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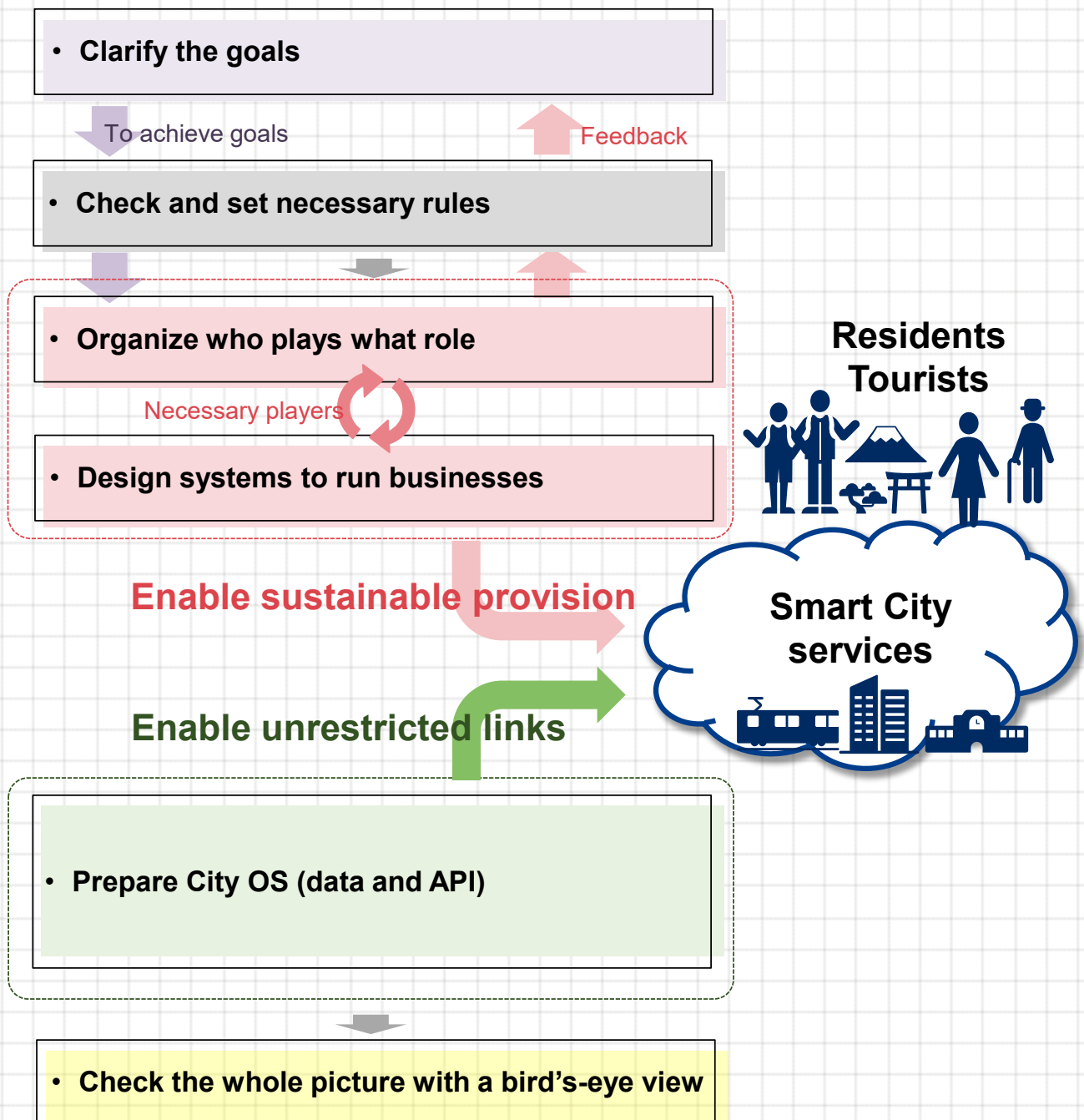
What has to be done for that?





- How to use Smart City Architecture -

How to use Smart City Architecture

Start designing following the procedures below.

It is built up with repeated track-backs and feedbacks.





-  **Smart City strategy** Set goals to be achieved by Smart City based on the issues and strategy of the region. Also set quantitative indexes to be used for evaluating the measures devised for each goal.
-  **Smart City rules** Check the rules necessary to implement the measures to achieve the goals and to enable data exchange, and set them as necessary.
-  **Smart City promotion organization** Clarify players and their roles necessary to achieve the goals.
-  **Smart City business** Study and organize business models and services with users' perspective in order to make the measures to achieve the goals and Smart City initiatives sustainable.

User-oriented Smart City services for residents and tourists



It is the core of regional development to enrich daily lives of residents and tourists!
It is important to continue to create services based on the fundamental needs of users.

-  **City OS** Introduce City OS meeting the requirements to efficiently implement variety of services and functions at low cost. It enables you to focus on the creation of new services.
-  **Smart City asset** Organize and provide data which fuels Smart City services.

Clarify the goals

What has to be done?

Smart City is nothing but a “means”.

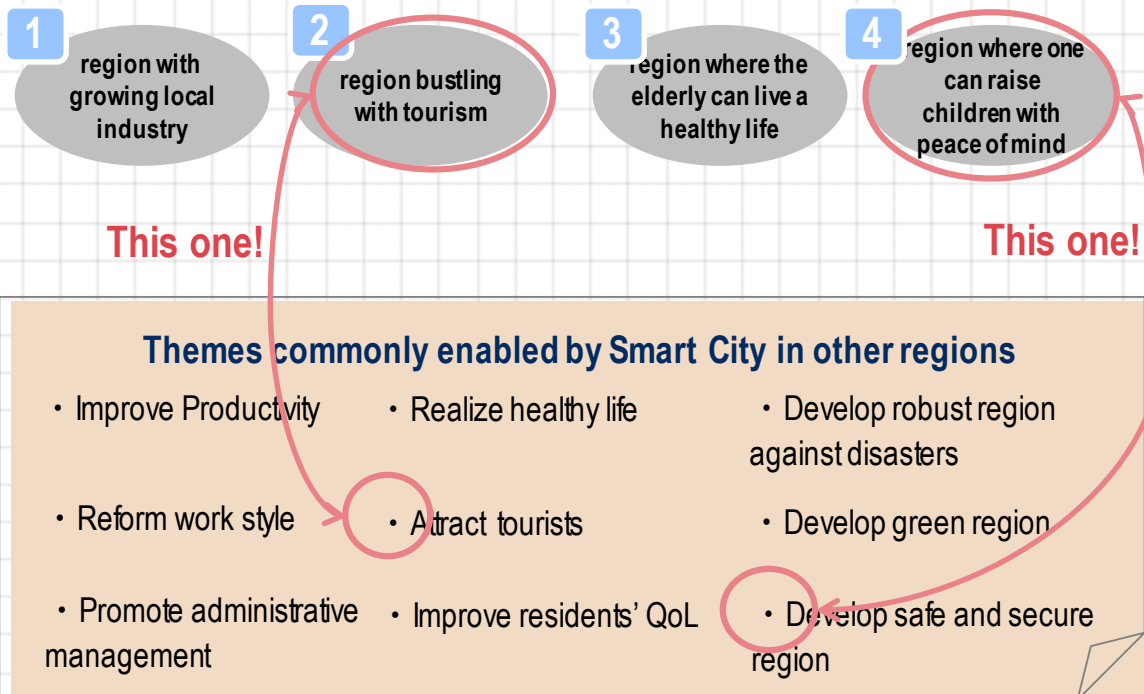
Determine what you would like to achieve by Smart City based on the strategy, goals, and issues of your region.

The means to be used for what you want to implement in your region may not necessarily be Smart City.

Select themes which are expected to benefit from the introduction of Smart City.

(Example)

The basic goals of the comprehensive strategy of a particular region



Organize them into specific goals

Once the themes are determined, they must be organized into more specific goals.

It clarifies what has to be done next.

It becomes easier to organize by utilizing a framework as shown below.

If you have already set KGI and/or KPI in the comprehensive strategy, they can be effectively used here.

<Smart City Strategy Framework>



* For the detailed description of framework, please refer to "Section 3.2" of the White Paper.

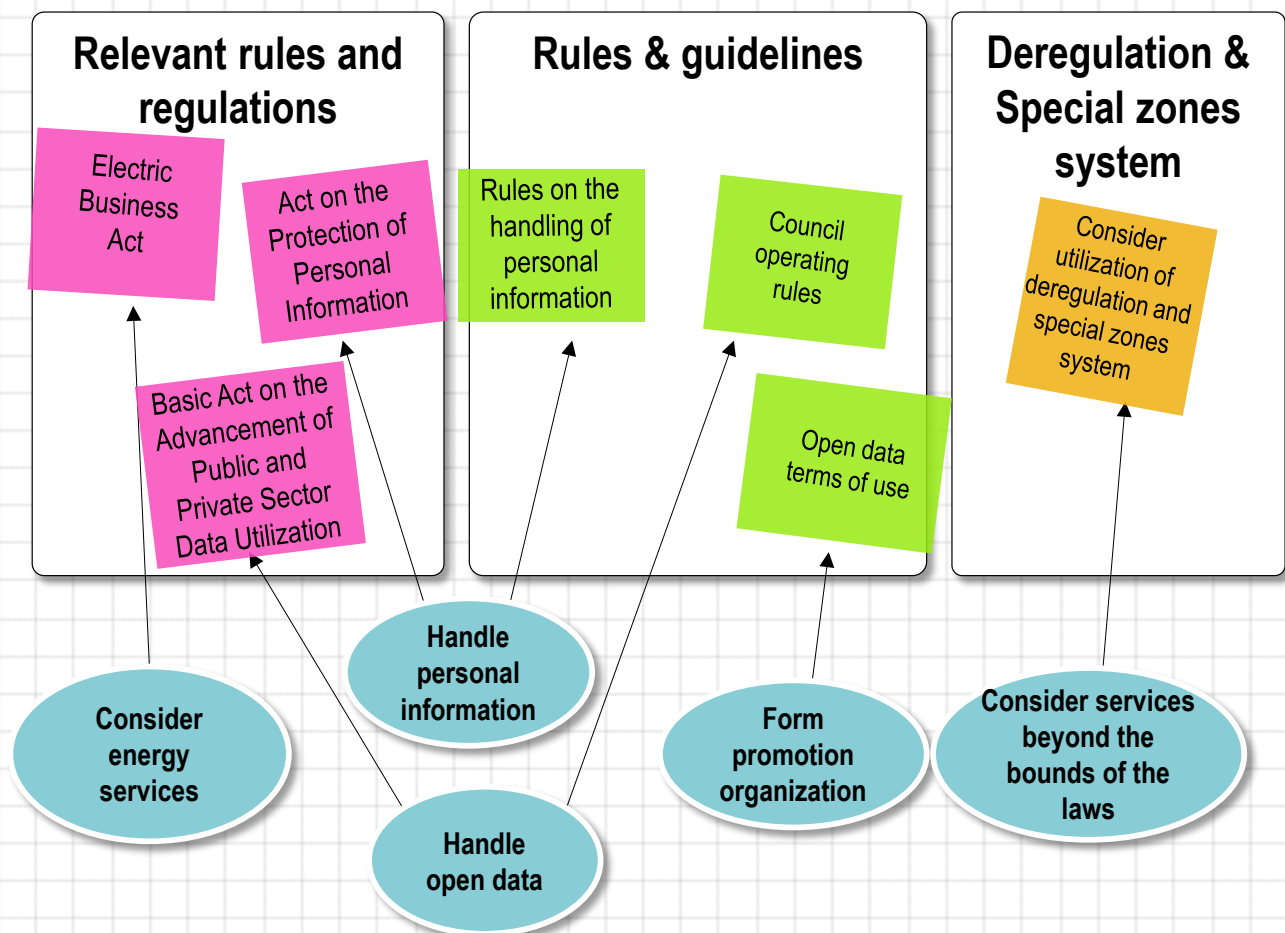
To achieve goals

Once the specific goals are set, proceed to examine the rules, promotion organization, and business model necessary to achieve your goals without letting them become one-off initiatives, as shown from the next page onwards.

Check and set necessary rules

Find out the rules, set them as necessary

The rules relevant for the promotion of Smart City can be categorized into the following three types. Clarify the relevant laws and regulations to be considered, as well as the rules and guidelines to be examined, for the promotion of Smart City, and set them if necessary.



Depending on the content of the rules, it is necessary to examine the rules and codes knowing that they may be broadly relevant to organizations, services, City OS, and others.

* For the detailed description of rules, please refer to "Section 4.1" in the White Paper.

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Organize who plays what role

Determine the primary promoter

In order to achieve the goals of the region by sustained utilization of Smart City, it is necessary to form an organization which plays a responsible role to promote and operate Smart City (primary promoter).

The Smart City primary promoter formulates the strategy for the entire Smart City, and plays a role of operating and managing city management and City OS to implement the strategy.

The primary promoter can be formed in various ways like the case of a single municipality formation, or the case of a multi-organization formation such as a council in which private companies may also participate. In the case of a municipality-led model, it may be effective to form a cross-sectional specialized unit within the municipality for this purpose.

Whether single or multiple, an organization to function as the primary promoter has to be determined at first.

The main functions that the primary promoter should be responsible for are as follows.

Examples of the main functions that the primary promoter should be responsible for

- **Manage overall & formulate strategy**
- **Operate & manage organizations**
 - **Get necessary players involved and organize their roles**
- **Formulate & manage rules**
- **Develop & operate businesses**
 - **Create mechanisms to foster community-based businesses and services (Set up forums such as subcommittees)**
- **Marketing & Public Relations**
- **City OS related (Management & operation of City OS, Data, and Security)**

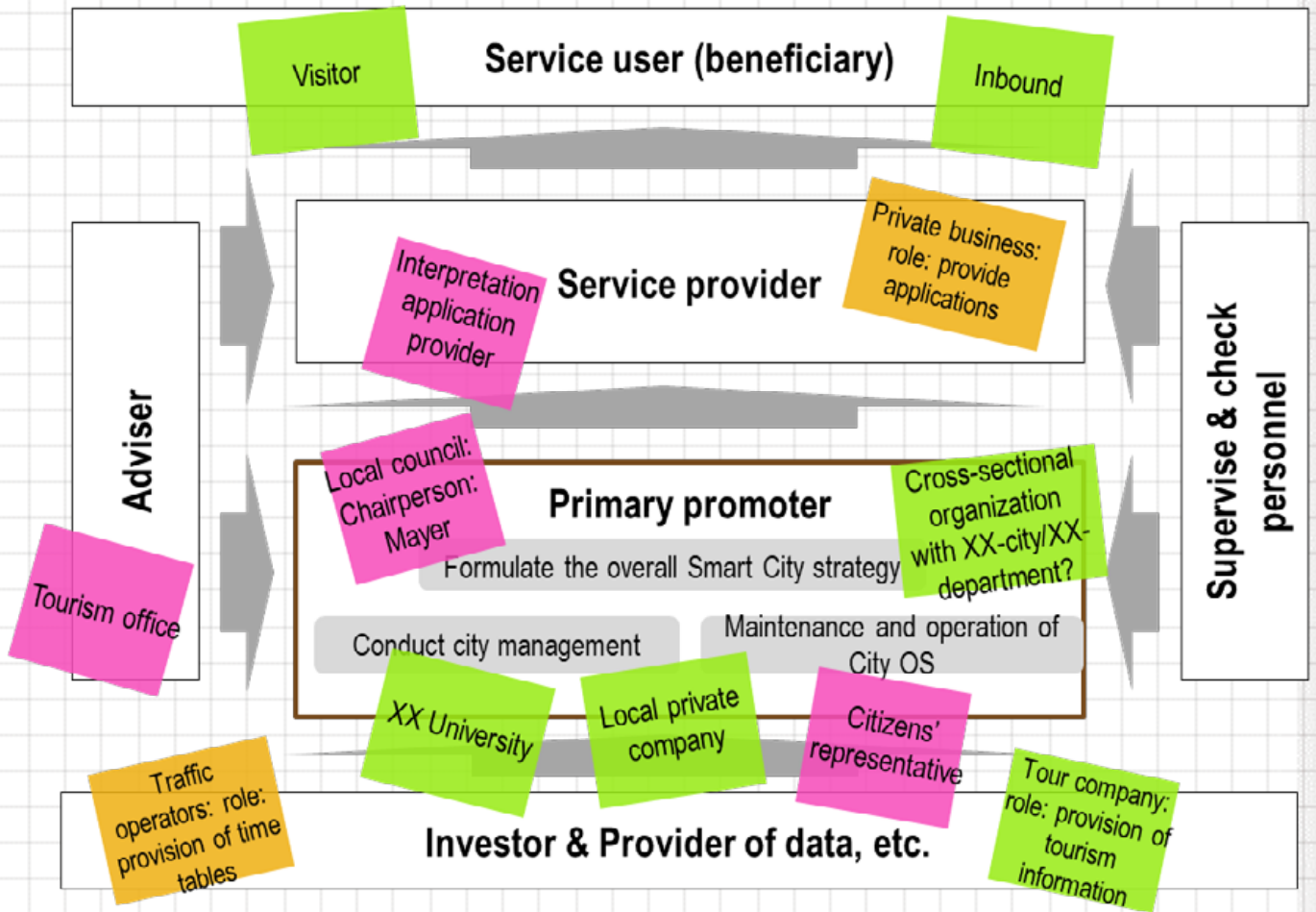
Gather necessary players and organize their roles

Smart City may not be realized by a single organization alone.

It is possible to identify and nurture new values not possible before by getting multiple players from all of government, industry, academia, and individuals involved.

The primary promoter determines the players to be involved to achieve the goals. You should pay attention to not only those whom you would like to bring in but also those who would be willing to participate and affected by the implementation of Smart City.

Once you have gathered the necessary players, organize their roles. You can use the framework as shown below. It is important to be aware of the players playing different roles with different objectives.



Framework for organizing stakeholder

* For the detailed description of organizations, please refer to "Section 5.1.2" in the White Paper.

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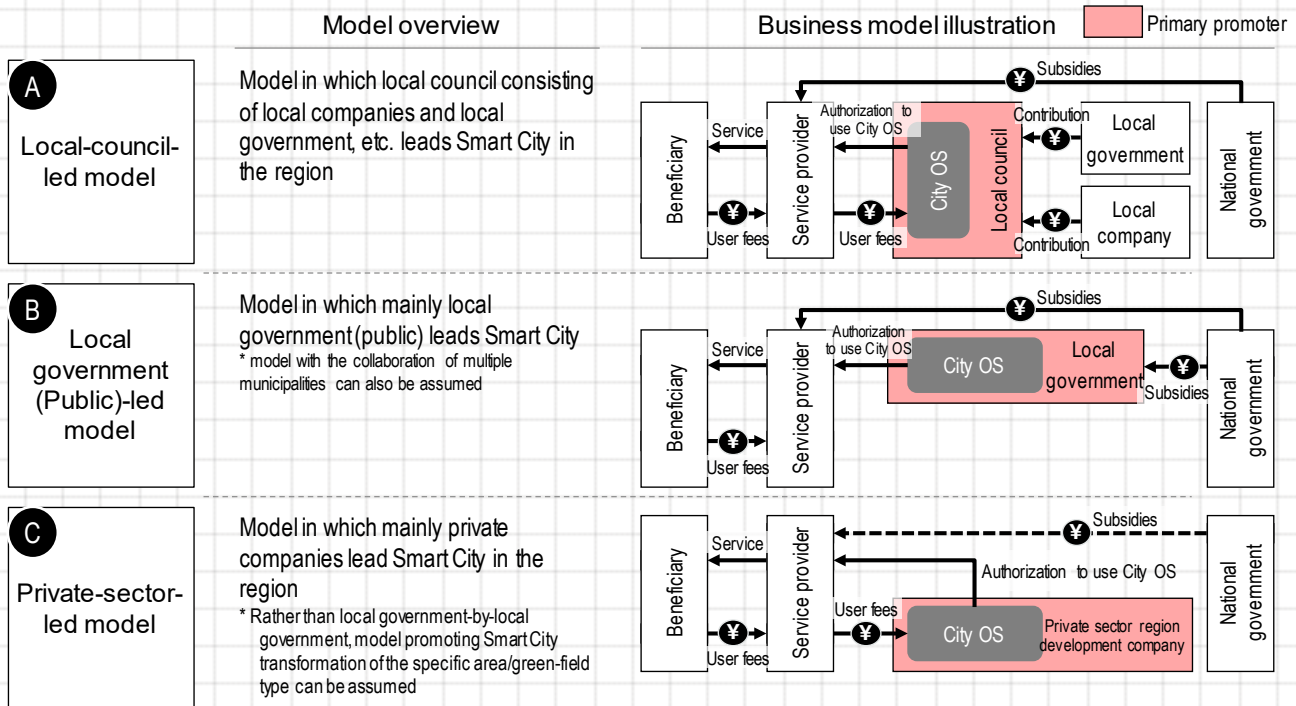
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Design systems to run businesses

Example diagrams of three types of business models are presented as references

For the sustainable development of a city, it is necessary to have a system to manage the entire Smart City, consisting of organizations and City OS. Such system is called a business model.

There are three types of business models depending on who the primary promoter is.



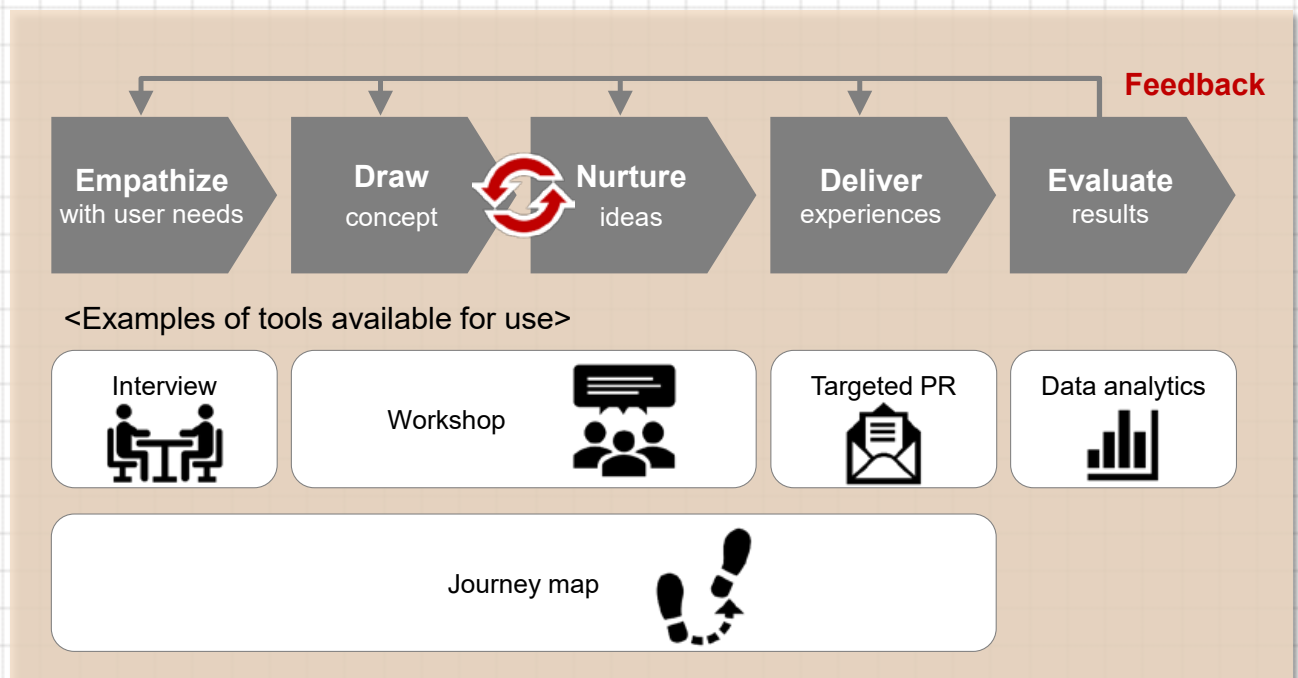
With references to the example types above and other examples presented in the White Paper, you can draw a diagram of a business model for your region. By clarifying the structure and flow of values and considerations exchanged between the primary promoter and the players involved as organized earlier, you can now organize the resulting profit generated as the differences thereof.

Design services to be provided to users

Smart City services are the measures to achieve the goals of your Smart City. These services must truly satisfy the user needs and be used by the users.

In order to do so, you must pay attention to designing the entire user "experience" by examining the user's perspective and involving the users.

The following is an example of the recommended frameworks.



The key is to understand the user needs down to deeper levels, translate and form them into services, and then continuously improve them.

You should actively provide such opportunities as interviews and workshops to hear directly from the users. It is also effective to visualize the expected user experience utilizing a journey map and so on.

Smart City services

For the services that enrich everyday lives of residents and tourists, it is important to continually generate values based on the fundamental needs of the users.

Smart City services are provided to the users by way of federating to data and other services via City OS. The most common examples are web sites and applications.

Summary of Smart City services for reference

Promote settlement and fostering by attracting and supporting people



Tourism

- Multi-lingual tourist support
- Capture tourist flow movement



Health

- Manage health point program
- Assess the risks of requiring nursing care and dementia



Education

- Remote education
- Assist home learning



Lifestyle convenience

- Assist marriage partner search
- Enhance public services

Securing quality and quantity of employment and economic development



Agriculture

- Manage paddy field sensors
- Store information on detecting harmful birds and animals



Logistics

- Optimize exchange routes
- Improve loading rate



Productivity

- Visualize process flow
- Improve business productivity



Industrial development

- Analyze food purchase data
- regional point program

Enhancement and revitalization of functions and environment of the region



Disaster prevention

- Visualize river water level



Energy

- Suppress electrical power demand



Traffic

- Parking space availability information



Security

- Safety-care of children

Maintenance & management of infrastructure



- Monitoring of road conditions