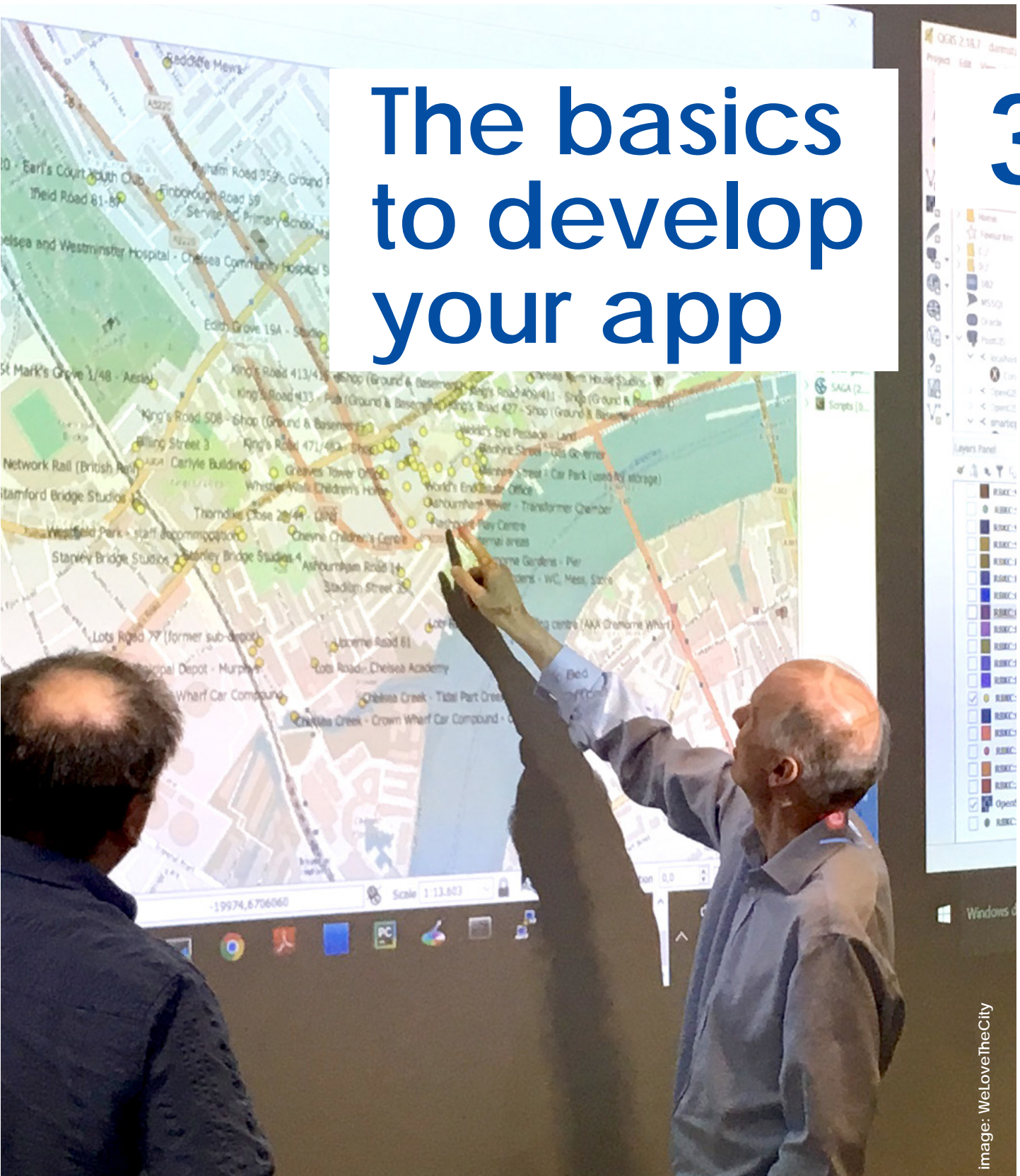
The basics to develop your app

3

An urban app consists of 3 elements; features, data and rules. By analysing your urban story, you specify the elements you need.

ANALYSE YOUR URBAN STORY

When the outline of your urban story is ready, it's time to zoom in. Analyse scene by scene to specify the features, data and rules you need for your app. When a scene implies a certain digital action from a user, it means a feature is added to your app. When a scene implies immediate feedback is given to a user, you have to find the necessary data and define the rules to generate this feedback.

SELECT THE FEATURES

A feature is a tool in the app that enables users to act. They facilitate online communication between different stakeholders and make it possible to reach out to a wider audience.

The smarticipate platform provides you with a set of built-in features which you can activate for your app. For example, the features sharing, liking and commenting on proposals via social media are ready for use.

FEATURES AVAILABLE FOR SMART IMPLEMENTERS

New topic

You can start a new topic that will be visible on the smarticipate platform.

Add data

You can add data layers to your map to visualize information that can help users with their proposals. You may need to speak to city officials about how to get this data.
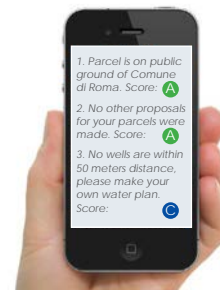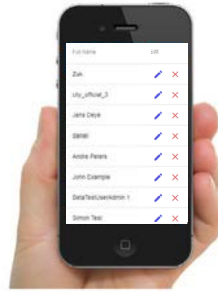
Create immediate feedback

You can give automated feedback on proposals based on data and a set of rules.

Add 3D Model

You can upload a 3D Model to view the surroundings, visualize your idea and explore the consequences for the neighbourhood.
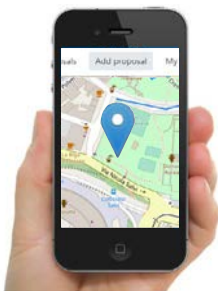

User management

You can invite people with their email address to use your app. You can define their role and erase their profile when needed.

Admin - statistics

You can get statistical information on topics, proposals, comments and users that are connected to your app.

FEATURES AVAILABLE FOR USERS

New proposal

You can add a proposal by locating objects on the map.

Comment

You can add comments to your own proposal or proposals from others. It also allows you to answer questions or reply on previous comments.

Like

You can like your own proposal or proposals from others. You can like as many proposals as you want.
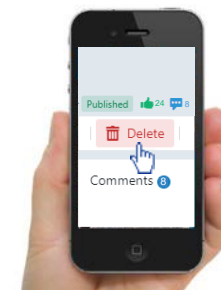

Sharing

You can share any proposal with a unique link and QR-code. The link can be embedded in websites or emails. The QR-code can be printed and scanned.
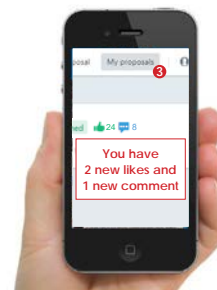
Notification

You can be notified about comments and likes on your proposal, new proposals or other related information on the topic you are interested in.

Right to erasure

You can delete your proposal, your comments or your profile whenever you want.

Jens Deye
ADFC Hamburg

Check your city's website to see if they offer a transparency portal or other open data tools. Also, data collecting institutions can be interested in sharing their data.

Be sure that you get your data from a reliable up-to-date source.

COLLECT THE DATA

The general goal of uploading data to your app is to help users in making good proposals. This can be done in two ways; before and after adding a proposal.

Data visible for your users
The information that is visible for users before they add their proposal, helps them to think out loud; 'If I want to make an urban garden I will need a water point. I can find the perfect location because the map shows me where there is a water point nearby.' In your urban app you can add layers to your map to help your users in this way.

Data for immediate feedback
The other possibility is to use data for immediate feedback after a proposal is added. The immediate feedback is based on data and a set of rules. This feature is very useful for users to find out whether a proposal fits a specific site, especially when different data layers have to be taken into account.

The smarticipate platform facilitates both ways of adding data. You can read more about this in chapter 6.
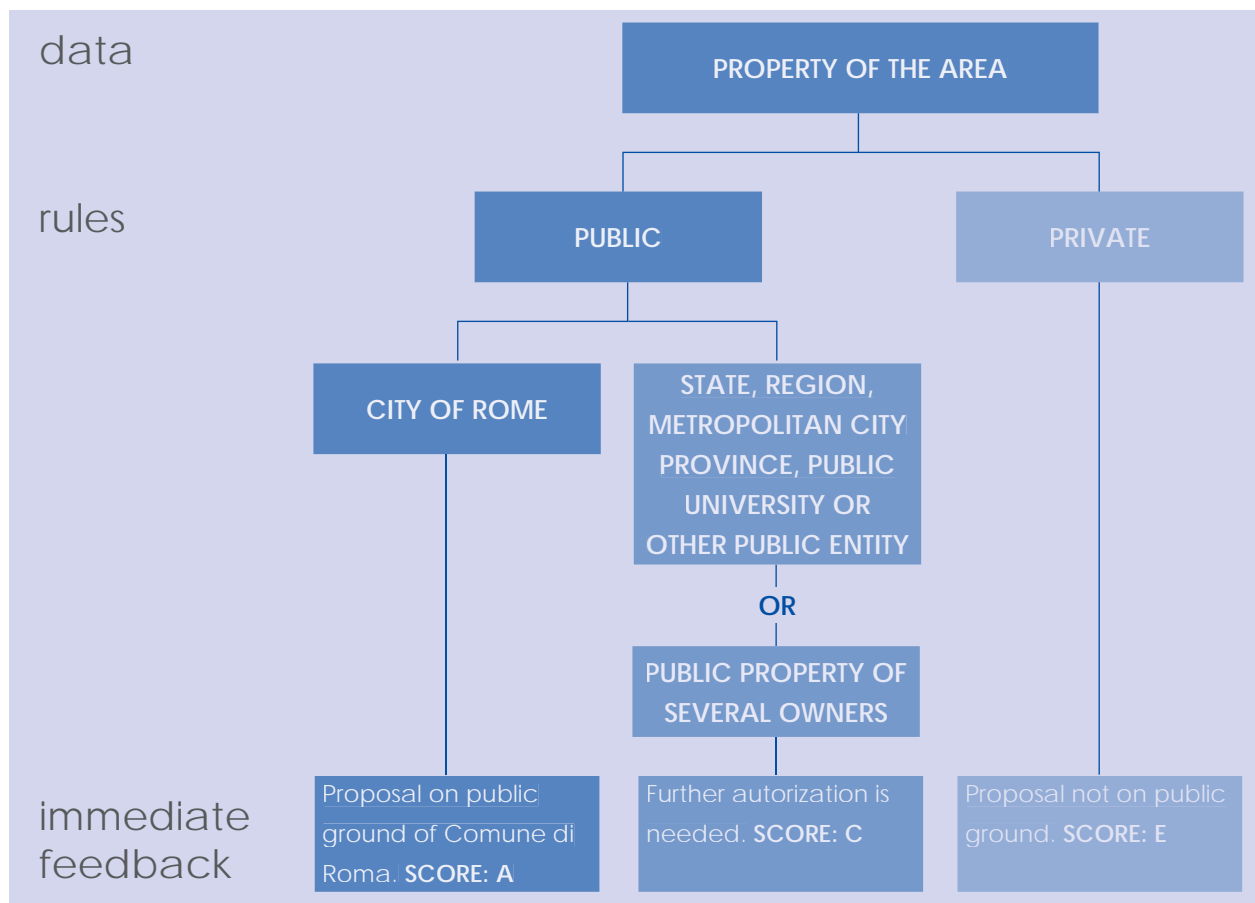
Relevancy
Collect the data that is relevant for your urban story and fits your area of interest. When you are focussing on a specific neighbourhood for example, you probably need detailed information per street. General numbers about the neighbourhood as a whole will be of less importance.

Consider data that has direct and also indirect influence on your topic. For example, when your topic is about planting trees data about species, available space and the kind of soil are of direct importance. Data about underground infrastructure, water retention, air pollution, shadow and ownership might be indirectly related but not less important to judge a proposal.

DEFINE THE RULES

To give your users reliable feedback you need consistent rules. These are the guidelines to decide whether a proposal is good or bad. The scheme below shows the rules that were created

by Rome to judge proposed location for urban gardens. Based on the data set 'Property of the area', the rules identify the location as public or private. The regulations of urban gardens of Rome establish that urban gardens must be created on public land. Therefore, private properties are judged with the lowest score. Public locations are further identified by the kind of owner, because the association will have to present their app to the owner of the land. Land that is owned by the City of Rome gets the highest score, land that is owned by other public authorities gets a lower score because further authorization is needed. The immediate feedback that is given to the user shows the score, plus the reason why this score is given. That gives the user the possibility to adjust and improve the proposal as far as needed.

data

PROPERTY OF THE AREA

rules

PUBLIC

PRIVATE

CITY OF ROME

STATE, REGION, METROPOLITAN CITY PROVINCE, PUBLIC UNIVERSITY OR OTHER PUBLIC ENTITY

OR

PUBLIC PROPERTY OF SEVERAL OWNERS

immediate feedback

Proposal on public ground of Comune di Roma. **SCORE: A**

Further autorization is needed. **SCORE: C**

Proposal not on public ground. **SCORE: E**

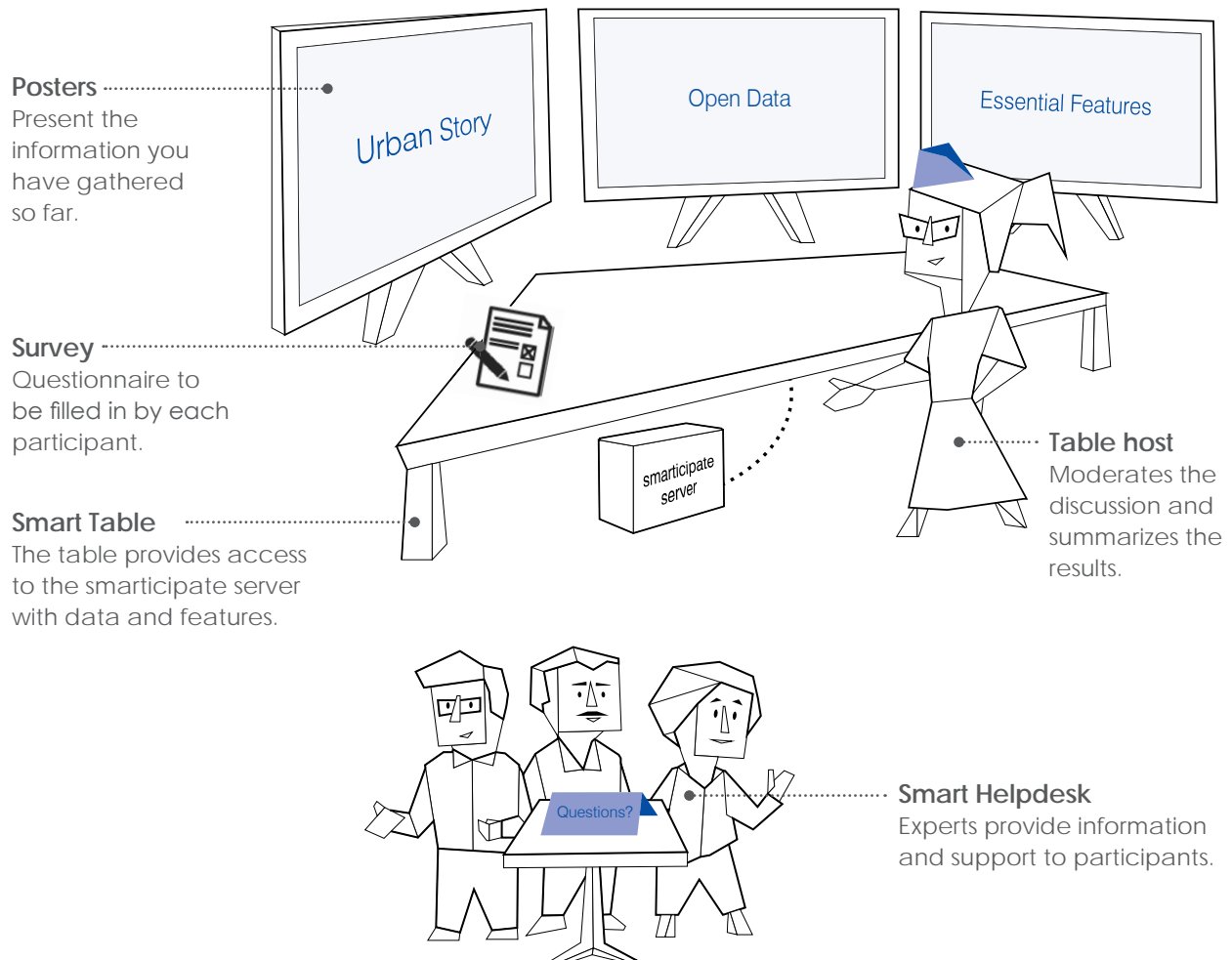Set of rules determined by the municipality of Rome to give feedback on proposals of urban gardening.

4 Organise a Smartathon

An urban app is not developed behind closed doors. Co-creation with users is an essential part of the process. It takes courage to present an unfinished prototype to a bigger audience. But the results are worth it.

WHAT IS A SMARTATHON?

Smartathons are lively, hands-on events. It all happens around the smart tables. At each table, six to eight citizens and entrepreneurs dive into your urban story, open data and essential features to improve your app.

Posters
Present the information you have gathered so far.

Urban Story

Open Data

Essential Features

Survey
Questionnaire to be filled in by each participant.

Table host
Moderates the discussion and summarizes the results.

Smart Table
The table provides access to the smarticipate server with data and features.

smarticipate server

Questions?

Smart Helpdesk
Experts provide information and support to participants.

TIMETABLE

10:00 **AM**
Meet and Greet
Meet your team members and get introduced to smarticipate. Your table host will welcome you.

11:00 **AM**
Working together
Explore the Scenario, Open Data and Essential Features around the Smart Table and discuss them with your team members.

12:30 **PM**
Lunch Mixer
Have a snack and meet people from other tables.

1:30 **PM**
Reflection
Work on your feedback! With your team members you sharpen your opinion and fill in an online questionnaire.

3:00 **PM**
Output
Enjoy a presentation of the day's highlights.

Date and time
Saturday September 17, 2016 | 10 am - 4 pm

Location
Kensington Town Hall | Hornton Street | W8 7NX
Royal Borough of Kensington and Chelsea

Contact
Paul.McDonald@rbkc.gov.uk | Tel: 0207 361 2213

This is an example for the set up of the Smartathon in London. In the manual 'How to organise a Smartathon' you can also check how Rome and Hamburg organised their Smartathons.

SET UP A MOBILISATION STRATEGY

To ensure lively sessions around the smart tables, it's crucial to form diverse groups with different knowledge and views. That's beyond the normal categories of gender, age and education level. Try to find participants beyond the people who normally get involved.

Digital
Publish an invitation to your Smartathon on the city's website. Also contact non-governmental websites to publish the event.

Connecting via other networks
Activate a wide variety of urban networks to mobilise Smartathon participants via their newsletters, websites and social media channels like twitter, facebook and linkedin.

Preparatory meetings
To prepare for the Smartathons and mobilise additional support, organise Meet & Greet workshops with civil servants and key city-makers.

Newspapers & posters
Advertise your Smartathon in print media and also via posters in public buildings, like libraries.

Word of mouth
Let city experts personally invite key stakeholders to the Smartathons. They can also spread the invitation through word of mouth with colleagues and partners in their network.

The Smartathon in London was published on the website of www.rbkc.gov.uk and an invitation was sent to a group of residents of different ages who do not normally get involved with planning. To invite smart implementers we activated the urban networks of Spacehive, Future Cities Catapult, Open Data Institute, The Borough Data Partnership and the Data Science Institute.

Paul McDonald
Royal Borough of Kensington and Chelsea

LET'S SMARTICIPATE!

Use an application form to let participants register for your Smartathon. Think about the information you want from them. For example, besides common questions like age and gender, you can ask them what role they see themselves as (see possible roles on the next page). This information gives you the opportunity to form diverse groups. The event does not have to be rigidly structured, as participants have the freedom to change table settings, put new items on the agenda and develop disruptive solutions. A mix of trust, non-organization and a relaxed attitude let you focus on a dynamic mix of participants and guarantees an uplifting discussion.

AgendaSetters
"I want to meet and connect other people who care about our community."

SolutionMachines
"I want to share my ideas for a better neighbourhood."

Disruptive moment

DataSetters
"I want to dive into available data & information and to know about the latest technology."

ProcedureSharks
"I want to help improve current planning processes."

FinanceGurus
"I want to ensure that public money is well spent."

RESULTS TO IMPROVE YOUR APP

Of course, you also need results. Prepare a survey that has to be completed by every participant at the end of the event. Compile them together with a final pitch from each table host and the written comments from the smart table posters. This provides the input for the development of your app.

Whether you integrate the feedback of the participants into your app or not, don't forget to link back to your users and give a summary of the most exciting outcomes and discussions. Your users will appreciate it and it helps you to get the feedback sharp.

Are you ready for it?

During the Smartathons in Hamburg participants elaborated the urban story by sketching the app and its features on the prints of a smartphone.

CHECKLIST BEFORE YOU GO ONLINE

Well begun is half done. You're almost there. Use this checklist to know if you have all the ingredients for your app.

Is it clear what you want to achieve with the app?
☐ yes   ☐ no
» check 'Specify your topic' on p.13

Can you draw the borders of your area of interest?
☐ yes   ☐ no
» check 'Size does matter' on p.14

Do you know who is going to use your app?
☐ yes   ☐ no
» check 'Identify your target group' on p.15

Can you explain how users can propose their ideas?
☐ yes   ☐ no
» check 'Select the features' on p.20

Do you know what feedback needs to be given on the proposed ideas?
☐ yes   ☐ no
» check 'Define the rules' on p.22

Do you have all the data to create this feedback automatically?
☐ yes   ☐ no
» check 'Collect the data' on p.22

USE THE SMARTICIPATE HELPDESK, IF NECESSARY

Did you answer one of the questions with 'no' and you don't know how to turn it into a 'yes'? The smarticipate team can help you further. You'll find their contact details on the final page of this manual.

Take a look at the apps on the smarticipate platform. Their topics, data and features are re-usable and might be useful to create your own app. For example, an app about planting trees can easily be adjusted into an app about placing benches, garbage bins or electric vehicle charging points.

Put your app together

image: Roma Capitale

Your topic is clear, you know which features you want to use and you have your data and rules ready. That means it's time to go online!

SIGN UP TO THE SMARTICIPATE PLATFORM

The smarticipate platform consists of a back-end and a front-end. The back-end, also called Dashboard, is used to configure topics (so-called apps) and to manage them. When you want to create a new app, you need to log in on the Dashboard. From here it is also possible to create and delete user profiles, for example for people you want to invite to collaborate during the app making process. You can also create user profiles to invite people so they can add proposals to your topic or be notified when new proposals are made.

The front-end, also called default view, is used to create proposals and to share and discuss them. This part is public and visible for everyone, also for people who are not logged in. However, the people who want to add proposals or comments, or people who want to be notified, need a user profile to do so. A more detailed explanation of how to use the front-end can be found in chapter 7.

SMARTICIPATE PLATFORM	
DASHBOARD Back-end Users: Smart Implementers To: create topics (so-called apps) manage topics (so-called apps) create and delete user profiles see proposals	**DEFAULT VIEW** Front-end Users: citizens & city-administrators To: create proposals comment and like proposals share proposals be notified

CREATE YOUR APP IN 10 STEPS
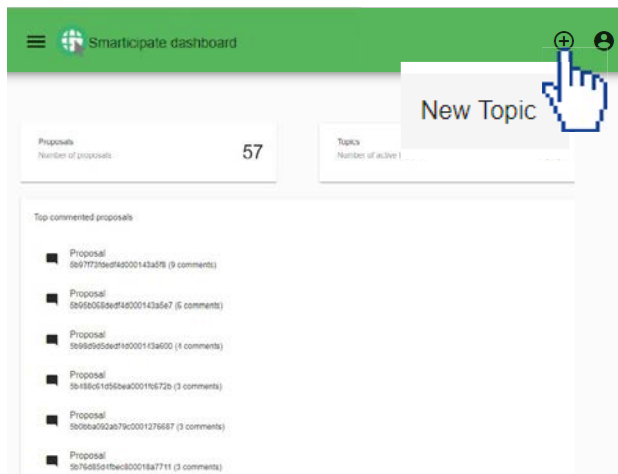
STEP 1. START A NEW TOPIC

The first step in making an app on the smarticipate platform is creating a new topic. To do this you log in on the Dashboard. On the dashboard you click on the + icon in the top right corner of the page and select 'new topic'. A new topic will open on the page of Basic settings.
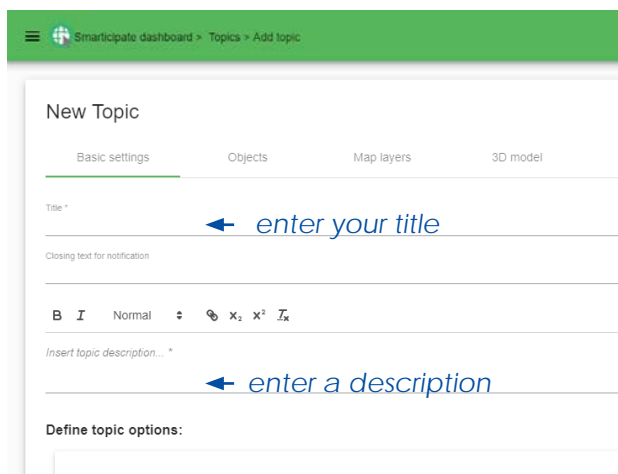

STEP 2. ENTER THE TITLE AND A DESCRIPTION

Enter the title of your topic. Your title needs to be unique, there cannot be two topics with the same name. In the description you give more detailed information on the topic. For example, you explain what users can do with the app, who's the initiator and refer to relevant websites or news items, containing additional information outside of the smarticipate platform.

The box 'closing text for notification' can be used when the topic is closed down. The text will be sent to all participants of the topic to notify them of its closure.
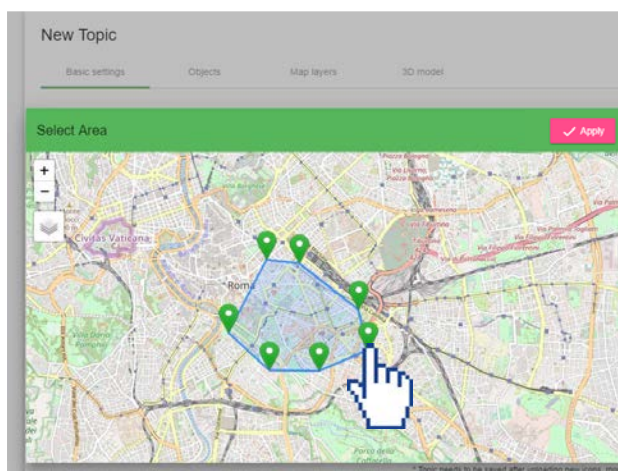
STEP 3. DEFINE THE AREA OF INTEREST

First thing you want to do is to locate your topic. Use the button 'Define area' on the bottom right of 'Basic Settings'. Now the map will appear. Scroll to the location and draw a polygon on the map to set the boundaries. By clicking 'Apply' the area will be saved.

You will now see that the button at the bottom of the page has become red. That means that the minimum information to create a topic has been entered. When you click on it your topic will be saved and published. You can now save and adjust your topic at your own speed.


STEP 4. CREATE THE OBJECTS THAT CAN BE PLACED ON THE MAP

Now you need to add the objects that should be available in the proposal, for example 'tree' or 'urban gardening spot'. You may choose point, line or polygon to show this object on the map. Add as many objects as you think are necessary by using the button 'Add object'.

STEP 5. ADD THE NECESSARY PROPERTIES FOR YOUR OBJECTS

When you scroll down the page you get to the part to 'Define object inputs'. These are the properties of your object. You can give them a name and choose the options that define them. In the case of the example of 'urban garden' the property can be 'enclosure', with the options 'wall' or 'fence'. Add as many properties as you like and do the same for any other objects you've added in the previous step.
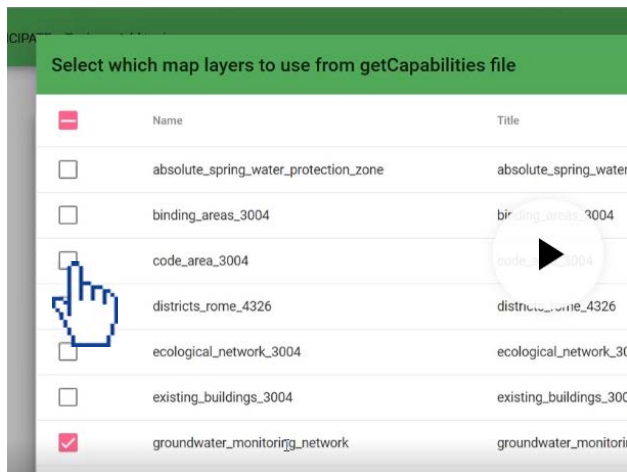
STEP 6. UPLOAD DATA LAYERS TO YOUR MAP

Go to 'Map Layers'. Enter a GetCapabilities URL or upload a corresponding XML file by clicking '1. Load layers from XML (WMS)'. You will get an overview of the available layers. Select the layers you want to add and choose 'Apply'. In the next window you configure the visibility of your selected layers. Choose the base layer and background layers. Then choose 'Apply'.

You can make GetCapability Request by the Open Government Portal of your city for a XML file that contains different data layers of the Open Government Data Server.
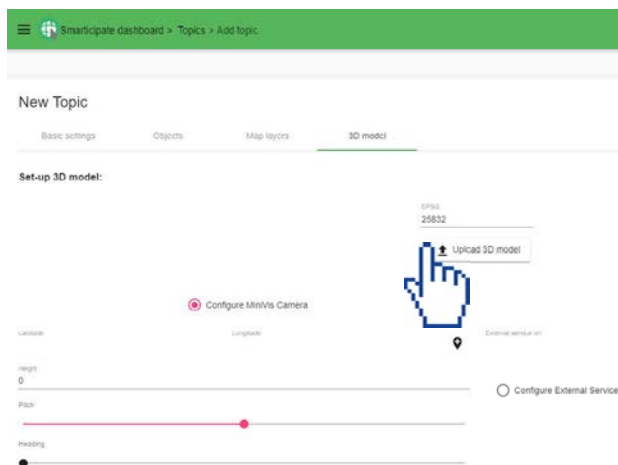

STEP 7. UPLOAD A 3D MODEL [OPTIONAL]

Under the tab '3D Model' you have the option to upload a 3D model in CityGML file for this format and define a camera position. Additionally, you can define a link to an outside 3D service, if needed.
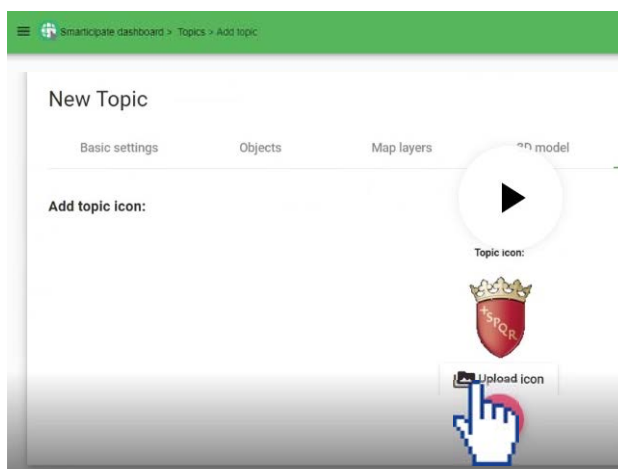

STEP 8. CHOOSE A TOPIC ICON

Your topic icon will be shown on the platform to make your topic recognisable for your users. Upload an image of maximum 256x256px. This helps to make the topic look interesting for users.
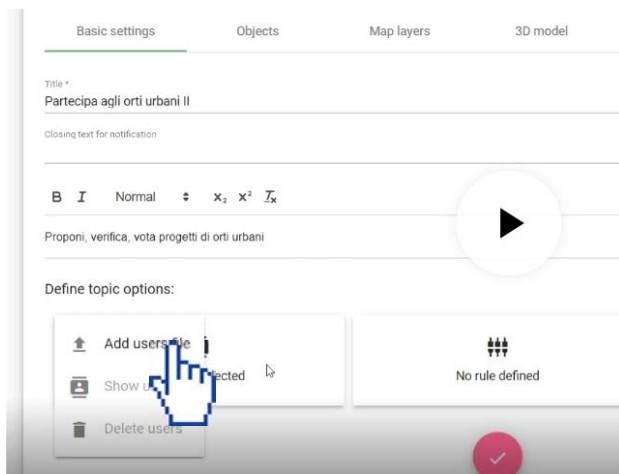
STEP 9. ENGAGE USERS FOR YOUR TOPIC

To invite users to make proposals within your topic you go back to 'Basic Settings'. On the left side of the page you'll find the button to the Users menu. Choose 'add users file' to upload a csv file with e-mail adresses of users who have given their signed consent to be contacted by the platform.
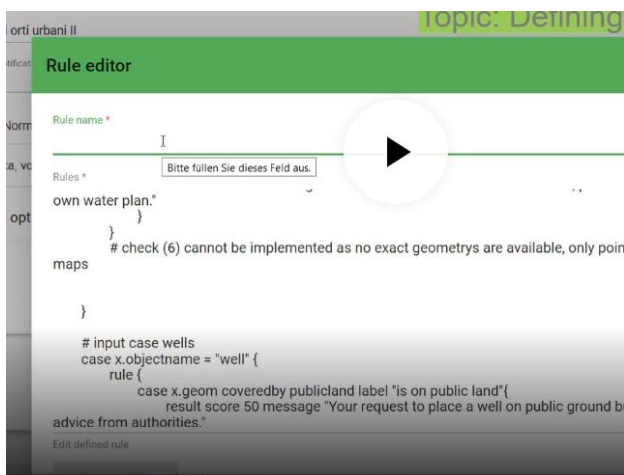
STEP 10. UPLOAD THE RULES

The final step is to upload the required rules that will be triggered when a proposal is added to your topic. Go to 'Basic Settings', Rules menu. Choose 'add rule file' to upload a dsl file. Give your uploaded rule a name and save it. You can edit your rule later. The box on the next page explains how to write the rules.

That's it, you're done! You can now send out a notification to the users that your topic is created and that they can start adding proposals.

Check the video tutorial here:
http://sbc1.ait.ac.at/projects/smarticipate/Dashboard_v5.mp4

The rules need to be discussed and created beforehand with experts from the city. The outcome will be a rule script based on WFSs (Web Feature Service) coming from the Open Government Data server of the city and the rules for enquiring those data to give immediate feedback. Here is an example of a rule script, used to create the Urban Garden App for Rome.

```
------------8<------------------
selectdata {
        select rome where intersects x.geom and property proprieta = "Comune di Roma" is parcelsRome
        select state where intersects x.geom is parcelsState
        select agencies where intersects x.geom is parcelsAgencies
        select provinces where intersects x.geom is parcelsProvinces
        select socialHousing where intersects x.geom is parcelsSocialHousing
        select entiLocali where intersects x.geom is parcelsEntiLocali
        select water where withindistance x.geom of 50.0 is wells
        union parcelsRome parcelsState parcelsAgencies parcelsProvinces parcelsSocialHousing
parcelsEntiLocali is publicland
        select paths where withindistance x.geom of 50.0 is romePaths
        select citizenproposals where intersects x.geom and property topicId = "partecipa-agli-orti-urbani"
is otherProposals
        }

        # rule for different inputs
        rule {
          case x.objtype = "garden" {
                # check (1) for public land
                rule {
                        case x.geom coveredby publicland label "is on public land"{
                                rule {
                                        case  x.geom coveredby parcelsRome {
                                                result score 100 message "Parcel is on public ground
of Comune di Roma"
                                        }
                                        case  x.geom coveredby parcelsState {
                                                result score 50 message "Parcel is on public ground
of the state. Further authorization is needed."
                                        }
                                        case  x.geom coveredby parcelsAgencies {
                                                result score 50 message "Parcel is on public ground
of agencies. Further authorization is needed."
                                        }
                                        case  x.geom coveredby parcelsProvinces {
                                                result score 50 message "Parcel is on public ground
of the province. Further authorization is needed."
                                        }
                                        case  x.geom coveredby parcelsSocialHousing {
                                                result score 50 message "Parcel is on public ground
of social housing. Further authorization is needed."
                                        }
                                        case  x.geom coveredby parcelsEntiLocali {
                                                result score 50 message "Parcel is on public ground
of local entities. Further authorization is needed."
                                        }

                                        default {
                                                result score 50 message "Parcel is on public ground
but spans land of several owners. Further authorization is needed."
                                        }
                                }
                        }
                        default {
                                result score 0 message "Your proposal is not on public ground!"
                        }
        }------------8<------------------
```

7 Test and edit your app

Image: Joseph Marshment-Howell

Congratulations, you managed to put your app together! Before doing the official launch, it is smart to test the app with your users, so you can tackle the most critical points and improve your app.

TEST YOUR APP STEP-BY-STEP WITH YOUR USERS

You might think sending a link of your app to supporters is sufficient but users like to gather together and test it in real life since it is much more dynamic and interactive. Don't be afraid to test a not ready product. In general citizens do appreciate the chance to influence the development of a new product. But make sure that people know that they will be testing a prototype which is still in the development phase. As a result, the whole testing of your app prototype becomes a social action, involving discussion, exchanging knowledge and maybe further chages.

Make sure you have some laptops prepared or ask your test group to bring their own devices like smart phones.

Take your users step-by-step through the process and be present if somebody has a question. You can use the step-by-step introduction 'How to publish a proposal?' on the following page to guide your users. Encourage people to mingle and make sure there is a good group dynamic. You might also have some people available to assist with guiding your users through the app testing.

Think in advance what you want to get from your users and prepare an evaluation form with the most important questions. Don't overstretch or limit the questions. Also listen carefully to your users.

Together with your users you can create several proposals to check following points:

- Did you choose the right map layers; is the information on the layers helpful to make a proposal?

- Do you have all necessary data to be able to provide understandable immediate feedback?

Citizens were very excited to meet the ICT developers and valued being part of the app making process. A perfect app is so intuitive in use and language that as a user you don't think about the logic behind. It was an eye-opener for participants to see how much thinking and technique is involved in such a seemingly easy app as planting trees.

Nicole Schubbe
Landesbetrieb für Geoinformation und Vermessung
Freie und Hansestadt Hamburg

- Are the rules clear and is the reason why a proposal gets a certain score well explained?

- Are the objects you place within your app logic and clear to users?

- Is your app user friendly?

- Does your app have all the relevant features your users need?

- Does the app meets the needs of your users and would they use the app when it is officially available?

After the testing let your users fill in your prepared questionnaire. It can be on paper or online.

SKETCH OUT THE 5 MOST CRITICAL POINTS

Evaluate the questionnaires filled in by your users and check what are the most critical points. Take the five most critical points

HOW TO PUBLISH A PROPOSAL?

Log in on the platform and click on your topic
Use your email address and password to log in. The platform gives an overview of all the created topics. Scroll down to find your topic or use the filter to search for it. You will recognize your topic from the name, description and topic icon.
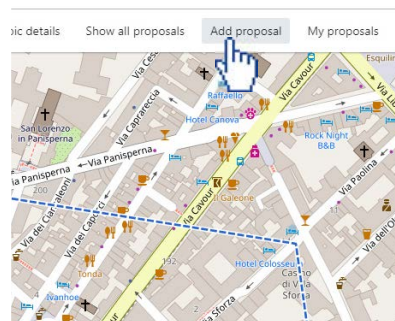
Add a new proposal
The topic page opens with the map where you will see the Area of Interest and the proposals that have already been made. Choose 'Add proposal' in the menu bar to add a new proposal within the topic.
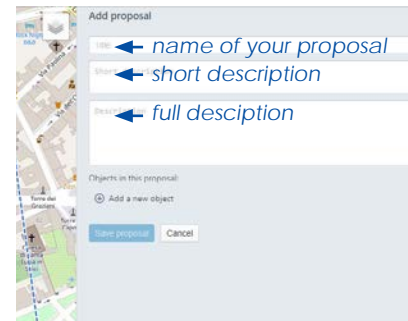
Describe your proposal
Give your proposal a title, a short description and a full description. In the description you can also add links to others webpages, for example to give more information about the initiator or the idea behind the proposal. It is also possible to add a link to a proposal of somebody else.

and try to figure out what you need to solve these issues. Can you improve your app within the features of smarticipate? Do you need more data sets or to shapen your rules? Sometimes it is even something as simple as improving the logo of your app or changing the style or language to clarify your app.

IMPROVE YOUR TOPIC

Improve your topic by adding or editing the necessary feature elements. Use the ten steps of chapter 6 to make sure everything corresponds with each other. If there are too many things you have to change it can be useful to close your test-topic and start a new one.

Once you improved your topic give feedback to your users and explain to them what you improved based on their input and what was not. At the end, it is your app, so you decide.
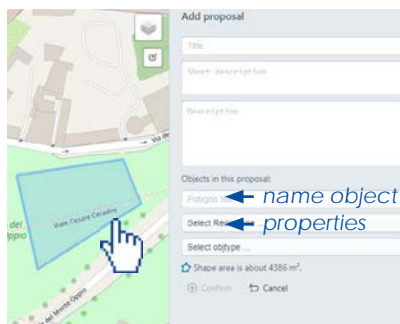
Locate your proposal
Click '+ Add a new object'. Give your object a name, select the properties and locate it on the map. Now the immediate feedback is triggered; it gives an overview of the scores of your object. Adjust your object till you're happy with the result, then click 'Confirm'. You can add as many objects as you like.
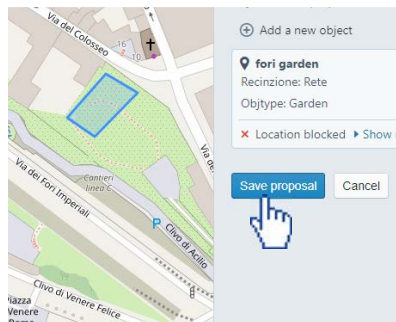
Save your proposal
When you've added all your objects you save your proposal by clicking 'Save proposal'. The status of your proposal will now turn into Draft. It means that you can still adjust your proposal.
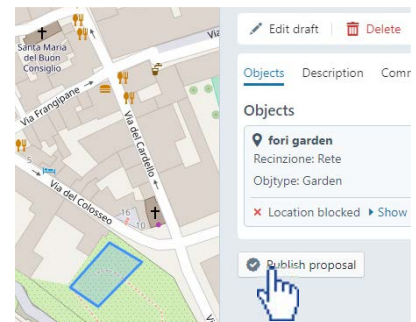
Publish your proposal
To give your proposal a final status you need to publish it by clicking 'Publish proposal'. After publishing it is not possible to edit it anymore.

Check the video tutorial here:
http://sbc1.ait.ac.at/projects/smarticipate/Front-End_v2.mp4

To improve your app you have to understand the relation between the back-end and the front-end of your app. This page explains how and where they are interacting. The steps that are mentioned refer to the steps of Chapter 6 'Put your app together'.

SMARTICIPATE

visible on the smarticipate platform start page

topic icon
» step 8

topic name & description
» step 2

Partecipa agli orti urbani

ni, verifica, vota progetti di orti urbani

visible on your app

map layers
» step 6

area of interest
» step 3

available objects
» step 4

object properties
» step 5

generated feedback
» step 10

The official launch

8

It's time to reveal your app to the world. That is a very exciting and crucial moment. Make sure it happens with a big bang. There we go!

SET THE DATE

Give yourself a deadline when the app has to be ready. That is the best pressure cooker.

What will be a good moment to launch the app? Think about a social event, a conference or information session that is relevant to this topic, holidays or other festivities: are you able to use them to set your app in the spotlight? If you make a 'Plant a tree app' for example, you can check if there is a local planting day or a park opening to launch your app.

FIND YOUR AUDIENCE

Use the network you have already built up during the Smartathons. Users will appreciate being informed that the app is now ready to use and will be launched officially.

Besides the people who helped you build your app, you will want to reach out to a bigger audience. What is your message to them and what will trigger them to check out the app and start using it?

Start with your mobilisation strategy used to invite people to the Smartathon and expand this by using local media, presentations, TED talks, pitches and meetings.

EXPLAIN TO YOUR AUDIENCE HOW TO USE YOUR APP

People love to hear how to use the app from the maker. Some people will just do trial and error, but others prefer to get an introduction from the inventor. Take time to explain to your users step-by-step what they can do with your app and what is it for.

USE OFFLINE EVENTS

Your app is online, but don't underestimate the power of offline. You don't have to organise every event yourself, you can check what else is happening in your city. Use those offline moments like meetings to promote your app. Keep explaining your topic and how to use the app. Your story can never be told too often, and you will get it sharper each time you present it.

You can learn a lot from business how they launch their products. Make people curious and invite them to the official launch. It can be festive and special, finally it is a moment to celebrate and you want to share this milestone with your users and supporters.

Joanna Hammond
Royal Borough of Kensington and Chelsea

MY OFFICIAL LAUNCH

Some blank space to give room for your ideas.

9 Manage your app

Finished? You've just started! Now it's time to manage and maintain your app. Keep your app alive and kicking!

FOLLOW PROPOSALS

On both the dashboard and the default view you can see all proposals that have been made within your topic. You are also able to see all the comments and the likes for each proposal.

Read the comments, follow the development of the proposals. How many people are involved? Do you feel a negative or positive vibe? Do your users understand your topic? Give them extra information when you feel the need to do so.

ANSWER YOUR USER'S QUESTIONS

Take part in the discussions related to the proposals. Keep up a lively discussion. You can also like a proposal or add a comment. The comments made by users are shown in white. Comments made by smart administrators can be recognized by their red colour. So users can see that there is a conversation going on between citizens and administrators.

Encourage critical feedback but don't let the conversation run away from the main subject. If the debate gets too heated up you can organize an extra offline event if necessary where different users are able to present their point of view in a moderated session.

KEEP YOUR APP UP-TO-DATE

Keep data up to date, add links or news items to your topic when there is more or new information available. Celebrate milestones, for example, if a proposal is realized then share it with your users. Inform your users about updates, new features, events and milestones - that will encourage users to continue using your app. An app which is updated regularly is much more attractive for your audience and users will be more inclined to interact.

10 Ten tips to make your app a success

Of course, you want your app to be a big hit. Here are ten extra tips to prepare for your take off.

During app making process

INVOLVE A VARIETY OF STAKEHOLDERS

Reach beyond the usual suspects to collect different knowledge and views. A lively and critical discussion at the start might seem uncomfortable but helps you to get a better understanding of your app and its impact on society.

TAKE YOUR USER'S INPUT SERIOUSLY

Keep in mind that your stakeholders want to participate because they care about their city or neighbourhood. Consider your user's input as serious feedback. It doesn't mean you have to incorporate everything your users demand, but let them know how their input is processed, when they can expect a result and why feedback gets incorporated or not.

MAKE YOUR TOPIC AS CATCHY AS POSSIBLE

'Planting trees' might sound interesting, but '100 new trees for your neighbourhood' will probably get a lot more followers. Think about the aspects of your story that are important to your target group and add this to your topic description to make it more attractive. A beautifully designed logo can also help to increase the recognition of your app.

THERE IS MORE DATA AVAILABLE THAN YOU THINK

Many cities have a database filled with information and most cities provide the collected open data as a service to their citizens. It is worth browsing the internet for information or to make an appointment with the relevant city department.

SET DEADLINES

Give yourself enough time to develop your urban story, collect the necessary data and determine the rules, but don't overstretch it. The Smartathon, testing event and your official

launch are important deadlines during the app making process. Use them to keep the process running and your users with you.

STAY INVOLVED

Keep your users engaged by feeding your app with news and updates. Moderate the discussions to keep it lively. Stay in touch with your users and let them know they can rely on your help and guidance. Once you have received a request, send an automated message with some nice text letting them know you have received it and you are on it.

NO DEAD-END STREETS

Not every proposal will be a success or receive a positive score and that's okay because it provides a reality check on which proposals are feasible and popular. But make sure to provide feedback and alternatives. One user's proposal might not be successful but there might be another interesting proposal close by. Keep users engaged by highlighting alternatives.

COMBINE ONLINE AND OFFLINE

An urban app can potentially reduce the number of traditional participation events, but not replace them totally. The reason for this is that all participants feel the need for a personal connection in any policy or decision-making process on topics they care about.

PARTNERSHIPS

Don't let your app be a standalone. See if there are businesses, non-profit and governmental organizations working on a similar topic to inspire each other, share experiences or collaborate.

GET THE PROPOSALS ON THE GROUND

Successful projects not only need good ideas, but also money. Embed your app in surrounding networks that specialise in public and private funding for socially-relevant projects to get your proposals on the ground.