



Business model generation

**This is what Eindhoven needs
for the ecosystem of 2020.**

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Vision & mission

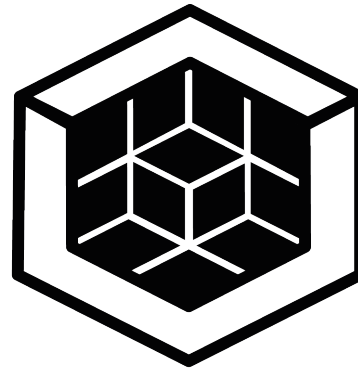
Eindhoven is an innovative city, for example Brainport. This is a triple helix where businesses, educational institutes and the government all benefit from each other's knowledge and resources. We think this is great, but it could be even greater. We wanted to involve the citizens of Eindhoven as well in this process of data and knowledge sharing. Therefore we wanted to make the triple helix a quadruple helix. In this quadruple helix businesses, citizens, educational institutes and the government of Eindhoven work together for the better of the city.

Our vision is to make Eindhoven a socially smart city by 2020.

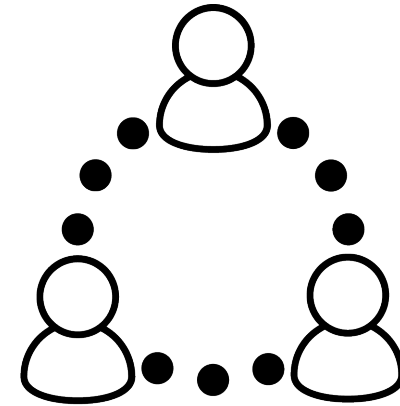
Socially smart means that citizens and business living in Eindhoven feel involved within and for the city. That they work together to improve the city. To realize this vision we want to create an ecosystem between all businesses, citizens, educational institutes and the government to create great projects. Our mission therefore is to create an innovative platform open to every citizen and company to engage society and make Eindhoven future proof. We will make Eindhoven the first showcase city in the world with projects emerged from this platform.

Mission

Create an innovative platform open to every citizen and company to engage society and make Eindhoven future proof.



Co - Creation



Collaboration

3 principals



**Collecting data &
decision making power through
Internet of things**



Transparency

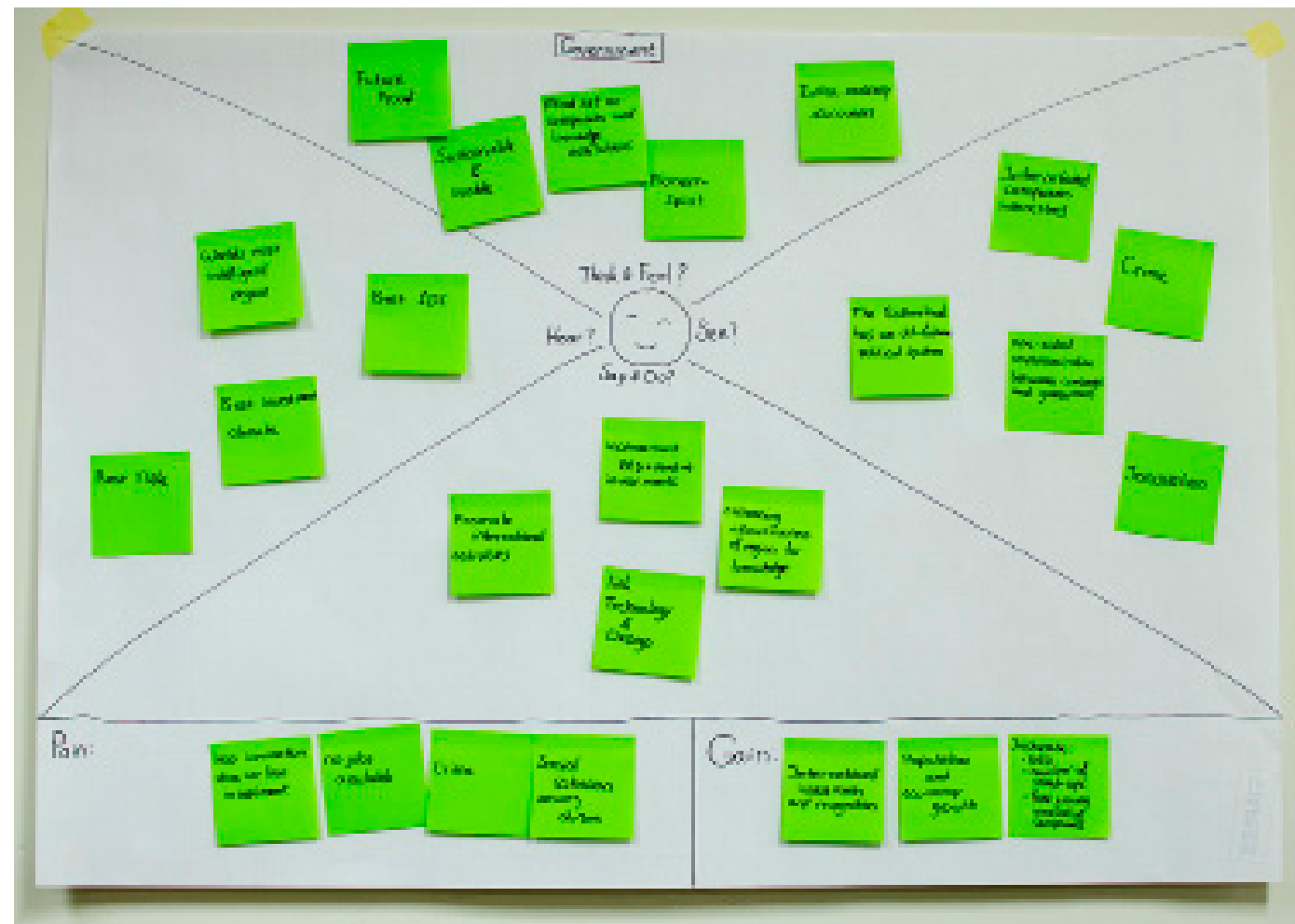


**Connectivity
for all**

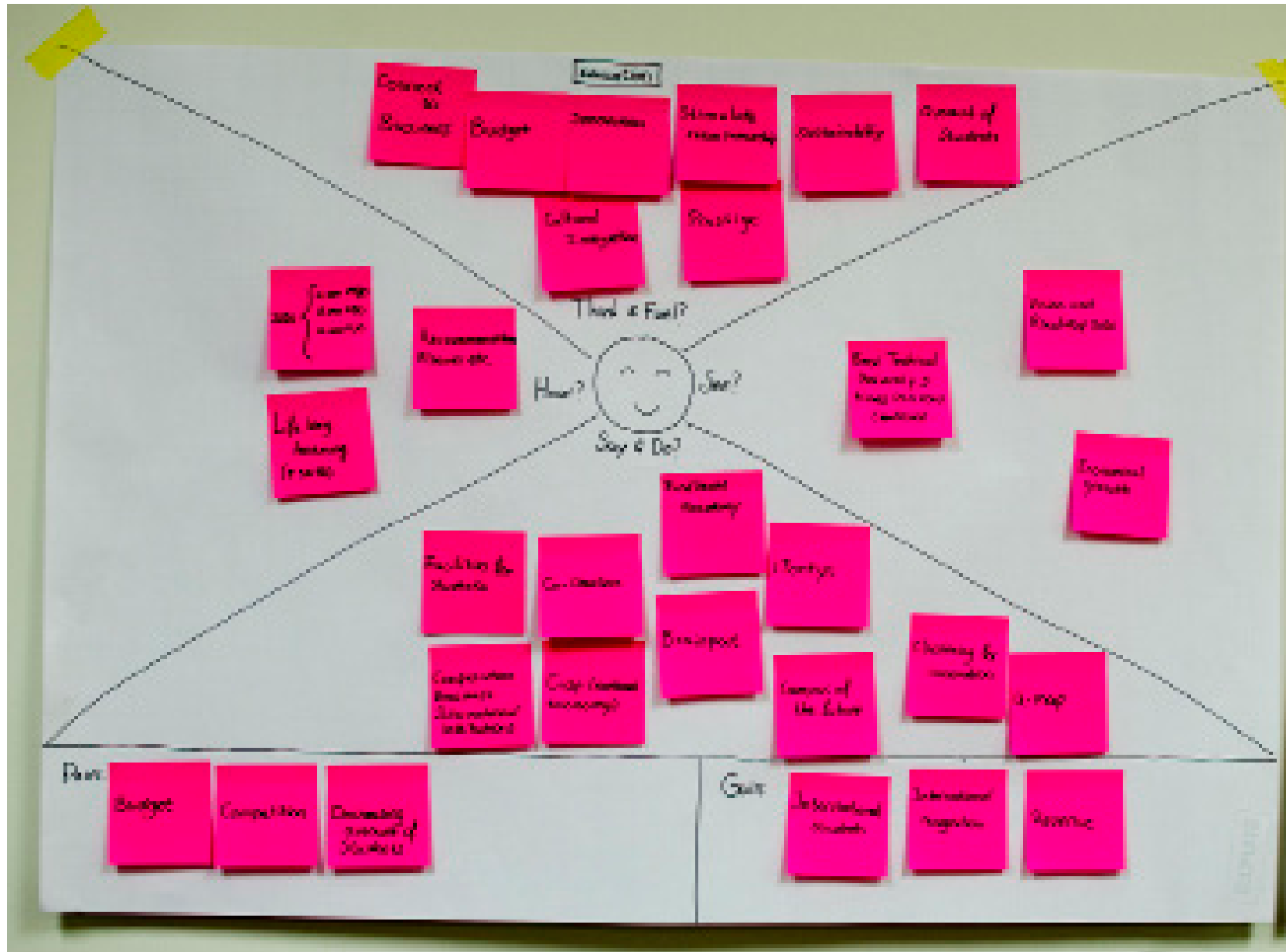
Customer empathy maps

To get the right perspective on the job at hand, we needed to get more information about our stakeholders. These are the Government of Eindhoven, the Citizens, the Educational Institutes and the businesses. We have made four Customer Empathy Maps to map out their Pains and Gains, One for each Stakeholder Segment.

Government of Eindhoven



Educational Institutions



Business



Business

Think & Feel?

How?



How?

Say & Do?

Pain:

Innovation ecosystem

Need in Psychological safety to experiment

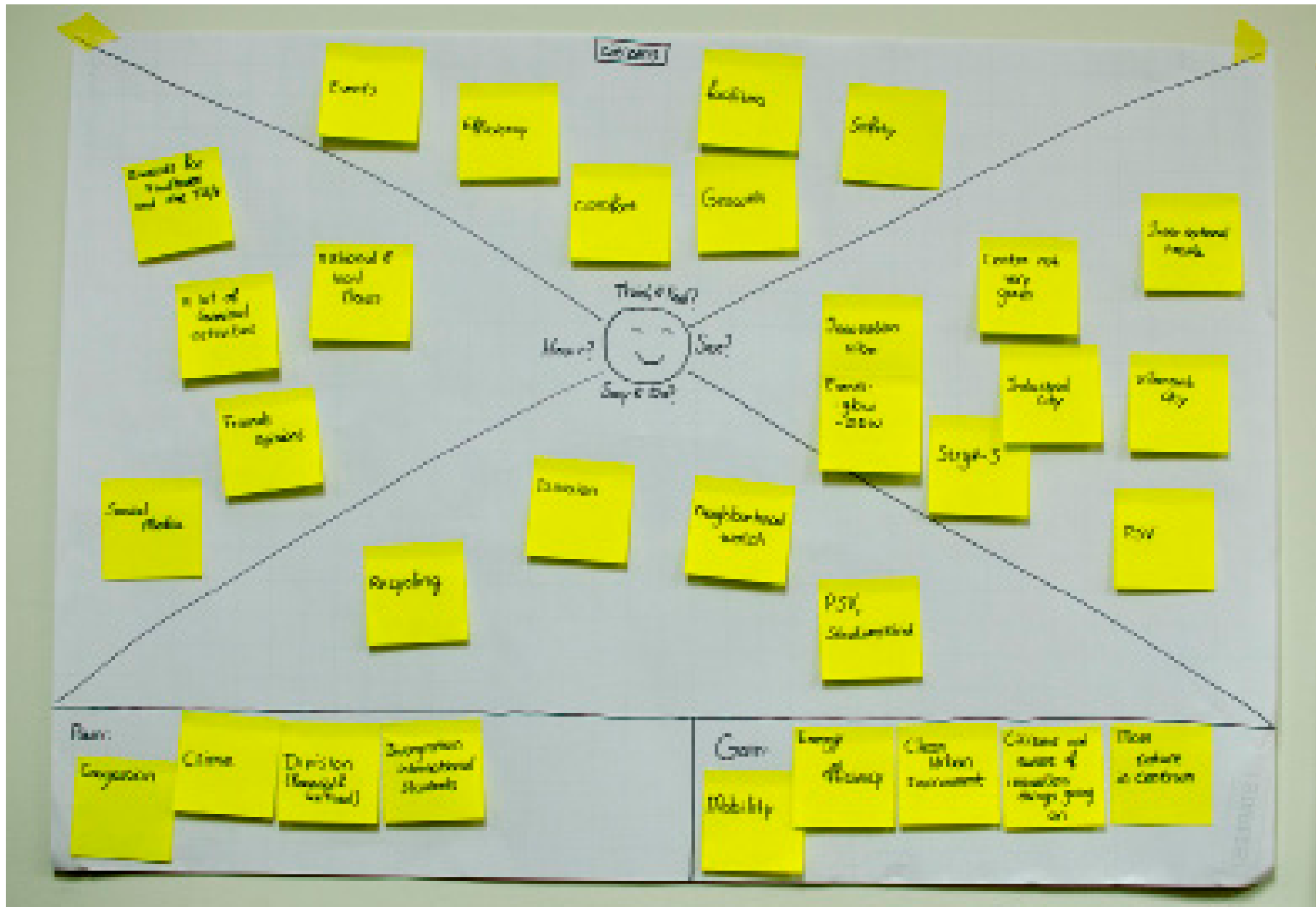
Gain:

Need-to-Knowledge on Customer

See what Customer can provide

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Citizens



Business model canvas

“A business model describes the rationale of how an organization creates, delivers and captures value”.

What value is created? How is the value delivered to the customers? These are two questions of many that should be answered after the following explanation of the business model canvas. Let's start with defining the **Customer Segments**. This model contains two Customer Segments for whom the platform will create value, namely citizens of Eindhoven and businesses located in Eindhoven. Expanding the existing triple helix structure of Eindhoven to a quadruple helix strategy, demands the involvement of citizens. Furthermore, the businesses in Eindhoven will flourish because of this new structure. Both segments can be categorized in order to define the specific target groups. The citizens are categorized in different generations, because each generation has different needs and faces different problems. The three defined generations are juniors, mediors and seniors. The businesses are divided in four groups according to their size. Eindhoven has micro, small and medium sized businesses. The fourth category contains the multinationals that are located in Eindhoven.

As mentioned above, each group of the Customer Segments has different needs and problems. This may seem a bit strange for now, but we offer them all the same solution. Value is created for all customers, because a new way of interaction between all the participants in the quadruple helix collaboration is established. This new way of interaction is set up through eight themes placed in the city. Altogether, they form the physical platform. People can go there if they would like to be heard by the city. Ideas from will grow into city projects through the digital platform. The results will be implemented in Eindhoven. The **Customer needs** are met, because citizens will have the opportunity to influence the development of their city, and everyone will benefit from the new developments. Businesses will benefit from the new opportunities that come with the projects and developments. To summarize, the **Proposed Value** is an innovative city platform open to every citizen and company to engage society and make Eindhoven 'futureproof'. The platform will result in a close collaboration between all partners of the quadruple helix collaboration.

The Channels through which the customers are reached, are the physical and the digital platform. The physical platform consists of two elements, namely the Crossover events and the eight themes. The eight themes Mobility, Infrastructure, Human and Health, Education, Sports and Leisure, Energy, Security and Society form the base of the model. The themes function as neighborhood centers. Within each theme, a team composed of a four people is stationed, representing the four members of the quadruple helix structure. Crossover events are events where all the eight themes come together to exhibit ongoing projects and to stimulate interdisciplinary projects. The events provide all citizens and businesses with opportunities to approach experts or users. Crossover events are open for everyone who's interested. This is making them a perfect tool for attracting attention from the outside world. The digital platform is a website which is used for multiple purposes. First of all, it's another way of exhibiting and storing the ongoing projects. Secondly, citizens have the option to vote for projects they would really like to see being implemented in their city. Thirdly, the website shows all the companies and facilities in the city. The last purpose will be the communicating the developments of Eindhoven to the outside world.

Eindhoven: a Socially Smart city in 2020

Key Partners

Citizens with ideas
opinions & experiences

- local
- national
- international

Businesses

- local
- national
- international

Education institutions

- primary schools
- secondary schools
- further and higher education

Local government

Key Activities

Marketing and branding of the city

Co-creation

Experiment

Testing of finished projects
in real life setting

Projects awarded and
selection by citizen votes

Knowledge sharing

Key Resources

Knowledge

- big open data
- collective intelligence
- crowdsource
- wisdom of the crowd

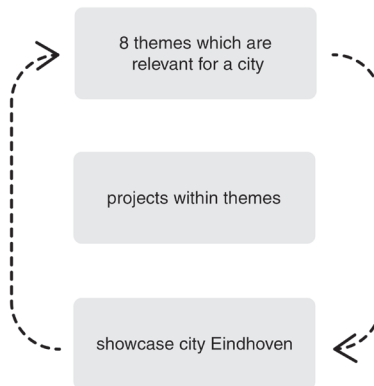
Internet of Things network

Value Proposition

A socially smart city connects its people, processes and data to improve the livability of citizens and businesses.

This will be achieved through an innovative platform open to every citizen and company to engage society and make Eindhoven future proof.

Data flow



Customer Relationships

sense of belonging and accomplishment through:

- Social engagement
- empowerment
 - inform
 - consult
 - involve
 - close collaboration between parties

Attractive city

- easthetically pleasing
- good governmental services
- transparency
- innovation vibe

Channels

Physica platform

- cross-over events
- innovation labs
- Finished Projects

Digital platform

- website
- application
- digital poles through city

Customer Segments

Citizens

- juniors
- mediors
- seniors

Businesses

- micro <10
- small <50
- medium <250
- multiNationals > 250

Cost Structure

Team experts salary

Marketing

Infrastructure

- online platform
- digital platform

Revenue Streams

Innovation

Patents and data

New citizens

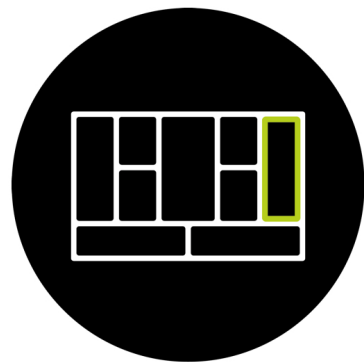
Reputation of Eindhoven

International Investments

New Businesses

Economic growth

The Customer Segments will stay in Eindhoven, because of the strengthened Customer Relationship. Active and engaged citizenship will make Eindhoven a more attractive city to live in. Citizens will have a sense of belonging when they can help the city become 'futureproof'. The close collaboration between parties is what establishes a strong relationship between the city and both Customer Segments. Every party will be more involved in everything that is going on in the city.



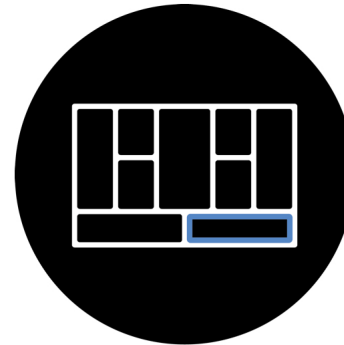
Customer segment



New Citizens



New Businesses



Revenue streams



New Initiatives



International investments



New Businesses

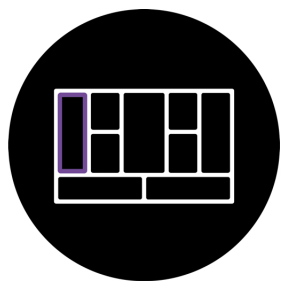
The most important **Revenue Stream** for the city can be described best through the development of the city. New initiatives, new businesses and international investments will follow, which will make Eindhoven develop even further. Another Revenue Stream for Eindhoven is the amount of money earned by advertisement fees of the website, small contributions for the Crossover events and Patents. The collected data through the Internet of Things, can also be seen as a Revenue Stream for the businesses in Eindhoven.

The elements of the model mentioned above require several **Key Resources** and **Key Activities**. In order to meet the Value Proposition, Eindhoven needs to have the physical and digital platform. Both platforms need qualified personnel. The city also needs funding to afford all this.

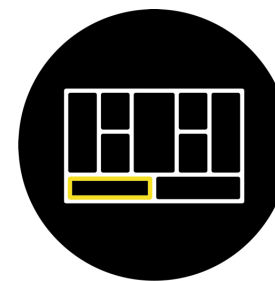
The Key Activities that need to be conducted are the following: Projects should be selected by citizens' votes. Finished projects should be tested in real life settings. Data is collected through the Internet of Things. The data is processed and used for city purposes. Crossover events have to be organized, the digital platform has to be updated and marketing/branding strategies have to be executed.

Of course, **Costs** come along with executing the model. The salaries of the employees of the themes have to be paid. The digital platform has to be developed and maintained. The infrastructure of the physical platform has to be made. Projects need financing, and the city has marketing and promotion expenses.

The Key Partners we need for accomplishing all this are all the parties of the quadruple helix. Citizens, Businesses, Educational Institutes and the Government all have their essential roles (Key Activities) to make the model for Eindhoven 2020 work. They form an even bigger Key partner in the eight themes, where all parties collaborate closely and conduct most of the Key Activities.



Key partners



Cost structure

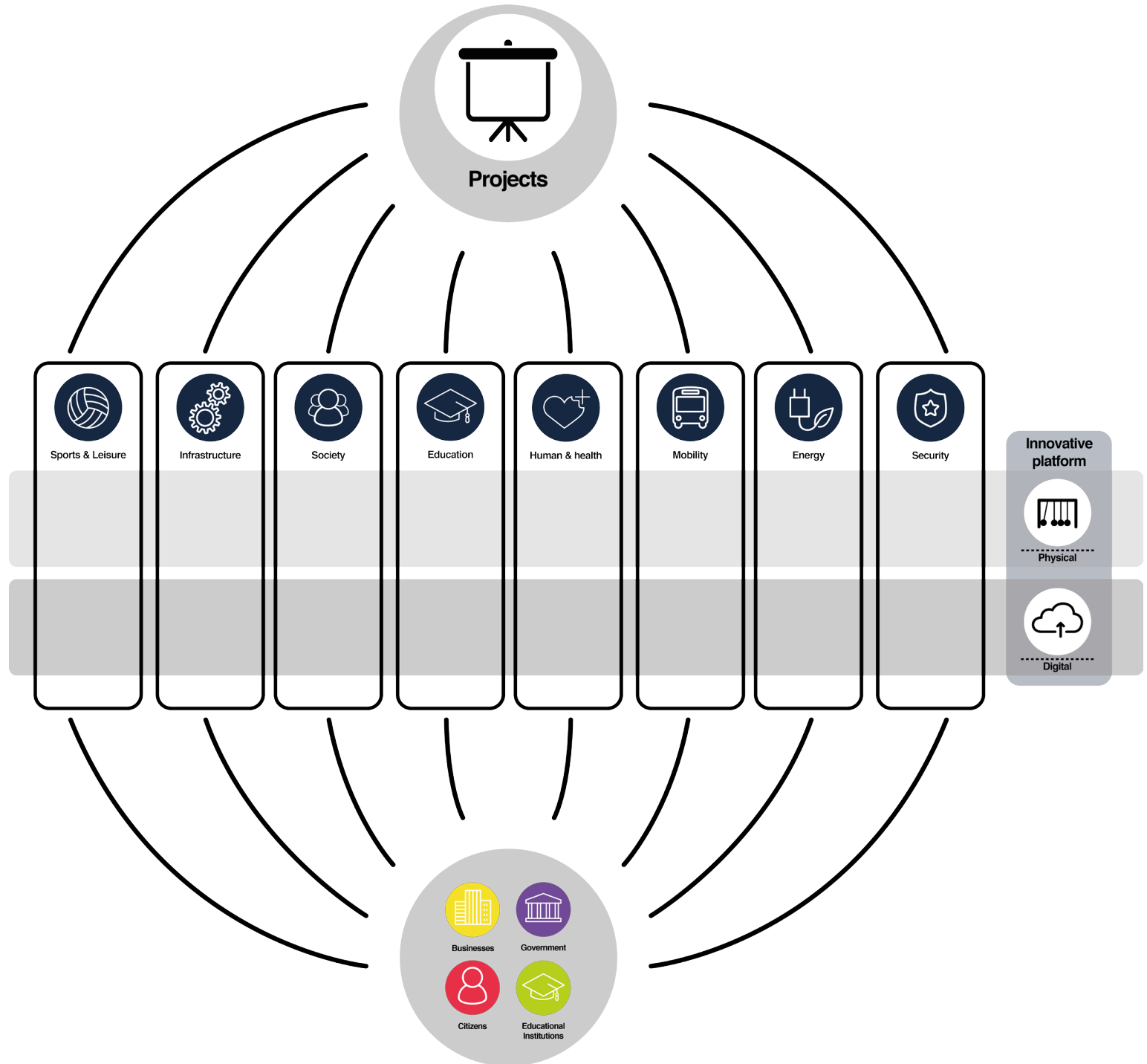


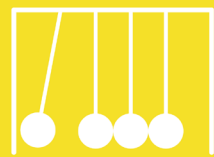
Concept

We will have **physical** and a **digital platform** to support the ecosystem of information sharing.

We have physical innovation labs where people can go to, to talk to someone or for having a meeting. Furthermore we would like to have cross-over events between all themes, so also between the themes knowledge can be shared.

Next to this physical platform there will also be a digital platform. This platform will be a website and an app where you see a map with all projects going on in Eindhoven per theme and where they are placed. But that's not the only thing. We also want to inspire people. We also want to place the internet of things network throughout the city so people who are not that active will see what is happening in Eindhoven.





**Physical
platform**



**Crossover
events**

+



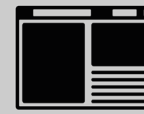
**Innovation
labs**



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**Digital
platform**



.....
Application



.....
Website



.....
**Internet of
things**

Tangible business model

Design principles

Internet of things

The internet of things is a network that connects physical objects which enables these objects to collect and exchange data. A way to get passive citizens to participate on the process of decision-making would be by collecting information. By letting the citizen to become users, some products could be tested to find possible improvements or think of better alternatives.

Transparency

Advancements and developments are undisclosed to the public meaning that they are able to know what is happening. By informing citizens people are able to take part of the projects and share their knowledge and skills. In the model people should know what is happening and become aware of the steps to carry out a task.

Connectivity for all

People should be able to connect with each other. A way to connect people with each other is if they work together for a common end. We wanted to show this in our prototype by making one of the sections interactive. The idea is to make people feel connected by letting them work together to achieve mutual goal.

Tangible business model

The tangible business model that was designed displays the process of ideas and their development into physical concepts that would be implemented in the city of Eindhoven. The marble represents an idea that a citizen, government, knowledge institution or company wants to develop. This marble goes through different stages the same way an idea would go until its realization. The steps represented in the model are ideation, evaluation, cooperation, selection and implementation.

Ideation

First level – Ideation

The marble enters through one of the pillars that represent a unit of the Quadruple helix. This means that a citizen, business, government official or university staff can present an idea. It then enters the first funnel, the place where all the ideas are collected together.

Second level – Classification

In the second stage the ideas will be elaborated to form projects that will then be divided between eight themes. In the model the marble goes inside on one of these themes and then exits the level. These themes are: Infrastructure, education, mobility, security, sports and leisure, society, health and energy.

Third level – Cooperation

In this stage representatives from Quadruple Helix would work with each other to develop the projects and find possible alternatives. This is represented by having four separate pallets that are controlled individually. In order let the marble move to the next level, 4 people need to find out a way so the marble goes through.

Forth level – Selection

After the projects are finished they are collected again and stored in a database. From this point some projects will be selected to be implemented in Eindhoven. The marbles are put in storage and a small hook picks some of them to enter the last level.

Fifth level – Implementation

The marbles that are selected from the previous stage land on the base of the model where the city is engraved. This is the last stage where projects of the city are displayed and become a showcase for what Eindhoven is capable.

