



THE HAGUE RESILIENCE STRATEGY

2019



The Hague



THE HAGUE

PIONEERED BY THE
ROCKEFELLER FOUNDATION



100 RESILIENT CITIES

City Facts – The Hague



3rd Biggest City in the Netherlands



Home of one of the five UN principal organs



Home of the Royal Family

539,154

2018 population to grow by 5,000 p/a

176

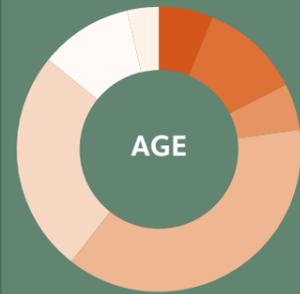
Nationalities

85,620 Ha

Surface

64.2 /Ha

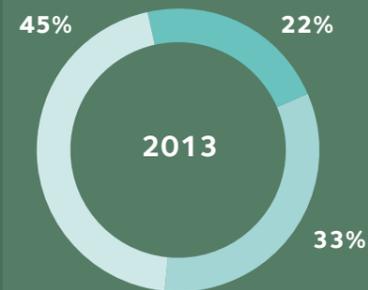
Population density



Relatively young and growing population

0 to 4-year-olds	6.1%	45 to 64-year-olds	25.6%
5 to 14-year-olds	11.4%	65 to 79-year-olds	10.6%
15 to 19-year-olds	5.5%	80-year-olds and above	3.6%
20 to 44-year-olds	37.1%		

Educational attainment levels in labour force



- None or primary (22%)
- Secondary (33%)
- Higher (45%)



9.5°C average temperature



116,000 trees



777mm average annual rainfall



944 ha large green areas



11 km coastline



0.65 average number of cars per address

Youth with & without a migration background



WITH (BOTH WESTERN AND NON-WESTERN)

84,539

WITHOUT

56,678



Official city of the government



Europol



The International Court of Justice



International Criminal Court



300

Intergovernmental and non-government international organisations



160

Embassies and consulates

20km

Rotterdam
The Hague Airport



45km

Amsterdam
Schiphol Airport

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2019



OUR RESILIENCE VISION:

The Hague is strong and just. We are a diverse, vibrant and safe city where everyone can take part. We connect with each other, our region and the world – this helps adapt to future challenges and realise new opportunities.

Opportunities to build resilience (page 28)

1. Ensuring a connected and inclusive society
2. Getting everyone ready for the new economy
3. Adapting to climate change
4. Improving risk awareness and emergency preparedness
5. Collaborating with partners

41 initiatives across the scales that make up our city

Scale 1:
Safe, empowered people

Scale 2:
Liveable and cohesive neighbourhoods

Scale 3:
Strong and just city

Scale 4:
Collaborate in the region and beyond

SHOCKS	STRESSES
Cyber attacks	Climate change
Extreme weather	Poverty and debt
Civil unrest	Digitisation
Pandemics	Population growth
Extremist acts	Segregation
Disruption of critical services	Uneven health outcomes
	Subversive crime
	Limitations of transport network
	Unemployment





Letter from **Pauline Krikke**, Mayor of The Hague

Dear Hagenaaars,

The Hague is a beautiful, green city by the sea. No wonder our city is an increasingly popular place to live and work, especially among young people – the number of inhabitants is expected to rise to about 600,000 in 2030. This growth comes with big challenges that are both physical and social.

Therefore we are very excited to be part of the 100 Resilient Cities network – pioneered by The Rockefeller Foundation. As part of an international network we have noticed that other cities face the same issues as The Hague. Through this network and the exchange of knowledge we do not only work to strengthen our own city, but also to make the world more resilient.

This Resilience Strategy lays out initiatives that contribute to the resilience of our city. The coming years we will apply this strategy to the city, although this does not mean that our city will be finished after. Like the sea, The Hague is in constant motion. The Hague faces changes that require a new way of thinking. We must dare to take alternative paths and dare to experiment. And we need everyone in The Hague to get involved in this journey.

Urban resilience is part of The Hague's DNA. As a coastal city, we are aware of the challenges that our environment gives us. The sea forms a natural border to our city, so in order to house a growing population we must invest heavily into the already built environment. At the same time, this should not be at the cost of our green areas as they are such an important element for the liveability of our city. By thinking outside the normal set of standards and increase collaboration, we will be able to make these developments go together. A green and climate ready city that welcomes everyone.

But a resilient The Hague has more than just a physically strong environment. Digital innovation also has its effects on our city. New technologies are able to make life in the city a lot more enjoyable, but for this reason it is also important to understand the risks that come with it. To ensure that digitisation will positively contribute to the liveability of our city now and in the future, we will continue to work on our cyber security.

But most importantly, The Hague is about the people that live here. A city can only truly flourish if it is socially strong and balanced. To achieve this, it is essential that people connect with each other. It is my sincere wish for people in our city to get to know each other better. Meet your next-door neighbour and the people from the next block. Because if we meet each other more, we will be able to increase resilience for the whole of The Hague.

By doing so, we will build a better city to live in. A strong and resilient city!

Pauline Krikke
Mayor of The Hague



Letter from **Michael Berkowitz**, President of 100 Resilient Cities

On behalf of the entire 100 Resilient Cities team, it is my great pleasure to congratulate the City of The Hague, Mayor Pauline Krikke, and Chief Resilience Officer Anne-Marie Hitipeuw on the release of The Hague's first urban Resilience Strategy – an exciting milestone for the city and our partnership. Through this Strategy, The Hague builds on its past to lay the foundations for a more resilient future.

A coastal city boasting natural beauty, The Hague is also a place of cultural richness and diversity, a hub for more than 300 international companies and organisations, and a locus of expertise in justice and human rights. As the city sets forth on implementing the actions in this Strategy to build resilience in the 21st Century, it will leverage these origins and assets. And it will do so while simultaneously recognising that addressing the city's rapid growth, the effects of climate change, and threats to social cohesion require both working in a different way and collaborating with a broad range of partners.

Like many previous Strategies in the 100RC Network, The Hague's Resilience Strategy truly stands out for the way it puts people at the heart of its approach: from working to connect individuals to become more risk prepared; to making neighbourhoods more peaceful; to advancing city-wide policies on procurement; and forging partnerships regionally to understand interdependencies between critical infrastructure. It is a strong testament to Resilient The Hague's vision that it takes an entire city – not just government alone – to build resilience, without losing sight of the city's people and communities.

With this Strategy, The Hague offers much for cities around the world to learn from, such as the pioneering work The Hague is undertaking to address cyber risks. Furthermore, the city does not perceive digitisation as a challenge, but rather as a unique opportunity to critically re-think social inequalities and the development of future skills. I encourage every reader to take a closer look at these tangible initiatives and tap into the wealth of expertise The Hague has to offer.

Uncertainty is now perhaps the only characteristic of our time and unforeseen risks and opportunities will inevitably emerge in the years ahead. But with the strong foundation and agile approach laid out in these pages, we are confident that The Hague's Resilience Strategy will realise its ambitions and concrete actions to positively impact the lives of all who call the city home. Now, the work of collectively achieving the goals outlined in the coming pages begins, and we are thrilled to be a partner in the work ahead to continue building a more resilient and just The Hague.

Michael Berkowitz
President of 100 Resilient Cities



Letter from **Anne-Marie Hitipeuw**, The Hague's Chief Resilience Officer

In the past year we worked hard on this Resilience Strategy. We certainly did not do that alone. Together with people inside and outside city hall, we developed the content of this strategy. People who already put so much effort into future proofing our beautiful city. Many good things are already happening and it is inspiring to see how the municipality, residents, companies and knowledge institutions work together for our city.

Following the guidance given to us by our Advisory Committee (p.109), the Resilient The Hague team wanted to focus on those initiatives that can really make a difference. The message was simple: select initiatives where the Resilient The Hague programme is decisive for its realisation. By focusing on these activities, The Hague will become an even stronger and more resilient city that can cope with the shocks and stresses of the future.

It all starts with resilient people who live comfortably and safely in liveable neighbourhoods. Together these neighbourhoods form a strong and just city. And because many of the challenges we face – such as the effects of climate change, the new digital economy, and promoting social resilience – do not stop at the borders of our municipality, we work together with our regional partners.

Thanks to 100RC and its network, in the past two years we have also learned a great deal from cities outside the Netherlands. We for example hosted a side event at the One Conference of the National Cyber Security Center on Cyber Resilient Cities with Atlanta and Manchester. This gave us many valuable insights to prevent and mitigate a cyber incident. As we move into implementation, we will continue to draw on these experiences from other cities, along input from specialists, companies and knowledge institutions that offer support to the 100RC network.

Developing this strategy was only possible with the help of all those people who have been thinking along with us about how to strengthen the resilience of our city. We want to thank everyone who has cooperated. I am proud of this strategy and I am confident that the new and existing initiatives described in the strategy, really make a difference in The Hague. Together we are building a strong and resilient city.

Anne-Marie Hitipeuw
The Hague's Chief Resilience Officer



Why urban resilience?

Today, 55% of the world population is living in urban areas, a percentage which is projected to be 68% in 2050. Not only are cities growing, they are also becoming increasingly interdependent. The effects of events in one place can be felt around the world. This rapid urbanisation has many benefits for efficiency, as well-functioning cities can provide employment and other opportunities for large numbers of people. However, as more human and economic resources concentrate in cities, the potential consequences of unexpected events become even greater, and when managed poorly, the urban environment and quality of life can suffer.

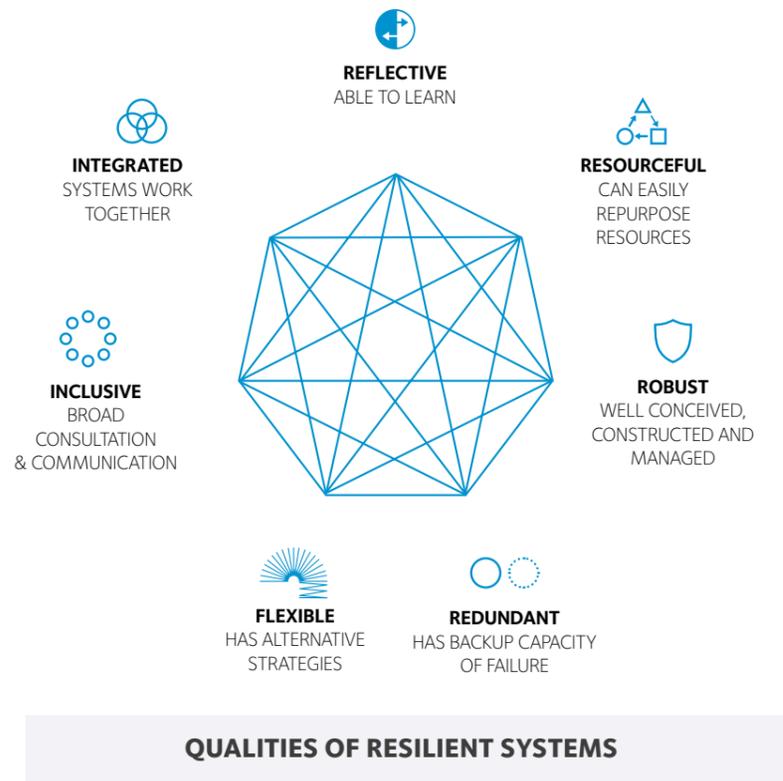
The Hague is no exception to this. Despite the strength and durability our city has demonstrated in response to crises over many centuries, the interconnected and rapidly evolving world also presents The Hague new challenges and enlarged threats.

This Resilience Strategy helps The Hague to strengthen the capacities of its residents, communities, institutions, businesses and systems to better withstand these future shocks and stresses. A resilient city is not only prepared to survive the shocks and stresses that might occur over time, but is also able to respond in a way that makes the city grow and thrive afterwards. By investing in resilience now, rather than waiting until disaster strikes, cities stand to benefit from the investment in good times as well as bad. For example, improving our green spaces reduces our vulnerability to the shock of heatwaves and heavy downpours but it also helps purify our air and provides improved amenity all year round. In the 100RC network this is called a 'resilience dividend'.

100 RESILIENT CITIES (100RC)

100RC - pioneered by The Rockefeller Foundation, was formed to help cities around the world help cities around the world prepare to meet the physical, social and economic challenges that are a growing part of the 21st century. 100RC defines urban resilience as:

“the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.”



Benefits of the 100RC Network

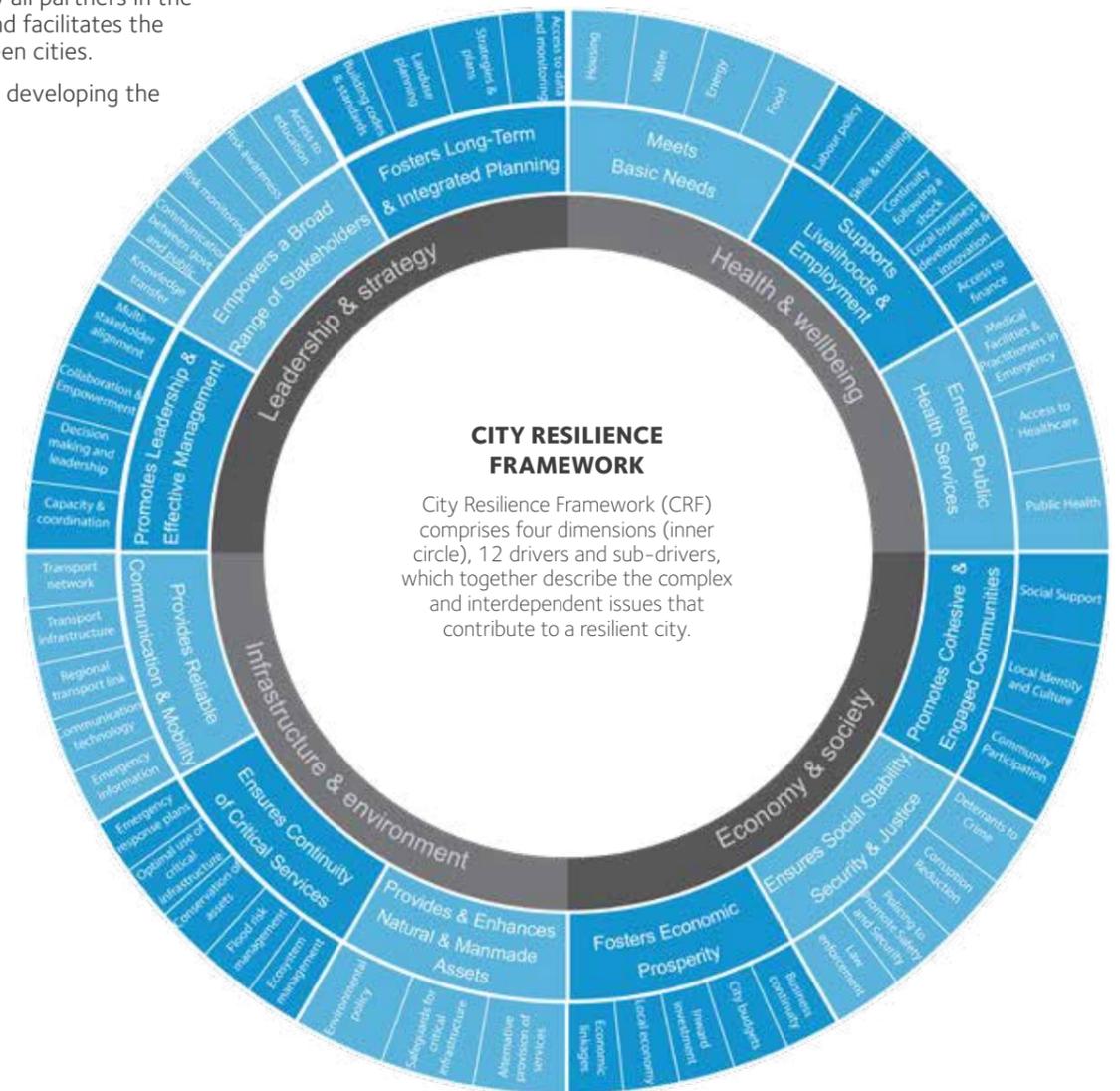
In 2016, The Hague was chosen from over 1,000 applications to join the 100RC Network. Being part of this benefits our city in four different ways:

- Receiving funding for a Chief Resilience Officer to coordinate resilience-building efforts
- Obtaining access to expert support from leading global providers of resilience services and expertise.
- The City Resilience Framework (developed by Arup) is used by all partners in the 100RC network and facilitates the cooperation between cities.
- It offered guidance developing the strategy.

The Hague regards participation in the 100RC Network as a two-way street. It enables us to share our own knowledge and experiences with other cities to solve problems collectively, and learn from each other. The Hague will not only become a more resilient city, but also help to create a global practice of urban resilience and illustrate the demand for resilience solutions to the market.

Multiple benefits of our initiatives

Page 105 shows how the initiatives in this strategy will create benefits across the four dimensions of the CRF.



CENTURIES OF RESILIENCE SO FAR

For centuries the people of The Hague worked hard to survive and thrive in the face of challenges. This panorama shows examples of events that illustrate the shocks and stresses our city had to deal with, as well as the resilience opportunities that were realised. As a background, the Panorama Mesdag shows our city as it was in the late 19th century. This panorama, which measures 120 metres in circumference, was painted by Hendrik Willem Mesdag in Scheveningen and is one of the city's most famous pieces of art.

2013:
The new boulevard protects The Hague against the rising sea levels and storms

1940-1945:
During World War II, The Hague suffered a major loss of life. 10,700 Jews from The Hague were deported and killed and severe food shortages led to the death of 2,100 residents.

1945:
Bezuidenhout was bombed by mistake. This neighbourhood and other parts of The Hague had to be rebuilt after the war.

1813:
The monument on Plein 1813 reminds us of the establishment of the Kingdom of the Netherlands after Napoleon was defeated. The Hague remained the seat of the court.

1899:
The first Peace Conference takes place in The Hague, which led to the constitution of the Permanent Court of Arbitrage.

1913:
The Peace Palace was built and becomes a worldwide symbol of peace and justice. It is the home of the International Court of Justice.

1945-1980:
The Hague faced large population growth due to the post-war babyboom, labour immigration and immigration from former colonies, while having a lack of housing supply. In response, The Hague started expanding – neighbourhoods of Moerwijk, Morgenstond, Bouwlust en Vrederust were developed.

1588:
In revolt against the Spanish rulers, state representatives went to the Staten Generaal in The Hague to call out the Republic of Seven United Netherlands.

2004:
The Hague faced increasing threats of terrorism. In an efforts to prevent attacks, the police arrests two radicalised Dutch citizens in the Laakkwartier.

2017:
The Hague hosted the Europol - INTERPOL Cybercrime Conference, EC-Council's Global Cyberlympics final, and the Cyber Security Week by The Hague Security Delta.

1874:
Construction of water tower in Meijendel to provide the city with drinking water.

1576:
The Act of Redemption is signed to protect the woods of The Hague against deforestation to cover the financial losses of the 80-years war.

1230:
Floris IV built a residence in 'Die Haghe', now known as the Binnenhof. His son Willem II added the Ridderzaal in 1242.

1948:
Governments of 26 European countries gathered for a conference in the Ridderzaal in The Hague to strengthen European cooperation and limit the effects of the Second World War.

2011:
The Sand Engine is constructed to protect the coastline of The Hague.

2014:
The Hague hosted the Nuclear Security Summit, with 53 countries and four international organisations invited.



KEY: CENTURIES

PRE 18TH 19TH 20TH 21ST

Developing the strategy

After joining the 100RC Network in May 2016, the Resilient The Hague team held an Agenda Setting Workshop in December 2016. The aim was to introduce the concept of resilience – not an easy word to translate into the Dutch language – and agree with the City on a way forward to develop this Strategy. This was followed by Phase 1 of the Strategy, during which a baseline understanding of The Hague’s resilience challenges was developed, which led to release of The Hague’s first Preliminary Resilience Assessment (PRA) in January 2018. The PRA identified four discovery areas and three cross-cutting themes to guide the future efforts of the Resilient The Hague (RTH) team and the city as a whole, while being aware of the existing programmes like on energy transition and on the circular economy that already make an effort in The Hague. The Resilience Strategy wants to build on existing efforts, instead of duplicating them.

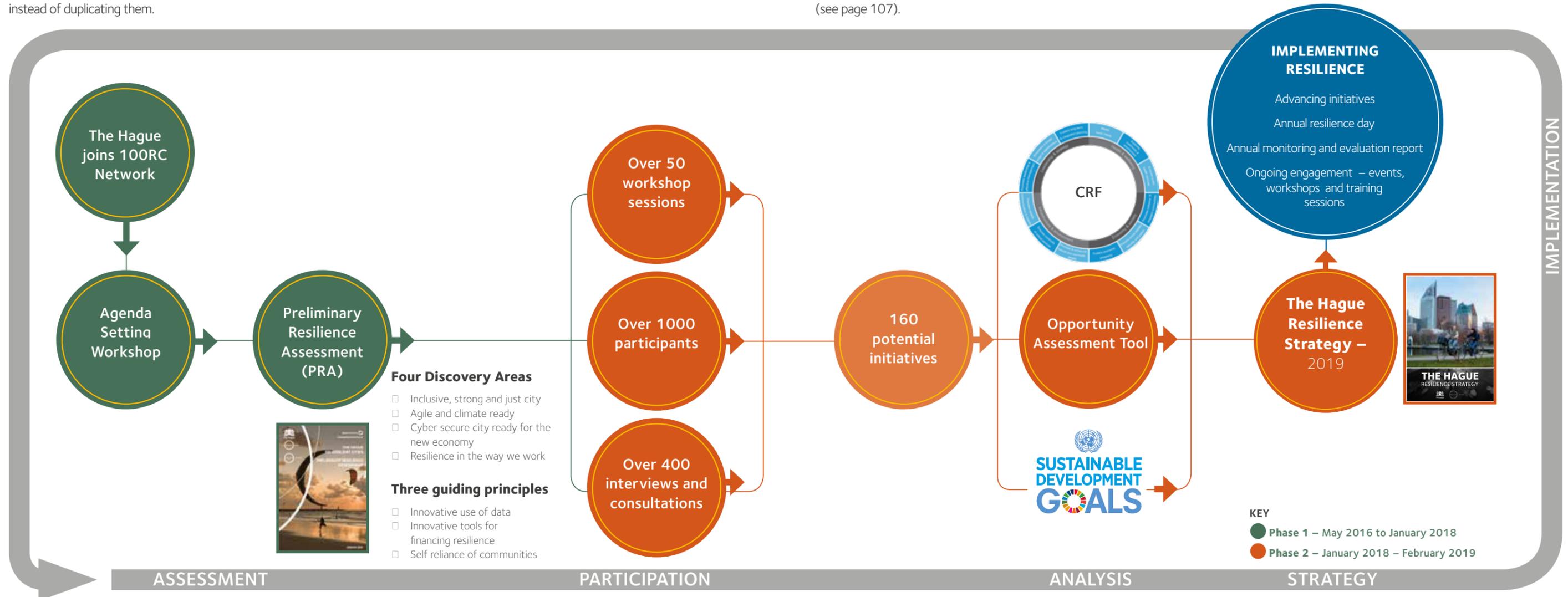
From the PRA could also be derived that a Resilience Strategy for The Hague should support new type of collaborations between different stakeholders. Building further upon this, RTH sent out a wide call to include citizens, businesses, and institutions in the process of developing the Strategy.

Together with these partners and other parties involved with The Hague, the RTH team entered Phase 2 during which they went deeper into an attempt to understand root causes of our resilience challenges and unlock new opportunities. The RTH team organised working groups with experts and meetings with citizens, conducted interviews, visited projects, and listened to the perspectives of many people inside and outside City Hall.

During Phase 2 the team and their partners were on a constant lookout for initiatives and ideas. This brought the understanding of just how many inspiring collaborations are already underway in our city, each contributing to our resilience in its own way. It became clear that while this Strategy must propose new ways forward, it must equally be about celebrating and scaling what already exists. During Phase 2 160 potential initiatives were identified, ranging from small scale actions that target individual citizens, to large scale projects drawing on regional and international collaboration. A range of analytical tools and measurements – including 100RC’s City Resilience Framework (CRF) and the Sustainable Development Goals (SDGs) of the United Nations – were applied to systematically test, refine and prioritise these opportunities. The SDGs will also be used for monitoring of the Strategy implementation (see page 107).

With the input of stakeholders spanning the CRF, this led to selection of the 41 initiatives that comprise this Strategy. Core to all initiatives is the aim to achieve multiple goals from a single investment and promote integration across traditional silos. The initiatives are organised under four scales (see page 37), which reflect the different levels at which The Hague must act to improve the resilience of all citizens: as individuals, within neighbourhoods, across our city, and spanning our entire region.

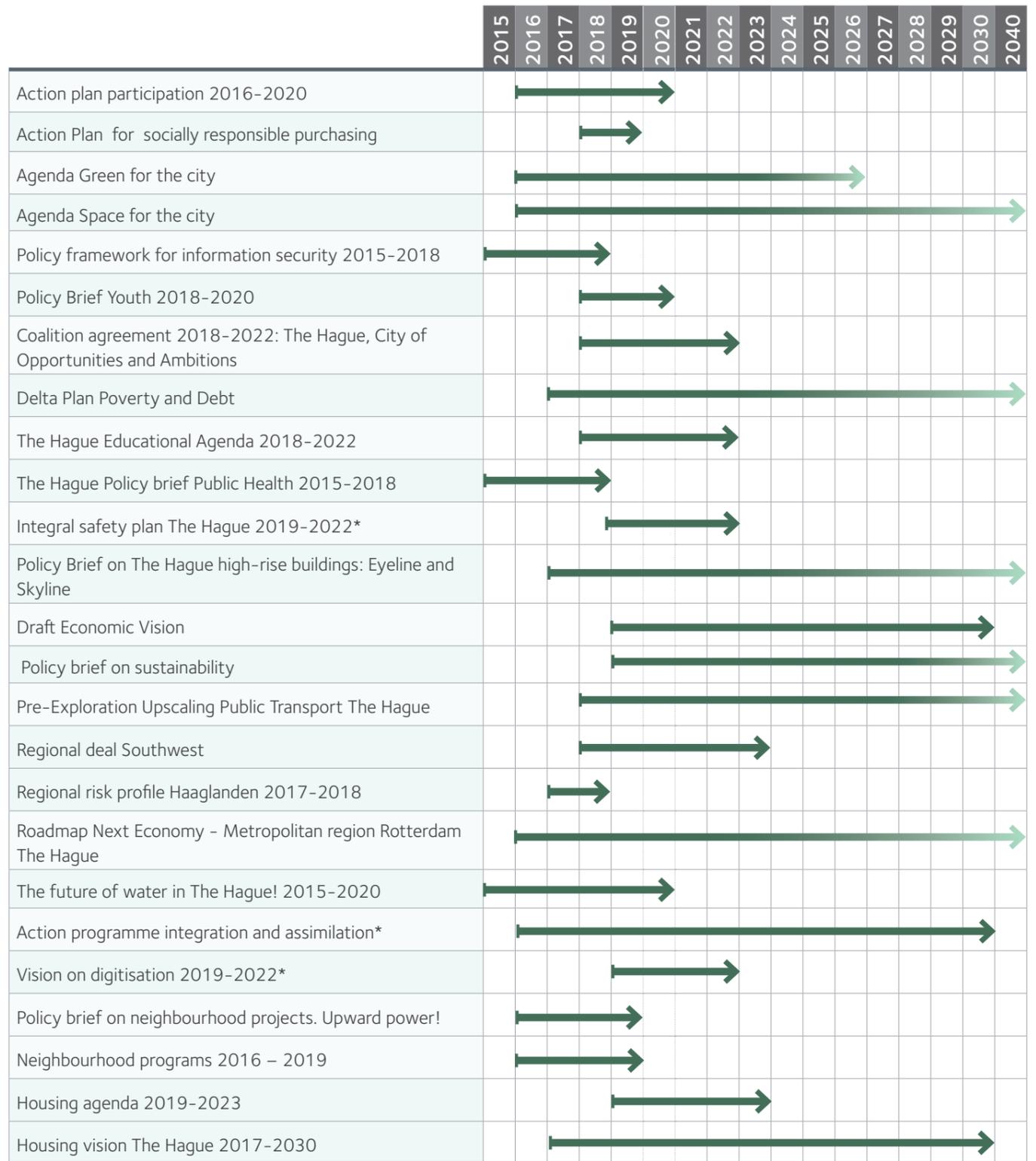
The Strategy is not a final and holistic document that depicts comprehensive solutions to all challenges, shocks and stresses that our citizens encounter. It is a waypoint on an ongoing resilience journey for The Hague and will be regularly updated to reflect new challenges and opportunities.



Building from the work of others

Although not always labelled this way, people have been working hard to maintain The Hague's resilience for centuries. Through developing this strategy we learnt about so many existing plans, programmes and projects that help us withstand shocks, tackle stresses and improve quality of life for our citizens.

This Strategy can provide a helpful framework for drawing important linkages between the many programs already underway in our city, resulting in greater benefits that come from a systems approach.



* in preparation

Shocks and stresses for The Hague



View on The Hague, Jan van Goyen, The Hague Historical Museum

Just like artists from “The Hague School” sought to illustrate in their paintings, The Hague is a city of contrasts. Stroll through our city and you’ll witness world-renowned historical sites alongside modern architecture. You will sense a dynamic business environment but may also get some sand in your shoes on one of our relaxing beaches. You will meet people that have lived in The Hague for generations as well as connect to more recent arrivals from 180 different nationalities. We are proud of this The Hague.

As a city of contrasts, we are also a city of ambitions. The Coalition Agreement 2018-2022 shows the Mayor and Aldermen’s plans for this period. It mentions challenging goals on growth, mobility, sustainability, security and inclusiveness. Expanding the timeframe to 2030, the United Nations Sustainable Development Goals (SDGs) mention the grand ambitions to end poverty, protect the planet and ensure prosperity for all. We aim for these goals with confidence. We have learned considerably from the global economic crisis and today we enjoy scientific and technological resources that are greater than ever.

However, we must also recognise that we live in a world of risks. One of the first steps to build resilience is to understand what these possible adversities may be.

The Hague is home to major international organisations such as The International Court of Justice, the International Criminal Court, Eurojust, Europol and the OPCW (Organisation for the Prohibition of Chemical Weapons). Additionally, our city is a convenient base for over 300 international organisations and NGOs contributing 38,500 jobs to The Hague’s economy. The Hague also hosts multinationals such as Shell, Siemens and Aegon.

The National Government is mainly based in The Hague, along with institutes such as the Netherlands Institute for Social Research (SCP), Netherlands Bureau for Economic Policy Analysis (CPB), Environmental Assessment Agency (PBL), National Coordinator Terrorism and Security (NCTV) and the National Cyber Security Centre (NCSC).

As we are the host of all these organisations and businesses, a crisis can have an impact on a local, national, and even international scale.

Taking a resilience approach means understanding our risks – and the complex relationships between them.

Shocks

Acute shocks are sudden, sharp events that can immediately disrupt a city. In The Hague, key known and emerging shocks include:



Cyber attacks

Our daily life takes place increasingly online. Companies, institutions and our critical infrastructure increasingly depend on digital technology. Therefore cyber attacks pose an increasing risk to the functioning of cities. That especially applies to The Hague because our city houses the National Government, international courts and international companies. ICT failure then not only affects our own inhabitants and companies, but can also have national and even international consequences.



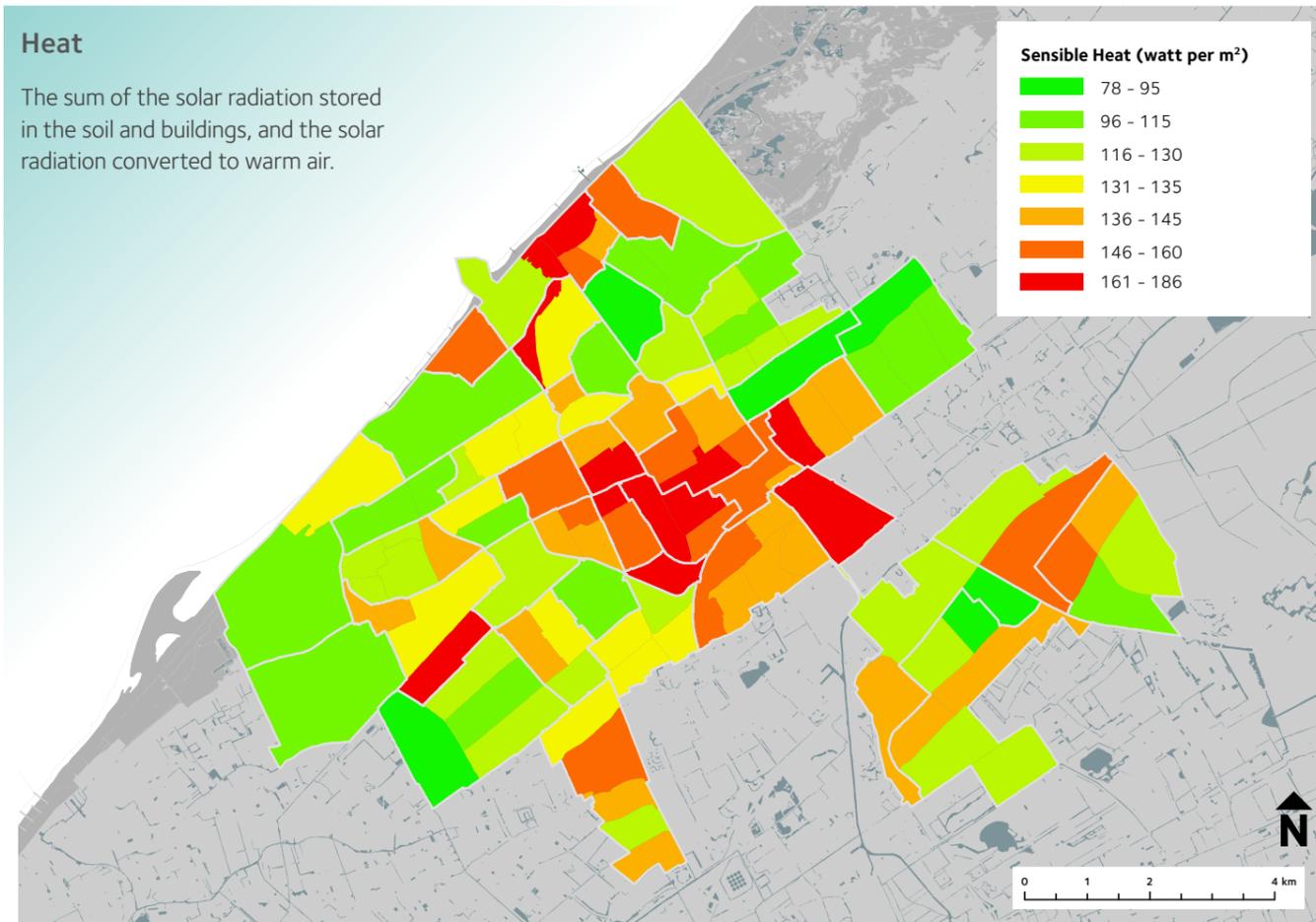
Source: Centre of Expertise for Cyber Security, The Hague University of Applied Science.

The National Cyber Security Center lists six key challenges for cyber resilience:

1. Cyber attacks are often profitable, easily executed and low-risk for an actor.
2. Attack software and resources are easily accessible.
3. Unsafe products and services are being used.
4. Considerations on costs and user friendliness lead to concessions to cyber resilience.
5. Increasing complexity and connectivity complicate organising cyber resilience.
6. Dutch organisations depend heavily on a limited number of foreign suppliers of cyber security products and services.

Extreme weather

Extreme rainfall or periods of prolonged heat and drought will become increasingly common in our city. The impact of extreme weather can be amplified by our ageing population, who can be more vulnerable to these events. The heat stress and climate score maps show how the impact of extreme weather can vary for each neighbourhood.



Source: TU Delft

Heat waves

Extreme heat is a growing problem that reduces labour productivity and can disproportionately affect the health of vulnerable people (e.g. elderly and sick). In The Hague, the 'urban heat island effect' (where large, built-up areas increase temperatures relative to surrounding places) is the strongest in the city centre (including the Schilderswijk and Transvaal), Scheveningen and Laak (including the Binckhorst).

During heatwaves...

- Increased number of emergency hospital visits
- Mortality rate in the Netherlands increases up to 12% (about 40 extra deaths per day).

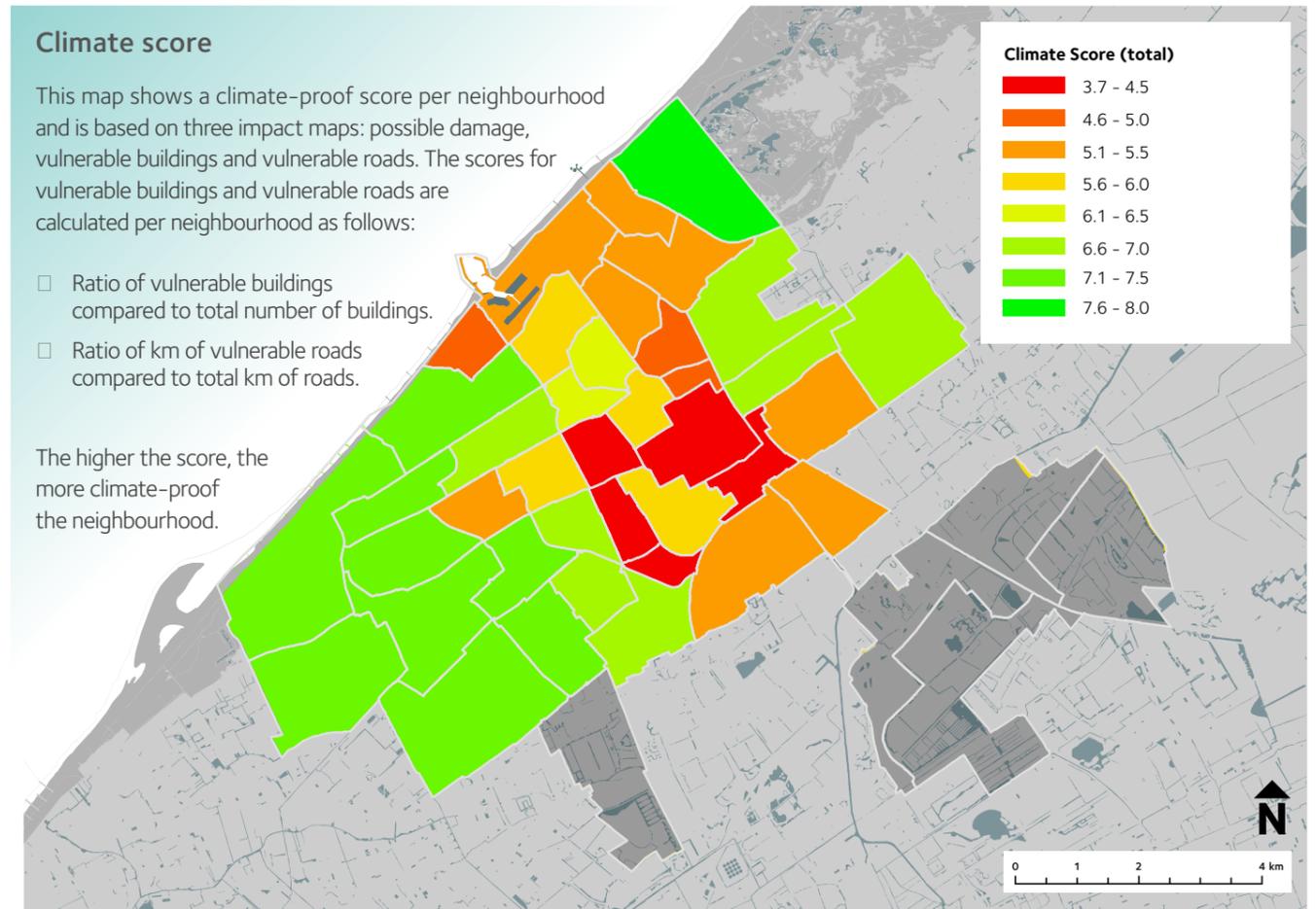
Source: TNO Factsheet on Climate Proof Cities.

Climate score

This map shows a climate-proof score per neighbourhood and is based on three impact maps: possible damage, vulnerable buildings and vulnerable roads. The scores for vulnerable buildings and vulnerable roads are calculated per neighbourhood as follows:

- Ratio of vulnerable buildings compared to total number of buildings.
- Ratio of km of vulnerable roads compared to total km of roads.

The higher the score, the more climate-proof the neighbourhood.



Source: <https://denhaag.klimaatatlas.net/>

Flooding

Our region is within dike ring 14 and largely below sea level. Besides flooding from the sea and rivers, flooding can also occur after heavy rainfall.

Civil unrest

Being an important political and judicial centre, The Hague is often the stage of major events, conferences and demonstrations. Some of those events come with an increased risk of disruption of public order. In addition, other national and international issues can lead to tensions in society.

Disruption of critical services

Being either a shock by itself, or a possible consequence of other shocks, a disruption of critical services can directly impact a large number of people, institutions and companies. Although Dutch critical infrastructure is generally robust, examples like the 2015 power outage in the Province of North Holland prove that large disruptions do happen. Dependencies between different critical services is a key area for future attention.

Pandemics

Like other large cities The Hague has a high population density, which can increase the spread of communicable diseases. An outbreak of pandemic flu is a priority risk on both national and regional levels.

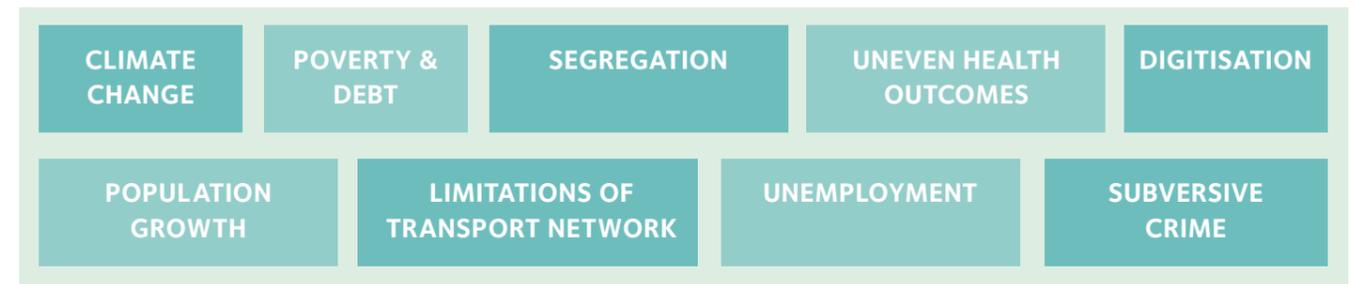
Extremist acts

As the administrative centre of the Netherlands and with the presence of many national and international organisations, according to the NCTV, risks related to terrorism are substantial for our city.



Stresses

Chronic stresses are slowly moving phenomena that weaken the fabric of a city. Stresses can themselves lead to a major shock – for example, Cape Town in South Africa recently came close to running out of water. This occurred due to the chronic issues such as lower rainfall, population growth and inadequate forward planning.



A city's stresses can also act as 'shock amplifiers' that significantly worsen the consequences of a major disruptive event and reduce the capacity to respond. For example, cities with an ageing or unhealthy population may have higher mortality rates during a major heatwave.

Climate change

Climate change is a true shock amplifier, increasing the likelihood and consequence of risks such as extreme weather, drought and outbreaks of some diseases. With 700 million people worldwide living in coastal areas, climate-induced sea level rise and extreme events are also expected to increase the global flow of refugees. This brings the consequences of global climate change to cities with well developed protective infrastructure, like The Hague.

Poverty and debt

In 2018, 62,856 households in our city had an income of no more than 130% of the legal social minimum. With tight financial means it is more difficult to overcome setbacks. In addition, financial concerns can hold people from taking resilience-enhancing measures such as a buying a smoke detector or making an emergency kit. Having limited financial resources and/or problematic debt can be a huge source of stress, potentially leading to adverse physical health impacts, domestic issues and difficulties holding employment.

A lack of financial resources limits people's ability to overcome additional shocks and stresses. People in debt are likely to isolate themselves from society, leading to social segregation and making it even harder to get out of debt.

19%
OF HOUSEHOLDS WITH
CHILDREN HAVE A LOW INCOME



20,800
CHILDREN LIVE IN A
LOW-INCOME HOUSEHOLD



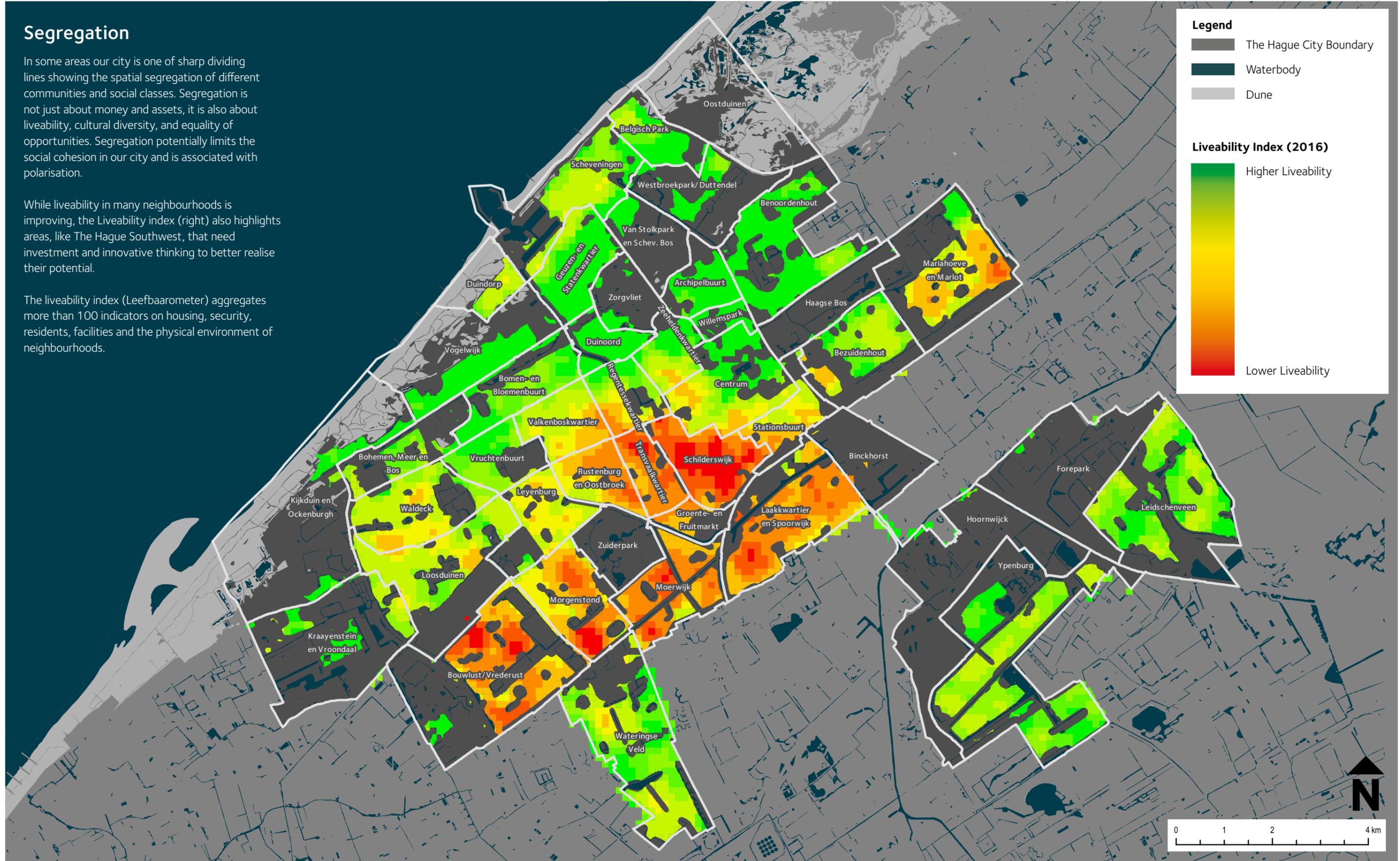
Source: The Hague Urban Data Centre and CBS

Segregation

In some areas our city is one of sharp dividing lines showing the spatial segregation of different communities and social classes. Segregation is not just about money and assets, it is also about liveability, cultural diversity, and equality of opportunities. Segregation potentially limits the social cohesion in our city and is associated with polarisation.

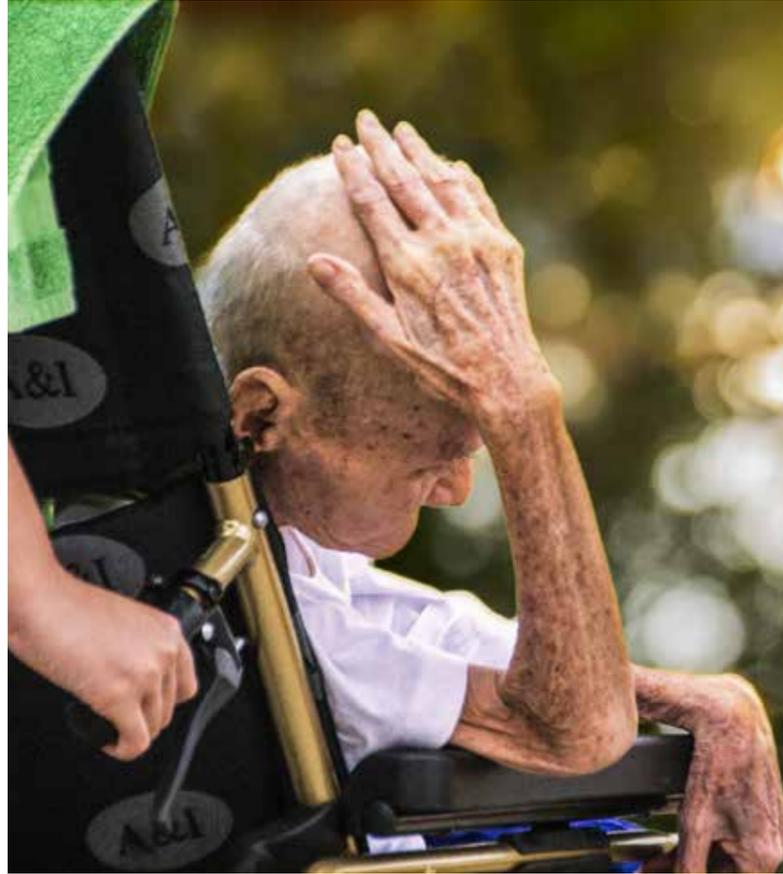
While liveability in many neighbourhoods is improving, the Liveability index (right) also highlights areas, like The Hague Southwest, that need investment and innovative thinking to better realise their potential.

The liveability index (Leefbaarometer) aggregates more than 100 indicators on housing, security, residents, facilities and the physical environment of neighbourhoods.



Uneven health outcomes

Despite good accessibility of medical care in the Netherlands, we see substantial health differences. There is up to a 9 year difference in life expectancy between some of our neighbourhoods, and looking at the number of years that people live in good health this gap grows to 16 years.¹ Experts attribute this difference not only to lifestyle, but also to stress. Health differences can lead to some groups being hit extra hard when a catastrophe occurs.



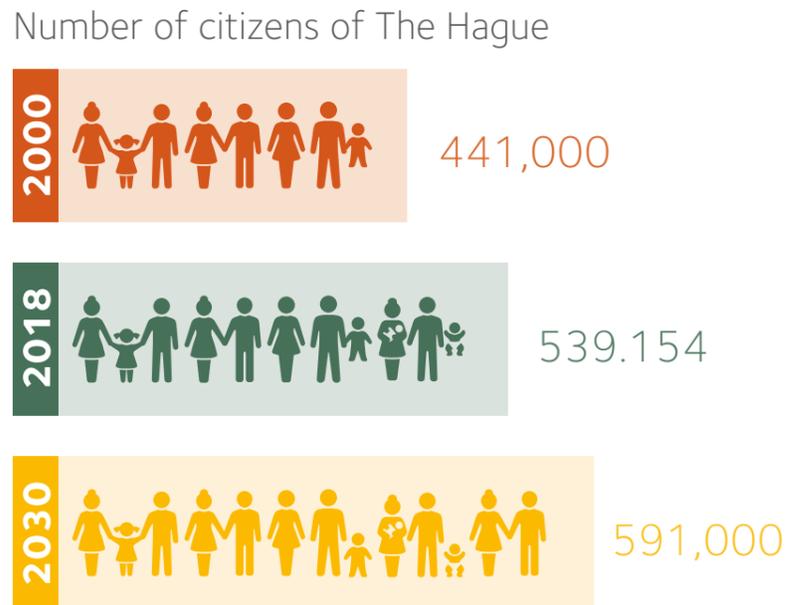
Digitisation

Digitisation and new technologies will bring many opportunities for those with the right skills to adapt to new ways of working. But it also has the potential to further deepen dividing lines between those who have the skills and money to keep up with the digitisation and those who have not. As jobs become obsolete or sectors disappear, some people might also be left behind. That is certainly relevant for The Hague. Our city has a relatively one-sided economy that relies heavily on the public sector. Compared to other major cities in the Netherlands and Europe, the technology sector in The Hague is small.

Population growth

The Hague is expected to grow by about 5,000 residents each year until 2030. While this comes with great opportunities for investment it also puts pressure on the housing market and challenges our city to densify.

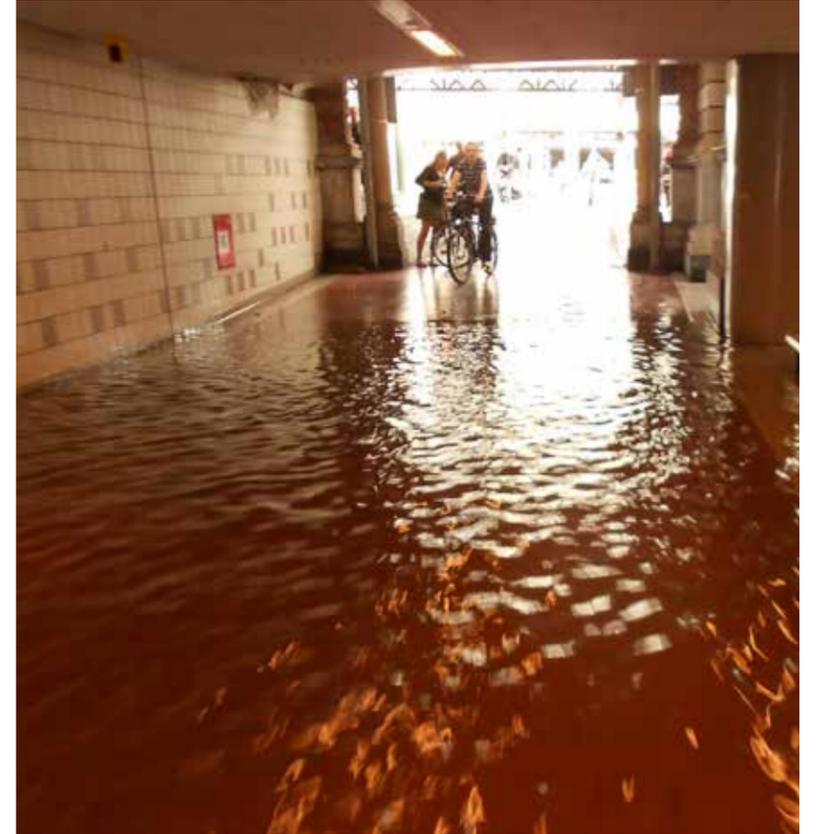
With foreign immigration making up about half of this growth we will need to use effective ways to integrate newcomers into our society. Teaching language skills is one of the critical ingredients to successful integration. The Hague's population is also ageing, with solid growth in the number of 65 to 80 year-olds. Loneliness is a priority risk for this group. Maintaining quality of life and keeping this group self-reliant and connected will require innovative solutions.



¹ Source: GGD Haaglanden

Limitations of transport network

Some neighbourhoods in The Hague have relatively limited access to public transport, which constraints the mobility in parts of our city. Also the capacity of the public transport and the road-system are increasingly under pressure as the number of citizens, visitors and jobs grow. This can even be problematic in case of an evacuation, considering that the coastal position of The Hague limits the number of evacuation possibilities.



Unemployment

A job offers a social network and income. Both are important resources for resilience.

We must ensure that residents with the capacity to work are employed. This may require innovative methods, particularly for residents with a distance to the labour market.

Subversive crime

Subversive crime such as money laundering and other forms of fraud weaken the very foundations of our society. Criminal money flowing into the regular economy is extremely undesirable and can have major consequences for the business climate, liveability, social cohesion and security.



Five key opportunities to build resilience

So far we have heard about a range of challenges confronting The Hague's resilience. This section describes five cross-cutting opportunities to address these challenges.

Our five resilience opportunities should not be viewed in isolation and are often interconnected. We embrace this complexity as it gives the possibility for one initiative to link to multiple resilience opportunities and have multiple benefits.

1. Ensuring a connected and inclusive society

To make our city resilient we must address a number of current and emerging social challenges. Our diagnostic work strongly indicated that we must recognise that some of our residents struggle to meet basic needs and have limited capacity or resources to handle acute shocks or cope with chronic stresses.

Building a connected and inclusive society requires a holistic approach. 'Brick and mortar' policies on the development of housing, mobility, and public space are just as important as social policies on youth, the elderly, wellbeing and education. We need to promote equality of opportunity for all children and make sure that all our citizens – especially our most vulnerable – can locate the many sources of support our city has to offer. We also need to facilitate professionals and volunteers who want to contribute collectively to an inclusive society.

An example of such an holistic approach is the development of the Central Innovation District: an area between and around the train stations The Hague Central, Hollands Spoor and Laan van NOI. While innovation districts can develop into exclusive areas for the highly educated, the goal is to develop an inclusive district where all people can work, live and recreate.

The Southwest area of The Hague also strongly calls for an holistic approach. There is a great opportunity to use proposed housing and public transport redevelopments to create multiple benefits that also address social challenges related to employment, inclusiveness and social cohesion. The Regiodeal Southwest will also play a role here.



Bonding within communities

Building social resilience is about promoting cohesive neighbourhoods and communities where people know and help each other. In good times, these social ties are an important source for pleasure in life; in adverse times they are an unmissable resource to overcome setbacks.

Bridging between communities

It is also critically important to build cohesion between different groups in society. To reduce segregation we must encourage that people meet and engage with people from different parts of our city, as well as people of different cultures, nationalities, capacities, values, social classes or age.

2. Getting everyone ready for the new economy

Over the last couple of decades, The Hague has lagged behind in growth of jobs and citizens compared to other large cities in The Netherlands. The Hague's economy recovered relatively slowly after the recent economic crisis (period after 2010).

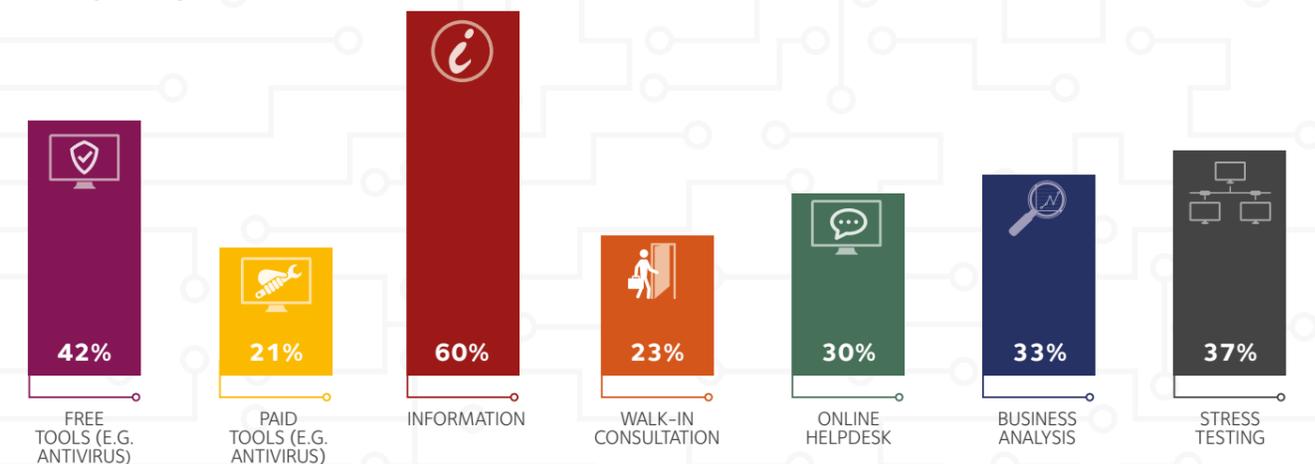
The Hague's economic structure is relatively one-sided, and therefore more vulnerable. In addition, the number of jobs has not kept up with population growth. Economic and technological developments such as digitisation require us to innovate. We must ensure that people, especially our youngest generation, and companies are prepared for a new economy.

That is why we have to invest in learning digital skills that are needed in daily life. New technologies have the greatest added value when everyone can use them. To ensure the digital literacy of our future workforce, more attention must be paid to ICT skills in primary and secondary education.

Companies need to be aware of the risks of digitisation. In particular, small and medium-sized businesses can take steps to improve digital resilience and business continuity. The Hague houses a number of companies and institutions from the cyber security sector, for example in the The Hague Security Delta (HSD) or in the InnovationQuarter (IQ). The HSD links cyber security to the job market by improving the connection between education and employers and by attracting and developing talent. The strategy of the IQ is, among other things, focused on innovation themes such as Cyber Security, Urban Security and critical infrastructure. The municipality links companies to these themes.

Top 7 Needs

Research by The Hague University of Applied Science indicates that 60% of SMEs would like more information about cyber security and digital resilience.



Source: The Hague School of Applied Science



3. Adapting to climate change

The sea level is rising. That is why we invested heavily in our coastal reinforcement over the past decade. At present, our coastal defence meets the standards until 2050. Nevertheless, due to the rising sea level, we must keep our knowledge up to date and continue to pay attention to the safety and the sea defences. The Hague maintains its alignment with the national Delta Programme.

Besides rising sea levels, The Hague's main climate risks relate to extreme events like heatwaves, heavy rainfall, and drought. The Hague's infrastructure is built to withstand unruly weather; however, climate change creates a new normal characterised by unpredictability. We must keep working to make our city robust to weather conditions that are more extreme or prolonged.

This is complicated by several factors. First of all, over 60% of The Hague is private property. This limits the possibilities of local government to act and means public-private cooperations are essential for climate-proofing our city.

Secondly, climate adaptation will take a considerable amount of financial resources. The city must support its interventions with a strong evidence base, explore innovative financing approaches, and collaborate with public and private stakeholders to innovate. By realising multiple benefits, some of the best climate proofing interventions contribute to the quality of our city on every day of the year.



The Sand Motor is an artificial peninsula made of sand near The Hague's coast. It uses the energy of the waves, wind, and currents to spread and over time the sea spreads the sand over our beaches, protecting our region from the sea. An additional benefit is that the Sand Motor has grown into a real hotspot for kite surfers and nature lovers.



The boulevard of Scheveningen: On the one hand a great place for recreation. On the other hand, an important link in Dutch coastal protection.



4. Improving risk awareness and emergency preparedness

Ensuring citizens understand key risks and how to respond is crucial for resilience. By promoting risk-aware behaviours such as contingency planning and checking on neighbours, citizens and businesses become better equipped to help themselves and each other. This unlocks much needed capacity for response agencies to help those who cannot help themselves.

Risk awareness and emergency preparedness is not only about people. We should also make sure that our systems, especially those that are critical for the functioning of our society, are robust to shocks. Protecting critical systems must be organised in close collaboration between private providers – which manage about 80% of Dutch critical infrastructure and services – knowledge institutions, local governments and the National Government.

- More than a third (34%) of the Dutch people do not know where the nearest automated external defibrillator (AED) is in their immediate vicinity.
- Currently, the Netherlands only has a passive campaign on emergency preparedness – citizens have to actively seek for information.
- Citizens think that the municipality should have a role to inform them about risks.

Sources: Dutch Heart Foundation, TNS-NIPO





5. Engaging partners in the city and beyond

Complex urban challenges require multiple partners to solve. To deliver these multi-stakeholder solutions, the City of The Hague must increase its already strong focus on seeking out partnerships across public and private sectors. When implementing the initiatives in this strategy we should strive to think and act as one.

The 100RC Network offers great opportunities to engage in collaborative partnerships with Rotterdam and other global resilience leaders. By working together, the whole region will benefit from one another's increased resilience.

The Hague's ongoing journey to become an even more resilient city requires us to be humble. We have a great deal of experience we can share with other cities in our region and the world, but also we must be ready to learn – from other cities, from different sectors, and of course from our own resilient and innovative citizens.

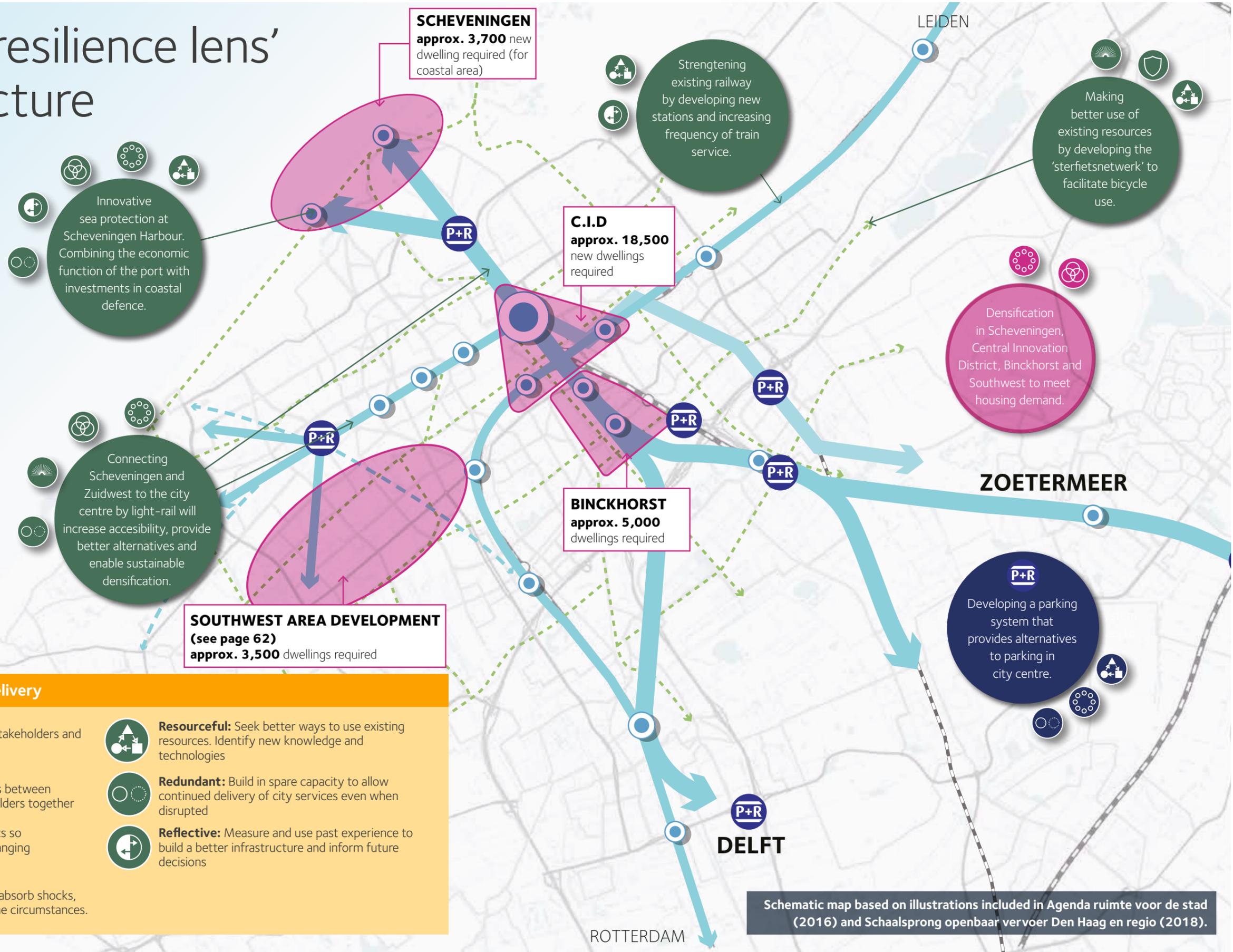


Applying a 'resilience lens' to infrastructure

Globally, **75%** of infrastructure that will be in place in 2050 has not yet been built!

To support projected growth, The Hague has many infrastructure projects either proposed, planned or under construction. What we build now will be in place for decades to come, meaning today's major projects provide great possibilities for improving our city's resilience.

Taking a resilience approach to infrastructure development means designing systems that can withstand, respond to, and adapt more readily to shocks and stresses. It also requires us to apply resilience principles throughout the investment's whole lifecycle. For example, taking an inclusive approach to planning that involves stakeholders in decision-making, and designing for a range of different future scenarios so that systems are flexible to changing circumstances.



Resilience thinking in design & delivery

- Inclusive:** Broadly define project stakeholders and prioritise meaningful involvement
- Integrated:** Think about synergies between systems and bring diverse stakeholders together
- Flexible:** Design and stage projects so they can accommodate rapidly changing needs and circumstances
- Robust:** Create systems that can absorb shocks, and continue to function in extreme circumstances.

- Resourceful:** Seek better ways to use existing resources. Identify new knowledge and technologies
- Redundant:** Build in spare capacity to allow continued delivery of city services even when disrupted
- Reflective:** Measure and use past experience to build a better infrastructure and inform future decisions

Schematic map based on illustrations included in Agenda ruimte voor de stad (2016) and Schaalprong openbaar vervoer Den Haag en regio (2018).

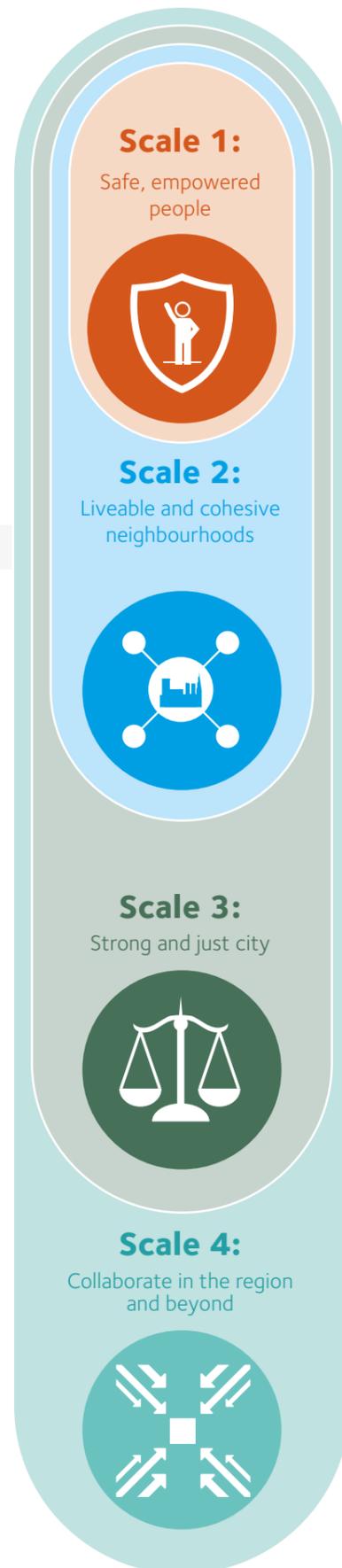
Turning opportunity to reality

In this section, we turn our attention from challenges and possibilities to tangible initiatives that can help us achieve our vision for a more resilient The Hague.



Our initiatives fall into three main categories:

- Pioneer** – A new project or programme that uses multiple opportunities to strengthen the resilience of The Hague. RTH plays a role in its implementation, in collaboration with other partners.
- Support** – An existing initiative where more can be done to increase the resilience benefits. For example, expanding the scope to include new physical areas or beneficiary groups, involving new partners, undertaking new research to refine the approach targeting new beneficiaries, or drawing in relevant expertise from the 100RC Network.
- Showcase** – An existing initiative that aligns with the vision of the Resilient The Hague strategy. These initiatives are in the strategy to show our best practices to other cities and to bring them to the attention of possible future partners.



Category	Initiative	Primary Opportunity	Related Opportunity
Scale 1: Safe, empowered people	1.1 School of Shapers	Yes	No
	1.2 Exploring how fathers can help signal, prevent and counter radicalisation	No	Yes
	1.3 Support for citizens with complex problems	No	Yes
	1.4 Debt Lab 070	Yes	No
	1.5 Haagse Makers (The Hague Buddies)	No	Yes
	1.6 Weekend Schools and Summer Schools	Yes	No
	1.7 Technical Innovation House	No	Yes
	1.8 Maker Education	No	Yes
	1.9 Preparing children for a digital future	No	Yes
	1.10 Computer skills for older people	No	Yes
	1.11 Supporting independence and health with digital technologies	Yes	No
	1.12 Climate adaptation and resilience in children's education	No	Yes
Scale 2: Liveable and cohesive neighbourhoods	2.1 Resilient Southwest	Yes	No
	2.2 SoZa co-housing, co-working, and co-living	No	Yes
	2.3 Resto VanHarte	Yes	No
	2.4 Schilderswijk Mothers	No	Yes
	2.5 Peaceful Neighbourhood project	Yes	No
	2.6 Social internship programme for new police officers	No	Yes
	2.7 Breaking stones and greening The Hague	Yes	No
	2.8 Tiny Forests	No	Yes
	2.9 Urban Water Buffer	Yes	No
	2.10 Connecting communities and experts to improve a risk communication	No	Yes
	2.11 International Zone The Hague – Innovation in security	Yes	No
	2.12 Citizen Alert Real Time (BART! 2.0)	No	Yes
Scale 3: Strong and just city	3.1 The Hague Economic Intervention Team	Yes	No
	3.2 The Hague Cyber Resilience Community Platform	No	Yes
	3.3 Smart City IoT Monitor	Yes	No
	3.4 P@CT	Yes	No
	3.5 Data loss	Yes	No
	3.6 Hâck The Hague	Yes	No
	3.7 Integrate resilience and climate adaptation into tender procedures	No	Yes
	3.8 Assessing climate interventions with most impact	Yes	No
	3.9 Developing cooler, greener schoolyards across the city	Yes	No
	3.10 Increase the number of green roofs	Yes	No
	3.11 Training municipal enforcement officers to pre-empt criminal behaviour	Yes	No
Scale 4: Collaborate in the region and beyond	4.1 Resilience training for the Municipality of The Hague	Yes	No
	4.2 Expand the possibilities for Social Return on Investment	No	Yes
	4.3 Building a network of cyber resilient cities worldwide	Yes	No
	4.4 Identify and mitigate risks from interdependent critical services	Yes	No
	4.5 G4 mitigation of cyber attacks	Yes	No
	4.6 Coastar project	Yes	No

How to read our initiatives

Type of Initiative

Scale of the Initiative

Implementation details

1.1 School of Shapers

Our city is rich with resilience building partners like our many inspirational community volunteers and professionals. To increase their impact, a training program has been created to strengthen their skills and foster connections between communities.

WHY?
The Hague is home to many highly engaged citizens who are ... The School of Shapers provides a platform to connect the ...

WHO?
Lead: Umar Mirza, MDI consultants
Partners: City of The Hague (RTH, DPZ, DPS), Leiden University, Ro National Theatre, Maatschappelijke Alliantie and others.

WHEN & HOW?

- A pilot class has started in November 2018.
- Complete the pilot and evaluate outcomes and impact mid-2019.
- Refinement
- Create ...

Resilience Opportunities

Sustainable Development Goals (SDGs)





Helping individuals and families to increase their capacity to respond to shocks and stresses.

Our city is only as strong as its people. Fortunately, The Hague is full of unique and talented individuals, most of whom are able to flourish in good times to grow after they experienced a setback.

Personal resilience is about being risk aware and having the social, physical, mental and financial resources and capacities to survive and overcome setbacks. However, when confronted with daily challenges just to meet basic needs, planning for long-term resilience is a luxury some cannot afford.

Our city is one of contrasts, and not all our residents are starting from the same place. Physical, mental, social or financial conditions are holding some people back. These people in particular need help to strengthen their own resilience and that of the people around them.

This chapter is about providing residents with opportunities to improve their resilience, work on their own safety net and develop new skills to respond to changes and risks.

This section promotes and proposes initiatives targeted at individuals which:

- Provide lifelong educational opportunities and help people keep up with the rapid pace of change.
- Link people to services they may need in good times and bad.
- Help our residents overcome problematic debts that undermine their resilience.
- Raise personal awareness of key risks and mitigation strategies.



School of Shapers - class of 2018

1.1 School of Shapers

Our city is rich with resilience building partners like our many inspirational community volunteers and professionals. To increase their impact, a training program has been created to strengthen their skills and foster connections between communities.

WHY?

The Hague is home to many highly engaged citizens who are eager to strengthen communities, neighbourhoods, companies, organisations and other parts of our society. These residents make positive impacts and are seen to be the shapers of our city. Many feel they could be even more impactful with additional skills.

The School of Shapers provides a platform to connect the shapers, expanding their network and strengthening their collective thinking power. By bringing our city shapers together, the School of Shapers aims to build bridges between the different communities they represent.

WHAT?

The School of Shapers, pioneered by Umar Mirza, is a professional education programme that further strengthens the shapers and connects them with each other.

The School of Shapers will facilitate and encourage ongoing cooperation between shapers, leading to a vibrant network of alumni. This adds to social cohesion within our city, which is essential for our resilience.

A class of 10 to 15 shapers participates in an 8 to 10 week programme that equips and motivates them to take their good work to the next level. Experts will train the shapers on topics as strategy, media, lobbying, leadership, resilience, marketing, management and governance. The shapers are coached on ways to implement their learnings into their own community or organisation.



WHO?

Lead: Umar Mirza, MDI consultants

Partners: City of The Hague (RTH, DPZ, DPS), Leiden University, Rotterdam School of Management, The Dutch National Theatre, Maatschappelijke Alliantie and others.

WHEN & HOW?

- A pilot class has started in November 2018.
- Refinement of the process to integrate learnings in 2019.
- Complete the pilot and evaluate outcomes and impact mid-2019.
- Create a process to scale initiative nationally and globally.

10ORC NETWORK INSPIRATION

Glasgow: Develop an understanding of what makes a strong community leader

Already the city of Glasgow has pockets of excellent practice where community leaders are working effectively to address inequality and increase opportunity. As part of its resilience strategy, the city is working to understand what drives this best practice and how it can be extended beyond the current reach for the benefit of all communities. The result will be briefings and resources which aim to empower grassroots leaders to make important decisions that benefit local communities.

In The Hague we take great inspiration from the example of Glasgow. Also in The Hague the connections and knowledge of community leaders are valuable for increasing resilience.





1.2 Exploring how we can help fathers signal, prevent and counter radicalisation

Building on lessons learned from successful programmes in our city, this initiative explores how fathers can be part of the collective effort to prevent radicalisation.

WHY?

A growing body of literature suggests that approaches to de-radicalisation are more powerful when multiple parties work together. The Hague is home to several of those multi-stakeholder collaborations, including one aimed at strengthening mothers to prevent, signal, and counter radicalisation. The idea is that mothers are often one of the first to notice if a child becomes susceptible to extremist ideologies. Mothers can also play an important role in restoring and/or strengthening the the bonds between children and the The Hague society.

This reasoning may also apply to fathers. However, The Hague currently has no similar initiative aimed at this group. They too could be helped with knowledge and tools to encourage proactive and appropriate responses to the signs of radicalisation.

WHAT?

Helping fathers may come with different challenges and require a different approach than working with mothers. To ensure any new programme is evidence-based, the City of The Hague will support a study into the opportunities, barriers and success factors of an initiative aimed at fathers.

WHO?

Lead and Partners: City of the Hague (RTH and DPS)

WHEN?

2019

100RC NETWORK INSPIRATION



Montreal: The Centre for the Prevention of Radicalization Leading to Violence (CPRLV)

The Centre for the Prevention of Radicalization Leading to Violence (CPRLV) is a pioneering initiative put forward by Montreal and the first of its kind in North America. It is the first independent non-profit organization whose objective is to prevent radicalisation leading to violence, and to support people affected by the phenomenon of radicalisation, such as loved ones, teachers, professionals, responders, and community outreach workers. The CPRLV also works to prevent hate crimes and incidents and support victims of such acts by ensuring that they receive care.

Illustration: The Hague's approach to prevent radicalisation and polarisation

The Hague applies soft and hard measures in its approach to preventing and countering radicalisation and polarisation. The approach acknowledges that polarisation and radicalisation are not just a security challenge – rather, they are societal challenge requiring us to tackle key integration challenges like integration, education, employment, participation, and emancipation. General measures are complemented by specific, targeted interventions aimed at individuals or groups.

In The Hague the basis for the policy on radicalisation and extremism is based on four focal points:

1. Network and communication
2. Knowledge and skills
3. Strengthening social resilience
4. Tailor made approach, executed through the concept of 'Safety Houses'. These are network partnerships that connect partners from the criminal justice system, mental healthcare and the Municipality.



1.3 Support for citizens with complex problems

A city is only as resilient as its most vulnerable people. For people with complex and interrelated problems, the effectiveness of these efforts is greater when services, teams and organisations work together.

WHY?

Socioeconomic and psychosocial challenges are often interrelated and can severely compromise one's health, ability to manage a household, finding and maintaining employment, studying, and maintaining relationships. This limits financial and social capability to participate in society on a day-to-day basis. Things become even more difficult when confronted with a major setback.

In households in The Hague with children:

- 24,000 families with socioeconomic problems
- Almost 9,000 families where the parents have psychosocial problems
- 7,500 families where the children have psychosocial problems.

Source: Dutch Statistics / Dutch Youth Institute 2017

Various municipal services and teams work with organisations in the city on solutions that ensure stability, improve well-being, increase self-reliance and increase the ability of people to participate in our society. In complex cases, support is most effective when these parties make a joint and coordinated effort. This is not only in the interest of people in need of help, but also has great value for the city as a whole.

WHAT?

Good steps have already been taken in The Hague to offer various types of support in an integral way. By making use of the resources of the 10ORC network, such as experts, platform partners, and the experience of other cities, RTH is investigating the possibilities to further strengthen the cooperation between the various providers of care and support.

WHO?

Lead: City of The Hague: OCW, SZW

Partners: Multiple partners like housing corporations, welfare organisations, volunteer organisations, schools, health care providers, local and national government.

WHEN & HOW?

In 2019 the city will investigate new possibilities to further strengthen the support of residents with complex problems. For example by providing support to help more people and to attract new partners.

Illustration: Intermediary Contact Point

Professionals in our city sometimes encounter citizens with urgent financial or social problems that go beyond their field of expertise. In those cases professionals can contact the Intermediary Contact Point (ICP) for consultation.

After a professional reports a case, the ICP can help secure people's basic needs with crisis interventions like preventing a house eviction or a disconnection from electricity, gas or water. Subsequently the ICP can facilitate an optimal referral to appropriate professionals and organisations.

In 2017, 6,317 reports were received by the ICP, 354 of which were crisis reports. Additionally, the ICP processed approximately 12,400 phone calls from and to professionals on consultation and advisory matters.

Are you a professional with urgent concerns about the wellbeing of a client? Please reach out to the Intermediären ContactPunt.

www.denhaag.nl/meldcode or intermediarendcontact@denhaag.nl



1.4 Debt Lab 070 (Schuldenlab 070) ★

'It takes a city to solve debt'. Building residents' financial and social resources to improve quality of life and adaptability to shocks and stresses.

The Debt Lab 070 (Schuldenlab070) has been set up to work on a debt-free The Hague. In the Debt Lab 070, over 25 private and public partners, including the Municipality of The Hague, work together to develop, pilot, and evaluate solutions for debt and poverty. The Debt Lab 070 uses innovative instruments to finance some of the solutions like social impact bonds. Their motto 'it takes a city to solve debt' reflects their integral approach towards preventing and curing problematic debt. Recently this initiative in The Hague has been scaled to the national level, named as SchuldenLabNL.

Do you need financial help or support? Then contact one of the eight district offices in The Hague. Or visit www.helpdeskgeldzaken.nl

Lead: Debt Lab 070

Partners: Eneco, CZ, Staedion, Philadelphia, Xtra Welzijn, Stichting samenwerking sociale fondsen, Haag Wonen, InHolland Hogeschool, AEGON, CAL, ADG Dienstengroep, ASN Bank, Dunea, Missing Chapter, Fonds 1818, Rabobank, VGZ, Reclassering Nederland, Society Impact, De Haagse Hogeschool, SVB, HTM, Vestia, CTH en de ING Bank.

Deputy Mayor Bert van Alphen:

"Poverty is one of the last taboos in the Netherlands. People often find it difficult to admit to being in poverty, which makes it more difficult to help them. It is important to remove the taboos that surround poverty and debt."



TOGETHER WE MAKE THE HAGUE DEBT FREE!

SCHULDENLAB 070

- INNOVATION THEMES**
- Housing for financially vulnerable residents
 - Financial health after graduation
 - Financial stability for the mentally impaired
 - Financial health when entering the job market
 - Financial health and sports
 - Saving on energy costs
 - Debt-free in society
 - Social aspects of debt collection
 - Lifestyle and finances in balance
 - Divorce and debt

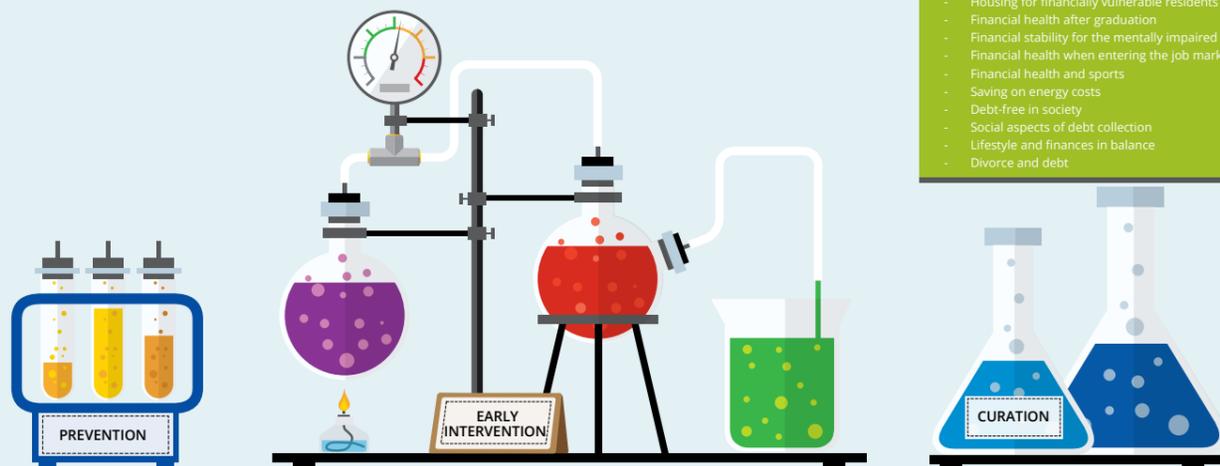


Illustration: Social Hospital

An estimated 3,000 families in The Hague receive help from multiple different care providers due to a combination of financial, social and health problems. The coordination of the integral services is complex and often leads to sub-optimal collaboration and sub-optimal use of resources. Sociaal Hospitaal, one of the projects from Debt Lab 070, helps these families navigate bureaucratic processes and find applicable care providers and financial subsidies. The aim is optimise care for families that need it the most.

The Social Hospital is funded by a Health Impact Bond. This is a 'pay for success' contract in which a private investor, in this case health insurer CZ, finances the project. When the predetermined results are achieved, the Municipality of The Hague repays the investor with interest reflective of the benefits generated.

Partners: CZ, City of The Hague, Social Hospital, School voor Publieke Waarden

Illustration: Youth Perspective Fund (Jongeren perspectief fonds)

Another initiative of the Debt Lab 070 is the Youth Perspective Fund (JPF). This initiative focuses on young people aged 18 to 27 with problematic debt.

The JPF offers participants a personalised debt-relief program. In return they must agree to a personal recovery plan, including a statement that he or she goes to school or work. Depending on their income, participants partly repay their debt in kind by doing a social internship. To offer a sustainable solution for their finances, participants get a coach that helps with the execution of the recovery plan. They also follow courses to manage their finances. This prevents a relapse into problematic debt, saving society future costs for home eviction or social help for example.

The City of The Hague financed the start-up of this initiative. Since 2017 private investors (Aegon and ING) also contribute financially.

Partners: Aegon, City of The Hague, ING, Society Impact

Illustration: Amargi

Amargi – another Debt Lab 070 initiative – uses the power of volunteers to help low-income citizens make ends meet and pinpoint opportunities for savings.

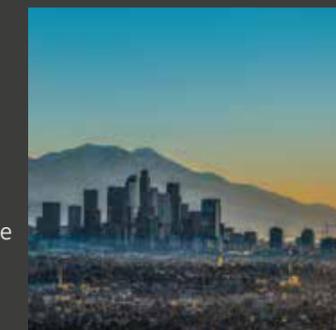
Together with a volunteer, the participant draws up a budget plan and checks whether all possible sources of income support are used. The volunteer provides tools to help the participants stick to the budget plan. An example is to introduce the participant to a two-account system, with one account for living expenses and the other for fixed expenses and savings. Creditors are asked to intervene quickly by contacting people that miss required payments.

Partners: ASN Bank, Aegon, Dunea, Eneco, CTH, Haag Wonen, Staedion

100RC NETWORK INSPIRATION

Los Angeles: Expanding access to financial literacy and security resources

Building on existing financial guidance programmes, Resilient Los Angeles is implementing an initiative to expand access to financial literacy and security resources. The Los Angeles example underlines the importance of bringing public and private parties together to tackle debt and poverty.



1.5 Haagse Makers (The Hague Buddies)



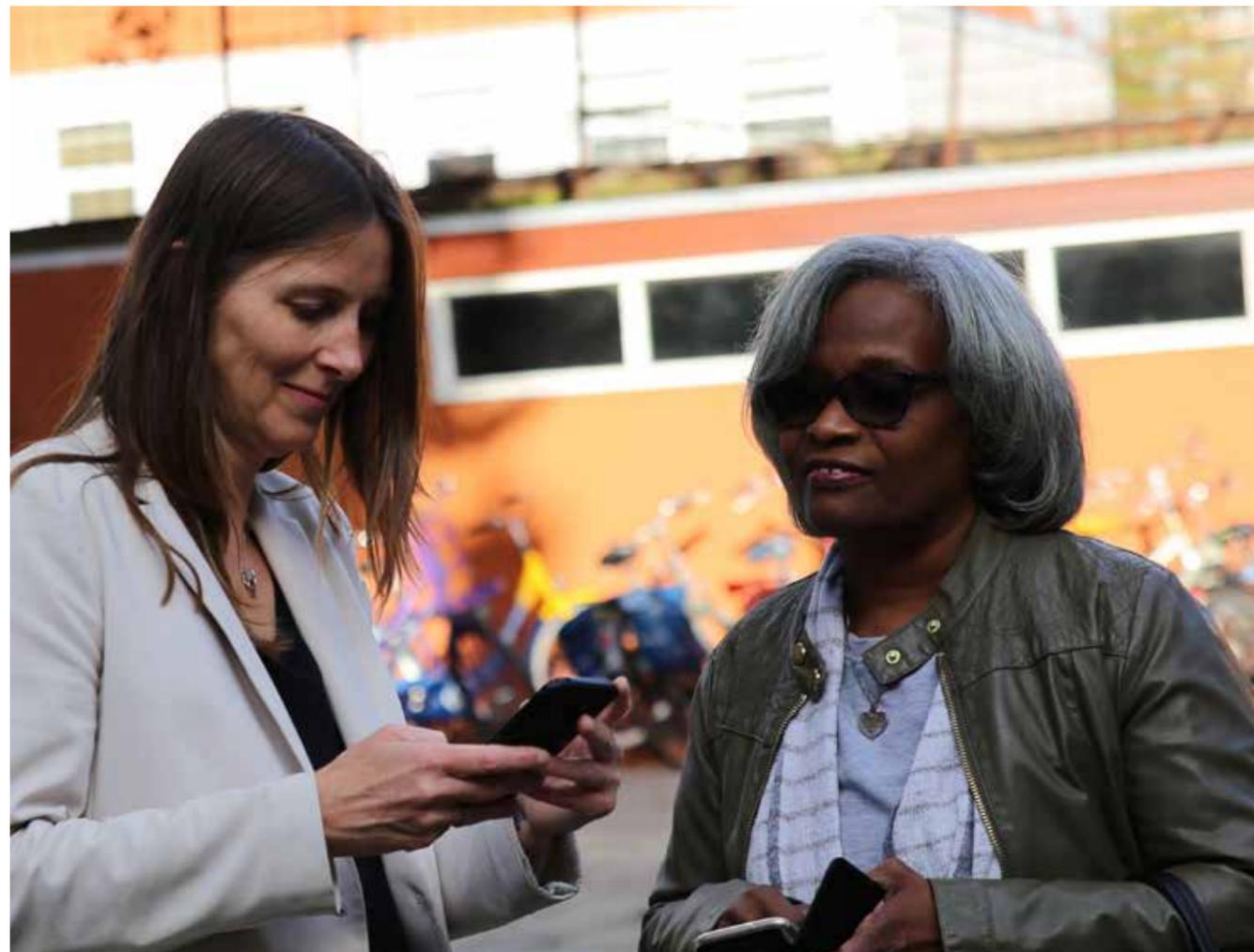
Using the power of volunteers, Haagse Makers guides, empowers and encourages newcomers to fully participate in the city.

The Hague is home to several buddy networks that connect volunteers to people who could use some extra support. Buddy networks align perfectly with the principles of resilience because they enable residents to participate as independently as possible and contribute to an inclusive and connected society.

Haagse Makers, an initiative by SamenHaags, is an example of a buddy network that specifically targets people that have immigrated from abroad. Newcomers can use an app that connects them to a Haagse Makker (The Hague Buddy) based on their profile and shared interests. The buddy introduces the newcomer to The Hague and to his or her own network. Getting familiar with the city goes hand in hand with practicing Dutch language skills.

By doing things together, speaking Dutch and getting to know the city, this initiative contributes to making newcomers feel at home.

Lead: City of The Hague: SamenHaags



1.6 Weekend and Summer Schools



By promoting equality of opportunity, weekend and summer schools help to unlock all the potential in our youth.

One of The Hague's top educational ambitions is to offer all children – regardless of their background – the opportunity to get the best out of themselves during their entire education. Parents, schools, programs on pre-schooling and early childhood education and extracurricular initiatives all play important roles.

The Hague is home to several weekend and summer schools and so-called neighbourhood universities. Some offer extra lessons in language and math skills, while others aim to broaden children's horizons by letting them discover their talents and expand their world (meeting people, seeing places).

Weekend schools, summer schools and neighbourhood universities promote the equality of opportunity for children and contribute to the social capital of our city. The Hague will continue to look for other opportunities and initiatives that link to these objectives.

Lead: Several weekend and summer schools, neighbourhood universities, primary and secondary schools.



Deputy Mayor Robert van Asten:

"All children deserve equality of educational opportunities. And teaching at a weekend school is great fun."



Children from the IMC weekend school visit the The Hague Fire Brigade.

1.7 Technical Innovation House (TIH)



Bringing together the right tools and expertise under one roof to build 21st century skills.

TIH works together with students and the business community to help young people keep up with fast-emerging innovations. Within this project, students develop skills that link to virtual reality, robotisation, 3D printing and 'serious gaming'. Students apply their knowledge and skills to real case studies. The project also offers companies a chance to use thinking power of young students to address their current challenges.

TIH is itself an innovative building equipped with state-of-the-art equipment. It combines the resources of four departments of ROC Mondriaan: Technology and ICT; Construction and Infrastructure; Metal, Electrical and Installations, and Automotive and Mobility.

The TIH also is a place where students are trained on new technologies by experts from the private sector and ROC Mondriaan. This initiative is focused on secondary education, although it may be expanded to primary education as well.

Lead: City of The Hague: OCW, ROC Mondriaan, local companies and start-ups. Funded by the Ministry of Education Culture and Science.



1.8 Maker Education

Inventors in the making! Investing in 21st century skills like computational thinking prepares our youth to contribute to a future-proof economy.

WHY & WHAT?

Innovations like 3D printing are rapidly reshaping industries from food production to textile-fabrication and construction. Traditional jobs in these industries are likely to change. Without taking action, we will not be able to leverage all the new job opportunities that come with these innovations.

The creative industry is getting more important for our economy. Technologies like 3D printing and programmable electronics make it easier to turn an idea into reality. Maker Education is an extracurricular activity that offers children the opportunity to experiment with different technologies, turning them from consumers into inventors. This boosts 21st century skills and potentially attracts more girls to the technology field. In this way we continue the tradition of the Netherlands as a "making and design" country.

WHO?

Lead: In The Hague: Arjan van der Meij

Partners: RTH, Per-Ivar Kloen (a FabLearn fellow from Stanford University), Lucas Education Foundation

WHEN & HOW?

In 2019 The Hague will work to identify how lessons learned from other cities and initiatives such as the FABlab@schoolsdk in Vejle can be applied to the Maker Education programme.



1.9 Preparing children for a digital future

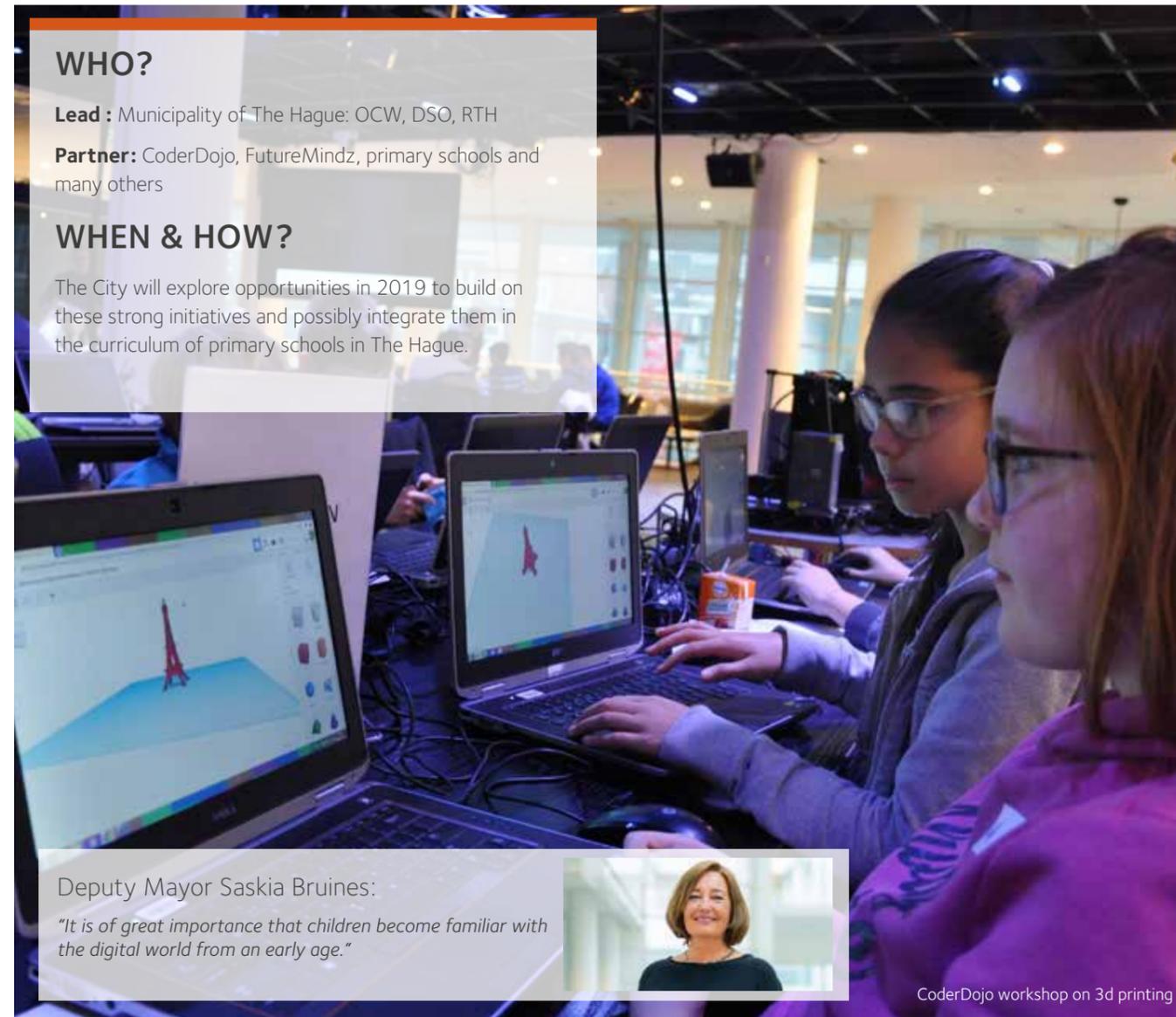
Digital technology is becoming increasingly important. There are several successful initiatives that prepare the new generation for a digital economy. Building on these efforts, this initiative will explore how these inspiring projects can reach more children in The Hague.

WHY & WHAT?

The Hague has become a hub for innovative initiatives aimed at preparing younger generations for a rapidly evolving digital future. These projects bring together school children where they can learn new skills and experiment together. The overall aim is to help children to become enterprising, creative and socially involved citizens who will be the future safeguards of the resilience of our city. It is essential that these initiatives reach many more children from The Hague.

FutureMindz has been designed and realised together with the schools and the Municipality of the Hague. This initiative provides design and guidance for a customisable series of lessons on gamification and 21st century skills. This includes activities such as drone races, a two-day team activity to solve cyber-related problems and a skills camp where children can play with the latest technologies in a team.

CoderDojo is a non-profit global movement, set up in Ireland by James Whelton and Bill Liao. It brings together 5-17 year old children who are taken through the steps of programming and app making by volunteer mentors.



WHO?

Lead : Municipality of The Hague: OCW, DSO, RTH

Partner: CoderDojo, FutureMindz, primary schools and many others

WHEN & HOW?

The City will explore opportunities in 2019 to build on these strong initiatives and possibly integrate them in the curriculum of primary schools in The Hague.

Deputy Mayor Saskia Bruines:

"It is of great importance that children become familiar with the digital world from an early age."



CoderDojo workshop on 3d printing

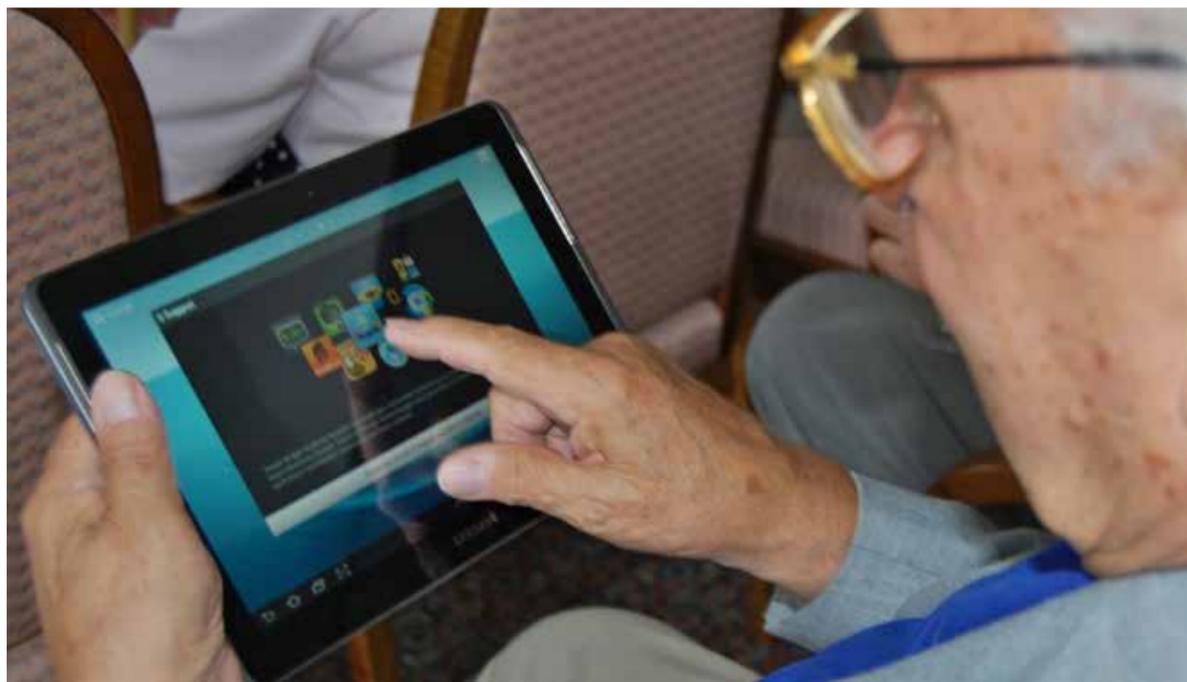
100RC NETWORK INSPIRATION

Vejle: The FABlab@schoolsdk initiative

The city of Vejle, in collaboration with the city of Aarhus, city of Silkeborg, Stanford University, and Aarhus university, is giving students the opportunity to examine, test and design new digital technologies. Part of the global FABlab (Fabrication Laboratory) movement, which is also active in The Hague, Vejle's FABlab@schoolsdk initiative provides pupils with an insight into the jobs of the future, allowing them to see themselves as designers and problem solvers.

In The Hague we firmly agree that investing in children's digital skills is a key lever for resilience. Lessons learned from Vejle can be applied to the Maker Education programme.





1.10 Computer skills for elderly people

Ensuring access to digital technology for all is a key ingredient for an inclusive society. Elderly residents deserve extra attention. This initiative empowers them with skills to enjoy the benefits offered by digitisation.

WHY?

Elderly people are one of the most vulnerable groups in a digitalised society. Some find adapting to digital technology very difficult, placing them at a disadvantage and potentially cutting them off from valuable services.

The intention is to scale up the project and ensure that it is attractive and available to as many people as possible.

WHAT?

The Central Library of The Hague, with the support of the MOOI foundation, offers two hour courses to help elderly people develop basic computer and technology-related skills. These courses are offered at a very low price. Participants learn how to use computers, tablets and apps to send emails, use various e-government services and to fill in online forms.

WHO?

Lead: City of The Hague Library, MOOI foundation

Partners: RTH

WHEN & HOW?

Interested in supporting this initiative? Resilient The Hague is looking for partners to help scale up the project.

1.11 Supporting independence and health with digital technologies



Emerging technologies can help older residents live healthier, more active and independent lives. This initiative works with older residents to understand their needs and trial a range of new technological tools.

An ageing population means the percentage of our population requiring special assistance is increasing. iZi Gezond Lang Thuis (iZi), in collaboration with residents, plans to find social and technological solutions to the daily tasks of elderly people, which will enable them to stay healthy and to live independently in their own homes. Examples include new forms of personal alarm systems, remote controlled lighting and window openers, social and household robots, and tablets and smartphones for seniors. The project will be delivered based on wishes and needs of elderly people. About 150 elderly residents trial a number of systems, devices and adjustments. Based on their feedback, favourite concepts will be further developed.

Lead: City of The Hague: OCW, Smart City

Partner: Leiden University, HaagWonen, TU Delft, World Startup Factory, The Hague University of Applied Science, Xtra



Deputy Mayors Kavita Parbhudayal and Saskia Bruines thank the participants for their contribution to the iZi program, which won the World Smart City Award prize.



1.12 Climate adaptation and resilience in children's education

Efforts to address climate adaptation in our city will not be successful without our future leaders. Through hands-on activities encouraging behavioural change, children will gain practical insights and inspiration to climate-proof the city.

WHY & WHAT?

Natuur en Milieu Educatie (NME) uses education to create support among citizens of The Hague for sustainability. The city farms have an important role.

NME offers toolbox that actively involves pupils in climate adaptation. One of the items in the toolbox is a model of a city known as a "water table". With a watering can, students simulate rain. They soon realise that it is difficult to prevent flooding in an urban environment. Then they make adjustments themselves to increase the water storage capacity. This provides insight into the effects of measures that the municipality is taking in this area.

Further research will be done together with NME, RTH and Museon to investigate how we can add additional tools to the toolbox, such as a 'serious game' and information regarding resilience and climate adaptation.

NME reaches about 32.000 children. City farms are visited about 425.000 times in the Netherlands.

WHO?

Lead: City of The Hague: DSB NME, Museon and RTH

Partners: DDH, HDD

WHEN & HOW?

NME, Museon and RTH will develop initial ideas to expand the toolbox in 2019.





Create greener and more cohesive communities where people support one another. At the same time, build connections – social, physical and digital – between different areas and communities in our society.

We are the home of ‘Haagse kracht’ (The Hague Strength). This strength is founded on the capacities of our people and the bonds in our society. While this chapter is partly about creating greener, more functional places to live, it is also an invitation for our citizens to take the Haagse kracht to the next level by strengthening their bonds within and outside their neighbourhood.

Our personal networks provide social capital that is crucial for resilience. On the one hand, we bond with others who live nearby, share our interests, or have similar demographic characteristics. These links contribute to our happiness during good times, and when faced with major disruption these bonds provide invaluable support networks. However, this is not the case for all the people of The Hague; for example, some older residents and recent migrants may feel distant from social networks.

Bonds based around shared traits and interests are only part of the picture. We know that The Hague can be a city of ‘dividing lines’ where segregation exists between different communities. If we want to maintain and grow the social capital of The Hague, we must increase our efforts to break down segregation and use innovative approaches to encourage new connections.

This chapter proposes a range of initiatives aimed at building more cohesive neighbourhoods and communities, but their success relies on you getting involved. When our social networks combine, it forms our city’s greatest resilience asset.

As our city grows, we are also redeveloping entire neighbourhoods, such as the Binckhorst. We must make sure these places are created in a way that encourages cohesion from the start.

This section promotes and proposes initiatives targeted at neighbourhoods which:

- Create new opportunities for people to build meaningful and lasting personal connections.
- Foster more risk-aware communities that can help one another in times of shock and stress.
- Create greener places that can withstand extreme weather.
- Use proposed infrastructure developments as a lever for revitalising communities.



Deputy Mayor Richard de Mos:
"You need strong residents to make strong neighbourhoods"

Visiting neighbourhood garden "Geloven in Moerwijk" with Columbia University professor and researchers

2.1 Resilient Southwest: public transportation as an accelerator for neighbourhood development

The Hague Southwest is a large district facing multiple challenges. A fast public transportation corridor is explored that will improve the connection of Southwest to the city and region. This initiative is about using this proposed project as a lever to establish an integrated vision for a resilient Southwest.

WHY?

The Hague Southwest (Zuidwest) is a large district (population of about 70,000; comparable to the municipality of Gouda) with a range of urgent socioeconomic challenges. This includes poverty, debts due to long-term unemployment, polarisation, growing numbers of disadvantaged young people, and low social cohesion. Many residents report feeling unsafe in their own neighbourhood and almost half of people are struggling to make ends meet.

Significant investments in physical infrastructure – including housing, public space and public transport – will also be needed in the area in the next 10 years. Ageing, outdated social housing comprises 65% of housing stock in the area; upgrades are needed to bring more differentiation and improve quality of life.

WHAT?

An ambitious and integrated approach is urgently needed to counter the downward spiral in Southwest. This is explicitly supported by the coalition agreement 2018- 2022 and the National Government that will support the Regional Deal for Southwest that will improve schooling, safety, work and prosperity in Southwest.

The City of The Hague is exploring the construction of a fast public transport connection from The Hague Central Station to The Hague Southwest. As the project is still in an exploratory phase, it presents an unrivalled opportunity to demonstrate how major transportation projects – when developed with a resilience approach (see page 34) – are about so much more than getting people from point A to point B. In Southwest, we believe this investment can be a catalyst for improvement against a range of stresses, such as limited access to private investment and employment opportunities. Improvement of accessibility of Southwest will also improve the attractiveness for high and middle income households.

Construction of this new corridor with a stop in Southwest District presents set of challenges that can be informed by past and ongoing major transportation projects: how can we build transportation infrastructure that maximises the benefit to those who need it most, minimises harm to the environment, is robust to the future stresses and shocks, and most of all, sets a framework for sustainable, equitable and resilient growth for our cities?

To improve our knowledge on the way transportation projects are conceived, planned, implemented, used and monitored, The Hague applied successfully to 100RC and Columbia University to host a Resilience Accelerator in Southwest. Accelerators involve workshops and input from world-class researchers to integrate resilience thinking into projects. It gives us an opportunity to more effectively plan transportation infrastructure that learns from past mistakes, anticipates on future trends, builds a coalition across fields, and brings multiple benefits to its residents.

The Accelerator has so far drawn attention towards the importance of community participation in the process of becoming a Resilient Southwest. Building from the preliminary results, we will draw upon case studies to assess which participatory approach is most likely to work in South West.

WHO?

Lead: Municipality of The Hague, DPZ, OCW, SZW, DSB, DSO, BSD, RTH, Columbia University

Partners: neighbourhood residents; all Region Deal partners; Ministry of Agriculture, Nature and Food Quality; HHS; STIPO –placemaking; 100RC; Rockefeller Foundation.

WHEN & HOW?

- The Hague was selected by 100 Resilient Cities and Columbia University to host a Resilience Accelerator in Southwest.
- In September 2018, the Resilient Southwest Programme Team organised a workshop with Columbia University, followed by a community dinner in November 2018 with citizens of Southwest as part of the Resilient Accelerator.
- In the first half of 2019, the regional deal implementation will kick off, and Columbia University will present the findings of case study research.
- In the second half of 2019, the Resilient Southwest Programme Team will begin to integrate findings from research and community participation into a vision for a more resilient Southwest.

100RC NETWORK INSPIRATION



Medellin: Elevated metro system to contributing to a safer city

Medellin's elevated metro system, completed in the mid-1990s, was augmented in 2006 and 2008 with the addition of two Metrocable lines. These cable cars, which climb both sides of the valley in which Medellín sits, travel deep into formerly difficult-to-reach favelas (shanty towns) that are located in the surrounding hills. By providing an affordable new connection, the metro famously played a pivotal role in reducing violence and segregation in Medellín. It also offers visitors possibly the least expensive but most comprehensive and photogenic city tour in the world.

This initiative of Metrocable shows how modern infrastructure can provide truly cross-cutting resilience benefits, such as improved safety, social inclusion, access to opportunity and environmental sustainability. Lessons from Medellín and many other cities in the 100RC network will help The Hague in planning and delivery of new infrastructure such as the corridor to Southwest.

2.2 SOZA co-housing, co-living and co-working



With this innovative co-housing and co-working initiative, The Hague facilitates professional and social integration for young refugees.

Located in the former building of the Dutch Ministry of Social Affairs and Employment, SOZA offers an innovative form of co-housing for status holders (refugees with a permit to stay and work in the Netherlands), students, and young professionals. It also offers room for sports, social support, and social enterprises.

The aim is to create a unique environment where social initiatives, businesses and residents connect and create a vibrant community. Combined with tailored social assistance, this puts status holders in a good position to build their new lives and participate in The Hague's society.

The SOZA building is an innovative public-private collaboration between the Municipality of The Hague and VORM and MRP Development, two private real estate development companies.

Lead: SOZA

Partners: MRPD, VORM, Municipality of The Hague: OCW, Gapph

Illustration: ANNA & Co

SOZA is home to ANNA & Co, an initiative from the Municipality of The Hague that connects residents to creative entrepreneurs and community projects. By offering a co-working space with offices, meeting rooms, a living room and weekly events, ANNA & Co creates opportunities for status holders, students and entrepreneurs to meet and work together, enabling them to build a network, exchange knowledge, apply for a job or develop entrepreneurial skills. It makes the residents part of a larger social community and strengthens their connection to our city.

As part of the initiative 'mijn buuf' (my neighbor), women get together and produce bags from recycled materials which are sold at SOZA and also send with a personal message to the asylum centres in Greece in collaboration with the Foundation Movement on the Ground. Women who show strong business skills or interest can receive further support from entrepreneurs at ANNA & Co around potentially establishing their own business.

Partners include: ANNA Vastgoed & Cultuur, My Buuf, Dutch Language Café, Meraki, Migrant Inc.



Illustration: It takes a village

VORM and MRPD invest in a SOZA-based programme called 'It takes a village', which includes a range of projects that benefit SOZA residents and The Hague.

In the Netherlands, 8.7% of the population has a valid First Aid certificate.² To both expand the number of people with first aid training in the city, and help status holders to participate and contribute to The Hague society, SOZA organises First Aid trainings for status holders and employees of the Horeca Academie (Hospitality Academy). A first aid certificate can increase the chances of getting a job, helps the participants to become more self-reliant, and also makes them important contributors to resilience as they know how to help when a fellow citizen is unwell.

In pop-up sport lessons, residents from SOZA, as well as people from surrounding neighbourhoods, participate in different sport activities, like bootcamp, boxing and fitness. The lessons are not only great for promoting active lifestyles, but also for connecting neighbourhood and SOZA residents.

SOZA Dinner Times are networking dinner parties with a specific theme. Each evening is programmed by a different partner from the city of The Hague, who invites their network as well as SOZA residents who have an affinity with the theme. These events help to increase the network of both status holders and the partner organisation, creating the potential for powerful new connections.

Partners: Oranje Kruis, BHV in Bedrijf, High Five Fitness, PitZtop, CID and Young The Hague, ADO Voetbal in de Maatschappij. FishEye Productions and The Hague Street Art.



100RC NETWORK INSPIRATION

Cape Town: Ikhaya le Langa Enterprise and Entrepreneur Academy

The 'ikhaya le Langa Academy' is an enterprise and entrepreneur development initiative designed to address serious social challenges such as unemployment in Cape Town. Using a flexible and scalable approach to learning delivered via onsite and offsite partnerships, it includes workshops, formal and informal mentorship, and on the job training, catered to people of all skill levels.

Major institutions such as the University of Cape Town and Cape Peninsula University of Technology deliver learning in partnership with newly formed and innovative NGOs such as Brothers For All's coding academy. The Academy also works with international corporates such as Microsoft and small companies like Caturra Coffee, presenting a wide range of pathways for budding entrepreneurs. As we look to prepare our citizens for a digital and entrepreneurial future in The Hague, we will look for transferrable lessons from the experience of Cape Town and other cities.



2.3 Resto VanHarte



A great recipe for a more cohesive neighbourhood!

Using the power of cooking and eating together, Resto VanHarte is reducing isolation and increasing social cohesion in our neighbourhoods.

In neighbourhood restaurants, local residents cook and eat together, get to know each other, provide affordable meals, and contribute to a liveable neighbourhood. Some restaurants even grow their own vegetables. The Restos are run by a small team of professionals, but the real driving forces are the volunteers.

Resto VanHarte is a success formula. The first restaurant opened in The Hague in 2005 and by 2018 it had expanded to over 25 cities in the Netherlands. Resto VanHarte has also developed programmes for children from different neighbourhoods in The Hague and is looking into opportunities for cooking classes.

Partners: Nationale Postcode Loterij, Rabobank, ABN AMRO, Achmea, Sodexo, Oranje Fonds, Kansfonds, Fonds 1818, RCOAK and the VSBfonds.



2.4 The Schilderswijk Mothers



Reaching out to isolated women: inclusivity in action.

Our city is home to many residents, volunteers, and professionals that support vulnerable people. One of the challenges is to reach people that live their life in relative isolation.

The Schilderswijk Mothers is one of our city's initiatives aimed specifically at women with little or no social network. About twenty professionally trained and coached volunteers support and activate women in the various communities of the Schilderswijk. They provide a listening ear, give practical support to participate in society, and if needed refer people to the organisations that provide further assistance. The Schilderswijk Mothers can be the bridge between government, social services and these women.

- The Schilderswijk Mothers have activated and supported over 1000 women over the past five years.
- More than 80% of the women they have reached have climbed one or more steps on the participation ladder (see figure).
- Between 80% and 90% of women are referred to additional support.
- Research shows that the benefits of the Schilderswijk Mothers programme outweigh the costs multiple times.

Lead: Neighbourhood centre De Mussen

Partners: Stichting Moeder & Dochter, Stichting Multiculturele Vrouwen in de Schilderswijk, City of The Hague, Kans Fonds



2.5 Peaceful Neighbourhood project



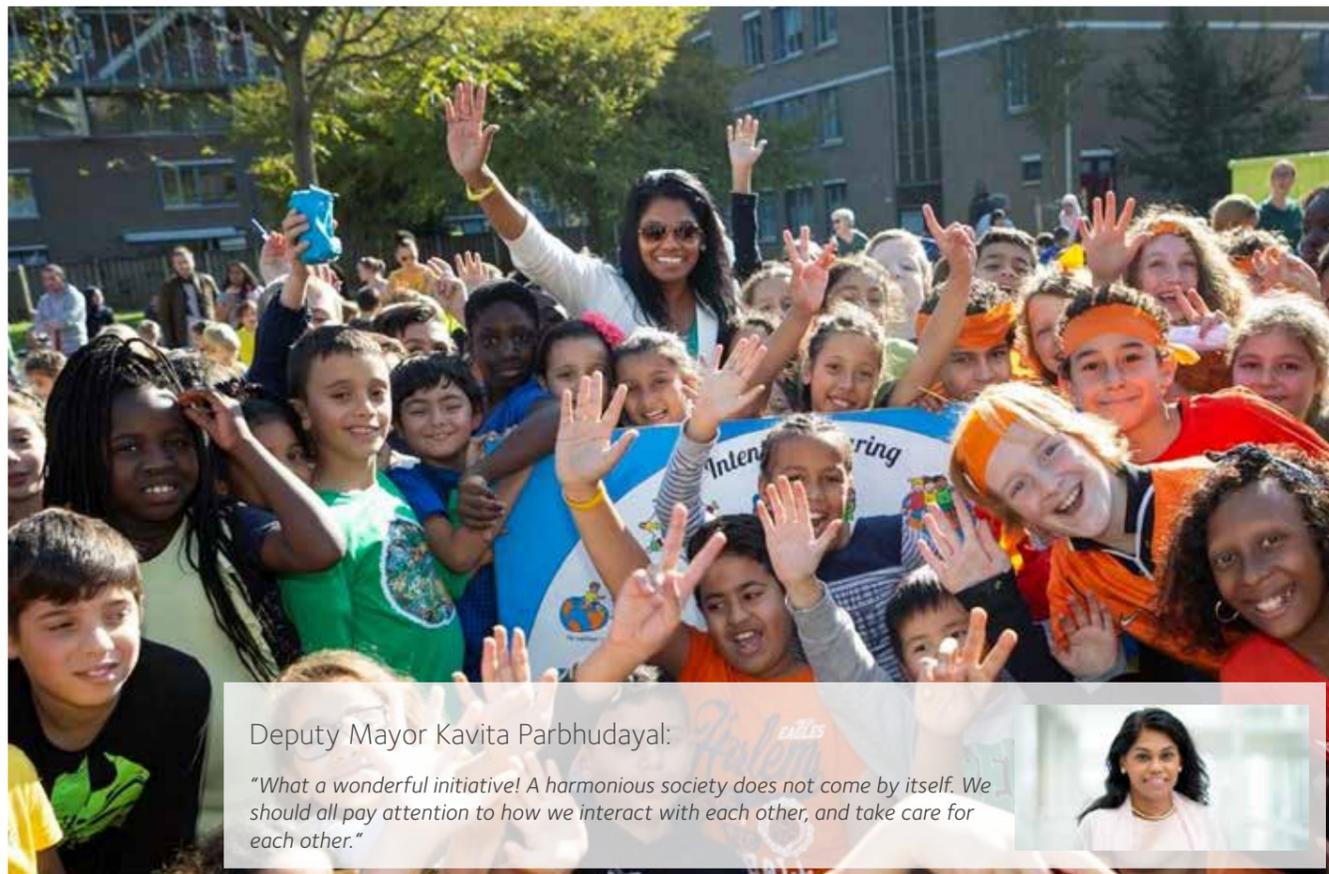
It takes a village to raise a child! Expanding a successful school programme into neighbourhoods.

The Peaceful Neighbourhood project was derived from the Peaceful School program, which teaches children a range of social and civic competences such as solving conflict situations, bridging differences, and taking responsibility for their communities. The Peaceful Neighbourhood initiative takes the principles from the school-level programme and expands it to a neighbourhood level. The project works with key people and organisations that are in contact with children, for example sports coaches, shop owners, police officers, playground management, social workers, librarians and parents.

In 2018, The Hague neighbourhoods Vrederust and Kortenbos joined the Peaceful Neighbourhood initiative. Other neighborhoods in The Hague may follow.

Lead: Stichting Vreedzaam

Partners include: Primary, secondary vocational and pre-schools, housing corporations, daycare organisations, the public library, welfare organisations, sport clubs, cultural organisations, police, Municipality of The Hague.



Deputy Mayor Kavita Parbhudayal:

"What a wonderful initiative! A harmonious society does not come by itself. We should all pay attention to how we interact with each other, and take care for each other."



2.6 Social internship programme for new police officers (Culturele Wasstraat)



An innovative programme that helps police officers build relationships with their community.

Police officers can be more effective when they have trusted relationships with the people in the districts where they work. However, good relations do not come naturally. Police work often revolves around responding to emergencies and by itself is not enough to connect the police to The Hague society. Police work often revolves around law enforcement and responding to emergencies; by itself is not enough to connect the police to The Hague society.

The Hague police has increased their efforts to improve their relationship with the public. A successful example is the social internship programme for new police officers in the City Centre District. Run by The Hague Police Unit, the programme offers new police officers the opportunity to undertake a two week introduction programme within the local community.

This includes introductory meetings with schools, religious organisations, youth groups, mental health services, and a range of other social services. This approach enables the police officers to have a greater contextual understanding of their district while winning trust from the community. In 2017, the Social Internship programme was awarded a prize for the best police project in the Netherlands.

Lead: The Hague Police Unit, City Center district



2.7 'Breaking stones' and greening The Hague



By reducing the amount of street tiles and trading them for plants, the city will be more robust against extreme weather events. It also creates a more healthy living environment for the citizens of The Hague.

The Hague is a dense city with paved areas, 50 – 60% of which are privately owned. The City of The Hague encourages greening of these spaces through a range of initiatives, including participating in a nationwide project called Operatie Steenbreek. This project focuses on increasing the amount of green in the city by replacing street tiles with plants..

This is done during trading events and at street tile collection points throughout the city, at which street tiles are traded for free plants. Citizens, schools and companies are welcome to participate. Since the start of the project in 2015, 76,000 thousands street tiles have been collected.

The Hague aims to increase the impact of Operatie Steenbreek in our city to contribute to the green spaces in our city.

Lead: Operatie Steenbreek, DDH

Partners: City of The Hague: DSB, DSO



2.8 Tiny Forests



Good things come in small packages! Small new green spaces delivering health and wellbeing benefits in The Hague.

A Tiny Forest is a dense, indigenous forest the size of a tennis court. It is not only important for butterflies, birds, bees and small mammals, but also for people.

Children can learn about Dutch nature in the outdoor classroom and local residents meet there. Tiny forests contribute to a biodiverse and climate-proof environment, while also helping citizens come closer to nature and each other. The Institute for Nature Education and Sustainability (IVN) will develop 100 Tiny Forests in the Netherlands. Plans are underway to develop at least two of such spaces in The Hague over the next three years.

Lead: IVN

Partners: City of The Hague: DSB, DSO, DDH, NME, RTH

2.9 Urban Water Buffer



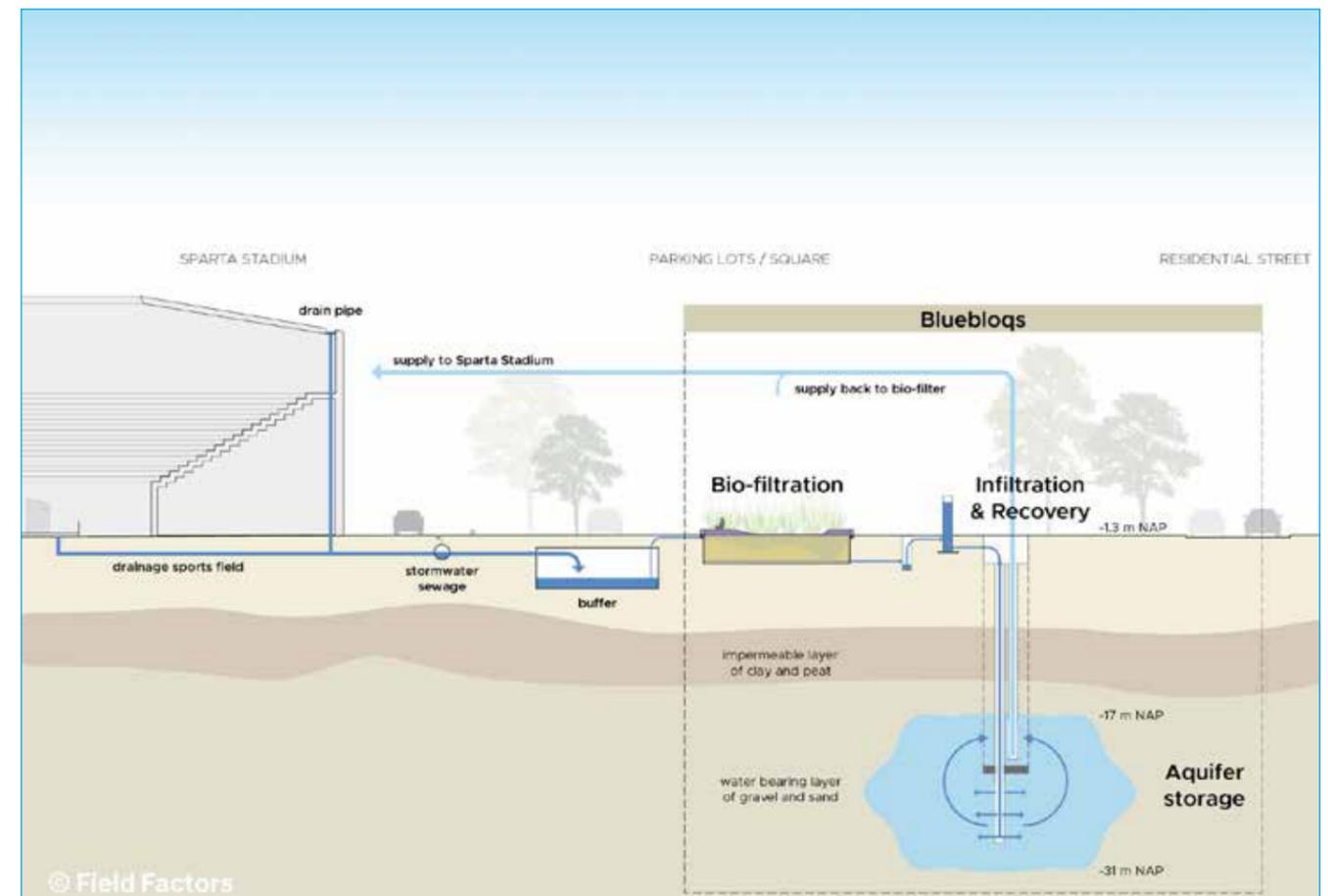
Innovation to tackle the challenges of flooding and secure fresh water supplies.

Our city is at risk from both too much and not enough water. We are aware of the increasing risk of rainfall flooding, but in the future we may also be prone to water shortages due to longer droughts. The necessary space for retention and infiltration of water in urban areas is usually scarce, which leads to costly solutions and/or conflicts with other above-ground functions.

Pilots with Urban Water Buffers in The Hague, Rotterdam and Rheden, will lead to a better understanding on how retaining more water in our urban areas can address flood risk and improve water supplies. The intention is that this initiative will lead to evidence-based interventions in future, making a positive contribution to resilience in The Hague and beyond. Further research is necessary on the pilot site in the Schilderswijk in The Hague.

Lead: KWR

Partners: HHD, City of The Hague: DSB, RTH, City of Rotterdam, Stowa



Source: KWR



2.10 Connecting communities and experts to improve and target risk communication

Risks are experienced and prioritised differently across our society. Communication aimed at increasing risk awareness and emergency preparedness should therefore be tailored to specific neighbourhood characteristics. This initiative provides a platform that connects communities and experts to achieve mutual benefits: increased awareness, better preparedness, and improved risk communication techniques.

WHY?

Preparing for emergencies first requires our citizens to be aware about potential risks and how to respond. However, exposure to shocks risks like flooding, extreme heat and civil unrest is not evenly distributed across the city. Unevenly distributed chronic stresses, such as poverty or health risks, can also affect the capacity of citizens to adapt.

In addition, variations in demographic and social characteristics – like age, languages, culture and social cohesion – can affect how risk information is shared and processed. These local differences limit the effectiveness of a general city-wide approach.

This initiative is aimed at tailoring risk communication to specific areas and target groups.

WHAT?

RTH and the Red Cross will bring together residents and experts with experience and knowledge of key risks in their community. Through an open dialogue, the residents will be given an opportunity to reflect on past experiences to inform future decisions on their risks and vulnerabilities. The platform will in turn enable the experts a chance to hear residents' ideas and collectively agree on possible approaches to boost risk awareness and emergency preparedness.

In the first half of 2019, a pilot round table session will be held in the Schilderswijk/ Transvaal. If successful, this initiative will be implemented across the city at neighbourhood level.

WHO?

Lead: The Red Cross, City of The Hague: DPS, DPZ and RTH

Potential Experts: Community builders, Police, Fire Department, health services, HHD, Institute for Safety, National Institute for Public Health and the Environment.

WHEN & HOW?

- The pilot round table will be prepared at the beginning of 2019 and participants will be recruited.
- Pilot in Schilderswijk / Transvaal in mid-2019.
- Outcomes will be evaluated to refine the approach.
- Scaling up of initiative in late 2019 / early 2020.

100RC NETWORK INSPIRATION

Sydney: Get Prepared – 100,000 ready Sydneysiders

Engagement undertaken for Resilient Sydney revealed serious community concern over a lack of community preparedness for emergencies. Community members also showed awareness of the need to strengthen local connections to ensure support and safety is close by during disasters. The number of households in Sydney taking action to prepare for shocks is unknown and effort is required to encourage take up and report results.

In response, the Red Cross and IAG co-created the Get Prepared app. The app is a free and easy to use, one-stop tool to help community members prepare for any type of emergency.

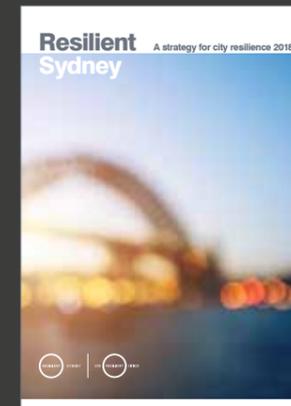


Illustration: AEDs in City Farms

In the Netherlands, there are 35 deaths from a cardiac arrest every day. An automated external defibrillator (AED) increases the chances of survival to 70%.

In collaboration with Fonds1818, the Hartstichting (foundation for heart diseases), and Firma van Ginderen, each city farm in The Hague installed an AED. They are placed in an exterior cabin which makes them accessible 24/7.

The AEDs at the city farms not only improve the safety and preparedness for emergency situations, but also raise awareness of the importance of a nearby AED in case of a cardiac arrest.

Illustration: Red Cross home visits

Taking some small, often simple steps can significantly improve the resilience of your home. The Dutch Red Cross offers free home visits to help vulnerable people prepare their homes for unexpected events.

Aided by a checklist, a volunteer helps the resident to identify potential hazards and take preventive action.

This may involve installing smoke detectors and other fire safety measures, checking and securing rugs and cables, sharing tips to prevent burglary, making an emergency communication plan or stocking supplies for an emergency. RTH will look into the opportunity to expand the impact of the home visits in The Hague.



2.11 International Zone The Hague – Innovation in security

By creating a testbed for innovative security techniques, International Zone The Hague maintains the security of international organisations while improving liveability for local residents.

WHY & WHAT?

The Hague is the fourth major centre for the United Nations after New York, Geneva and Vienna. In some of these cities the international district is isolated and remote from residential areas, but in the Hague it is located in a residential neighbourhood.

Sometimes security measures required for major events can significantly affect accessibility and liveability. This happened during the Nuclear Security Summit (NSS) in 2014, which led to establishment in 2015 of the Integral Area Security International Zone (IGIZ) innovation program. It has the aim of improving security in The Hague's International Zone while maintaining an optimal balance between security, location, climate, quality of life and appearance. With its integrated and holistic approach, the programme creates a unique living lab where innovative security techniques and new partnerships can be trialled. Some examples include:

- **Shared Security Information Platform (SSIP):** Using a secure digital platform to share security information between stakeholders in the World Forum area via a secure information exchange platform.

- **Eye and Ear experiment:** Trialling video cameras with acoustic sensors for better and more efficient observation in the World Forum area.
- **Web monitoring of World Forum area:** Continuous monitoring of internet and social media to signal threats in time.

WHO?

Lead: City of The Hague: Smart The Hague, DPS, Police unit of The Hague.

Partners: Europol, Eurojust, OPCW, IRMCT, RTH.

WHEN & HOW?

- The City will implement the initiated projects and will explore possibilities to link these initiatives to events happening in the International Zone.
- Lessons will be shared across the 100RC Network

2.12 Citizen Alert Real Time (BART! 2.0)



BART! is a digital platform designed to connect police, citizens, and the municipality to create a safer living environment in Escamp and Ypenburg.

Today, many local residents communicate with each other via digital neighbourhood groups on WhatsApp, Facebook or special neighbourhood apps such as Next Door, Veilige Buurt, MijnBuur and Waaksamen. Local residents share information about liveability, crime, lost and found objects and other information that is relevant to the neighbourhood. BART! contributes to the ability of residents to take action themselves and to work together on the liveability and safety of their neighbourhoods.

When neighbourhood challenges cannot be solved by residents themselves, they can also use BART! to send messages, photos or video anonymously to the police or municipality. Additionally, the municipality and the police can also make use of the information that is being shared on the neighbourhood platforms. BART! uses algorithms to condense the vast amount of information in neighbourhood apps into manageable proportions. It supports municipal or police centralists to respond timely and effectively to solve neighbourhood issues that go beyond the field of influence of the residents. The municipality and police can also communicate with the group members.

Lead: National Police, Municipality of The Hague

Partners: TNO, CGI-Nederland and the Technology Investment Group NL.





Living up to our reputation as the International City of Peace and Justice by ensuring our critical city-wide systems are robust, inclusive and flexible. This includes creating legal and technological solutions to protect our citizens from the risks of digitisation, including cyberattacks and privacy violations.

For centuries political power in The Netherlands has resided in The Hague. However, our city's legacy is not one of power at any cost. Rather, The Hague has attracted purpose-driven organisations from all over the world, along with courts seeking to protect the fundamental rights of all the world's citizens. Our city's global reputation is one of peace and justice.

investments in infrastructure, social structures and digital developments. Regardless of the intervention, we will always take an evidence-based approach that prioritises adaptability and flexibility, seeks to achieve multiple benefits, and always considers the effects on the more vulnerable people in our society.

Maintaining our reputation means confronting existing and emerging threats to our city's built and natural systems, such as cybercrime, extremist acts and climate change. Tackling these issues will require some major

We strive to be a strong and just city for all the people of The Hague.

This section promotes and proposes city-scale initiatives which:

- Apply a systems approach to reducing our exposure and vulnerability to major shocks, such as cyberattacks and floods.
- Trial new ways of working that improve our preparedness for climate change.
- Tackle behaviours that undermine the fairness and stability of our society.
- Encourage organisations and individuals to contribute to a climate-proof living environment.



SCALE 3

STRONG AND JUST CITY



The Hague

3.1 The Hague Economic Intervention Team (HEIT)



Subversive crime weakens the foundations of our society. The Hague responds with an integrated approach.

Like most other cities in The Netherlands, The Hague has experienced a drop in registered and reported crime. Feelings of safety and security have also improved in recent years.

While appreciating these positive trends, we must also recognise there are types of crime that are less visible but still disruptive to society. Think of money laundering, cannabis cultivation and fraudulent businesses. Criminal money flowing into the regular economy can compromise the business climate, as well as harm institutions and networks that underpin our resilience, such as social networks and the criminal justice system. These practices are hard to detect and their effects are even harder to reverse. The Hague Economic Intervention Team (HEIT) is an effective response to these challenges. The main task of the team is to detect and end fraudulent business activities and abuses related to prostitution. The HEIT methodology has two pillars:

1. A multi-stakeholder approach, joining the authorisations, competence and expertise of various partners from the local and national government.
2. The administrative approach, which allows immediate inspections and rapid interventions while still leading to substantial measures for the offenders.

Each year the HEIT performs hundreds of inspections. The visibility of the inspections is a key tool for encouraging compliance – they communicate that the city of The Hague does not tolerate activities that weaken our social fabric.

Lead and partners: The HEIT is a collaboration between various network partners, such as the Dutch Tax Authorities, the Social Affairs and Employment Inspectorate, Dutch Customs, the police and various departments of the city of The Hague, and 27 other municipalities in the region. Depending on the situation, HEIT may also involve other parties such as energy companies, the Dutch Food and Consumer Product Safety Authority (NVWA), Environmental Services and the Dutch Forensic Institute (NFI).

Illustration: Use of Big Data to investigate trends and patterns in subversive crime

Providing stakeholders with up-to-date knowledge on criminal use of real estate is a key tool for fighting subversive crime. The Hague does this by partnering with other Dutch cities, the National government and Statistics Netherlands in the research project: 'City Deal: Perspective on subversive crime' (Zicht op Ondernijning).

By linking data from multiple sources, patterns in the data are identified that might indicate an elevated risk of money laundering or other criminal activities. This leads to insights into the nature and scope of criminal activities, and into the branches and neighbourhoods where they take place.

Illustration: Subversive Crime Domain Council (domeinraad ondermijning) and district tables

Sharing relevant information and building strong networks are key to tackling subversive crime. This is the primary objective of the Subversive Crime Domain Council. Comprising executive directors from different departments, it creates an internal platform where they can meet on a regular basis and discuss cross-departmental issues and possibilities to prevent and/or reduce subversive crime like connecting data sources or create barriers for criminals.

For external coordination three district undermining roundtables have been started in The Hague (one for each police district). The Municipality, Police, the Prosecutor's Office and other partners meet to assess signals of subversive crime, and identify how to fight specific cases.

100RC NETWORK INSPIRATION

Los Angeles: Prevent crime and violence through enhanced use of data.



Building on past successful methods of data analysis around domestic violence and human trafficking, the City of Los Angeles is currently developing a scale-up strategy around methods to lower crime. As we look to tackle subversive crime and undermining in The Hague, the big data approach being taken in this Los Angeles initiative is a source of great interest and potentially important lessons.



3.2 The Hague Cyber Resilience Community Platform

To ensure our communities and businesses' preparedness for inevitable cyber attacks, this platform promotes sharing up-to-date information on cyber security and ensures that we reflect on and learn from past experiences.

WHY?

Nations, cities, municipalities and businesses world-wide are experiencing cyber attacks at an increasing rate. As cyberattack methods are continually evolving, one of the major challenges is to quickly provide relevant and accurate information. With attack methods becoming more sophisticated, implementing effective cybersecurity measures is also increasingly costly, particularly for smaller organisations with limited resources.

Private-public partnerships are an essential part of the solution in this dynamic environment. While large organisations have their own ICT department or are supported by the National Cyber Security Center, SMEs and citizens sometimes are not well enough informed about how to increase their digital resilience.

WHAT?

There is a need for an improved exchange of information on cyber security, to improve preparedness and response to a cyber attack. The Hague Cyber Resilience Community Platform will explore what is needed to improve the cyber security of organisations and citizens in The Hague with a focus on improved information exchange. The outcome will be resources that not only boost the cyber security of an organisation, but also will decrease the cost of acquiring this information.

Through additional research we will ensure that this platform meets the needs of the target groups. We will learn from other cities in the G5 Smart City network, in which The Hague takes the lead in the Safety and Security topic.

WHO?

Lead: Municipality of The Hague: RTH, CIO Office, DPS and Economic Department

Potential partners: HSD, TU Delft, University of Applied Science InHolland, HHS, Economic Board The Hague, NCSC, VNG-IBD, Fox-IT, G5 Smart City-network and others.

WHEN & HOW?

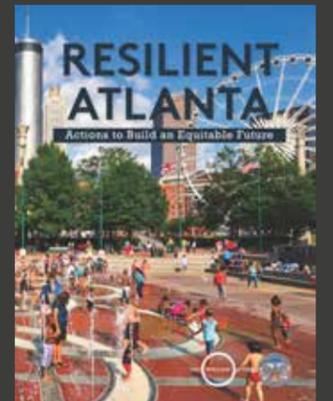
- In 2019 the City will conduct initial stakeholder analysis, research and engagement to understand the needs and capacities of different stakeholders.
- A process will be designed to develop new resources and tools to respond to needs and fill capacity gaps.
- Implementing partners will evaluate the effectiveness of the new resources.
- Further involvement of new partners.

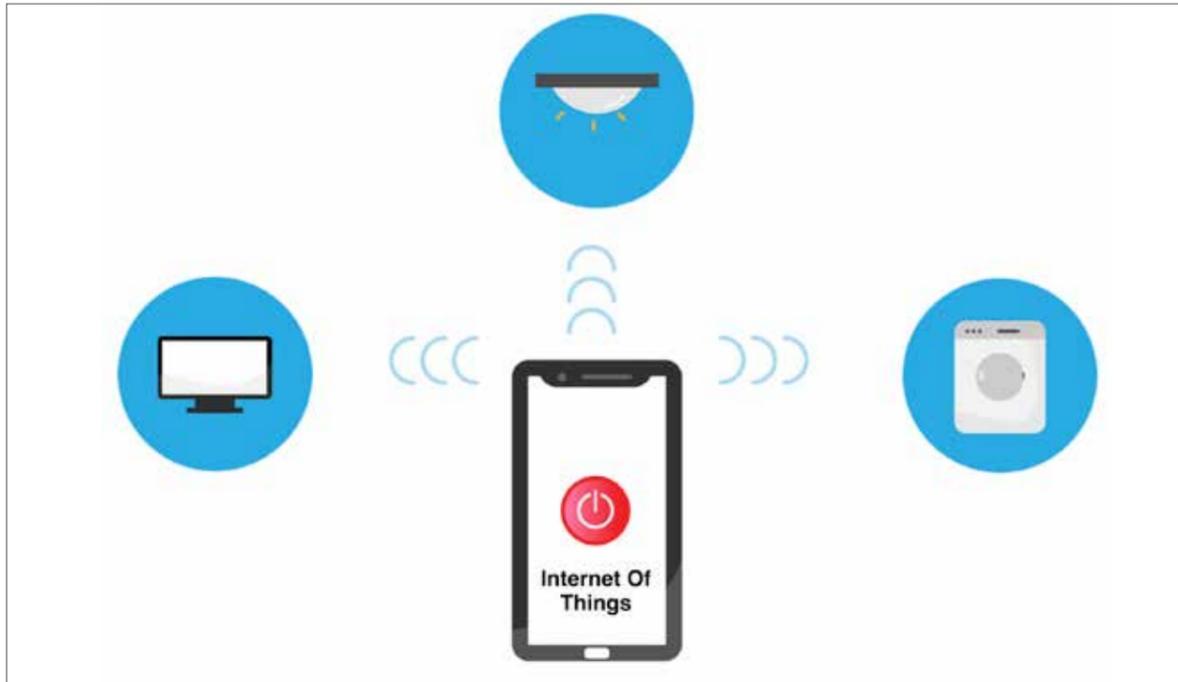
100RC NETWORK INSPIRATION

Atlanta: Cyber resilience in an increasingly smart city

Atlanta is increasingly relying on smart technology to streamline and enhance city services using real-time data. These smart systems combine hardware, software, and geospatial analytics to make our communities more digitally connected and improve our quality of life. Atlanta is working to improve its overall security posture by building an information security program that improves threat and vulnerability-management capabilities for both information and supervisory control and data acquisition (SCADA) systems.

A recent major cyber attack against Atlanta emphasises the urgency for The Hague to work on the cyber resilience and security of our digital infrastructure.





3.3 Smart City IoT Monitor

Taking action to reduce opportunities for cyber attacks on smart city infrastructure.

The project also includes an online dashboard that shows information on current cyber risks.

A robust, secure and efficient internet is in everyone's interest. The internet is not only for human-operated computers; other electronic devices are also increasingly connected to the internet. This is called the Internet of Things (IoT). The IoT is not without risks as devices can be hacked if they are not sufficiently protected.

This initiative detects unsecured IoT devices and reports them to internet providers to inform the end users. This initiative reduces the risk of disruption of our digital systems and society.

WHO?

Lead: Municipality of the Hague: CIO Office

Partners: CyberSprint , RTH

WHEN & HOW?

- The monitor will be developed and launched in the first half of 2019

100RC NETWORK INSPIRATION

Wellington: Business continuity planning support for small businesses

When the Wellington Resilience Strategy was released in 2017, around 100 SMEs per annum participated in the existing Wellington Region Emergency Management Office (WREMO) business continuity programme. Wellington is now working with partners such as Chambers of Commerce to project aims to improve the programme's reach with a view to 1,000 SMEs per annum participating.

Rather than focusing on a specific shock event, this programme helps Wellington's business community to prepare for a wide range of possible disruptions, including major events such as cyber attacks and earthquakes, as well as smaller but potentially catastrophic events for small businesses, such as equipment failures. The benefits also go beyond preparedness – business continuity planning requires organisations to examine their business process, which can identify opportunities to make operational improvements that increase overall competitiveness and efficiency.



3.4 P@CT



Building cyber skills and connecting education with employment opportunities in the new economy.

Cyber security is an important point of attention in our increasingly digital society. Entrepreneurs must be able to do business safely and consumers must be able to use digital services and products safely. P@CT is a collaboration between schools, the government and the cyber security sector in the region of The Hague. P@CT contributes to the development of vocational training programs. The students of today are the cyber security experts of tomorrow. In the coming years, P@CT will continue to grow into a sustainable cooperation platform that is part of The Hague Security Delta, the regional network organization for cyber security.

Learnings can be transferred to training programs that target children that attend primary school.

Lead and Partners: Municipality of The Hague, The Hague Security Delta, ABN-AMRO, Deloitte, Fortress Group, Institute for Financial Crime, Regional Police and Tracks Inspector, Leiden University Medical Center (LUMC), Human Power 7, Siemens, TNO, UNO2Cloud, The Hague University of Applied Sciences, Center of Expertise Cyber security, secondary education and ROC Mondriaan. Topsector Dutch Digital Delta and Platform for Information Security are supporting this initiative.

3.5 Data loss (Gegevensweg)



Increase the awareness of civil servants on digital security by playing a serious game!

Given the fact that the Municipality has access to all vital databases in our city, civil servants have to be aware of the possible impact of a data breach on the daily life of our citizens. A data breach affects people's privacy and may even facilitate criminal activities like identity theft.

To raise awareness on data security among civil servants, the Municipality of The Hague launched a game through which all staff test their knowledge and increase their awareness on digital security in a more immersive way. The game can be played together in person or remotely from multiple computers. The game was first played in 2017 and will be repeated in 2019. RTH will contribute to raise a wide audience in city hall to play this game and can also share experiences with other organisations that also want to use this game to raise awareness about data security..

Lead: The Municipality of the Hague: CIO Office



3.6 Hâck The Hague



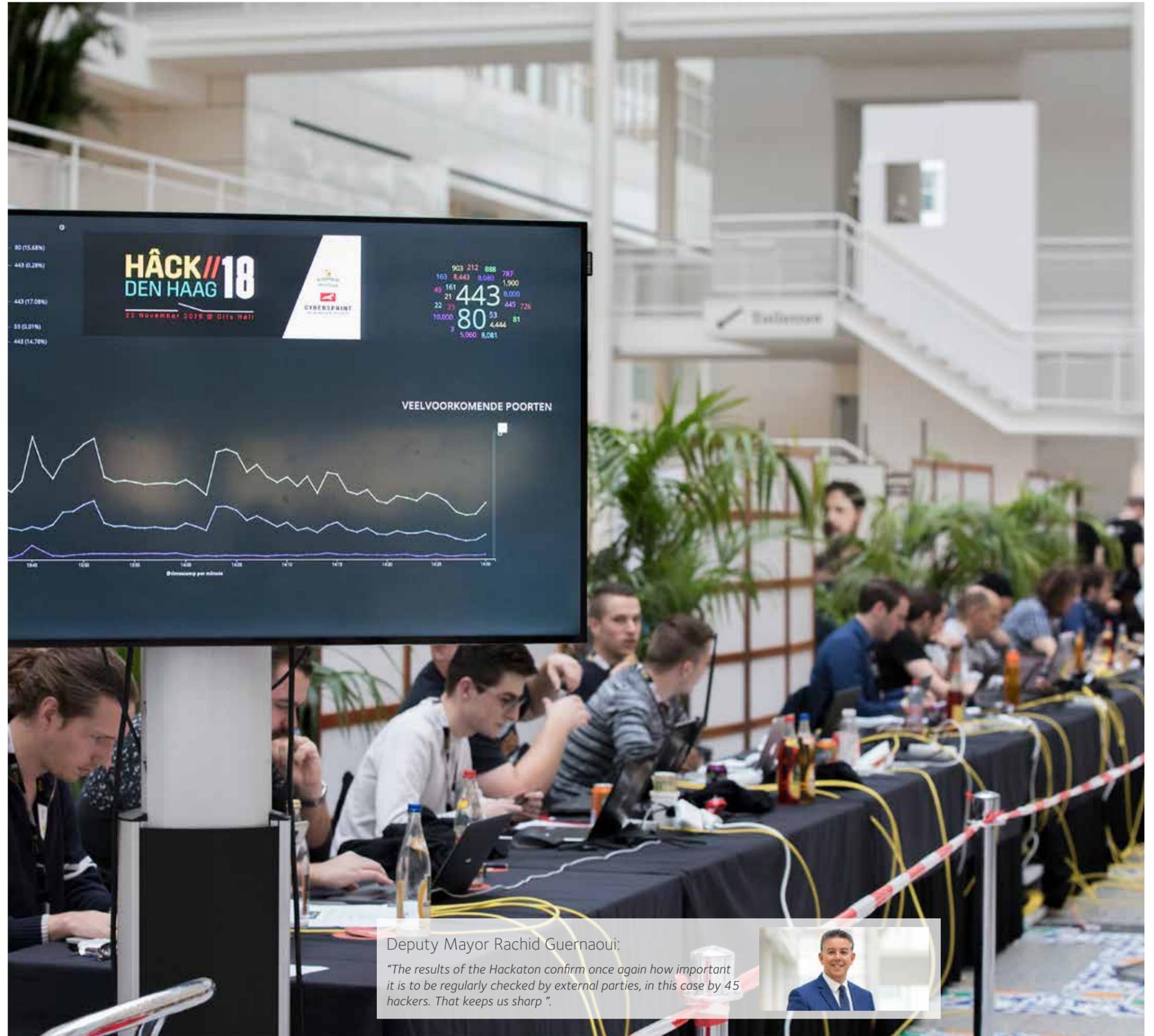
Competition for ethical hackers to help make our digital infrastructure more resilient.

Once a year, the Municipality of The Hague organises the Hâck The Hague competition, which invites ethical hackers to help identify specific data security challenges and vulnerabilities of our digital infrastructure.

Participants must agree to the conditions of this competition. The hackers are required to report vulnerabilities to the municipality and cannot share them with others. IT specialists from the municipality are ready to immediately resolve any vulnerabilities found. The event is set up as a competition where the best hackers win a cash prize. Testing the municipal systems in The Hague receives media attention, contributing to awareness on digital resilience.

Lead: Municipality of The Hague – CIO office

Partners: Ethical hackers community, Cyber sprint



Deputy Mayor Rachid Guernaoui:

"The results of the Hackaton confirm once again how important it is to be regularly checked by external parties, in this case by 45 hackers. That keeps us sharp".





3.7 Integrate resilience and climate adaptation into tender procedures

The decisions we make in projects now will have consequences for decades to come. Making climate adaptation part of every (re)development enables our built environment to become robust when faced with extreme weather.

WHY?

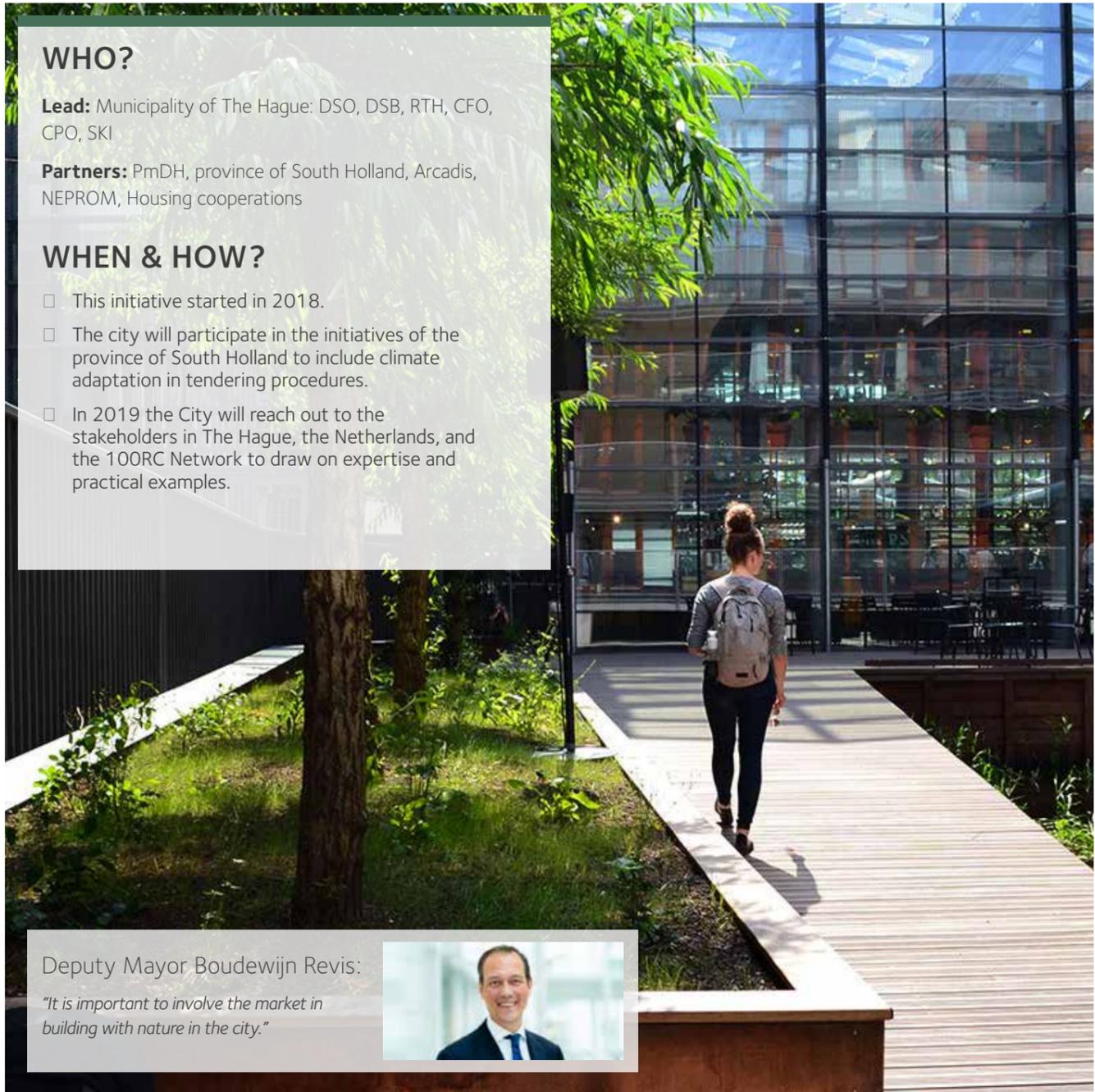
With expected population growth, The Hague is facing a housing and redevelopment challenge. By including sustainable measures in new developments we have the opportunity to reduce the impact of heat stress, drought, extreme rainfall and soil degradation, as well as promote biodiversity. By addressing multiple shocks and stresses at once we make the city more resilient.

As a first step, The Hague has signed the Climate Adaptive Building Covenant of the Province of South Holland in October 2018. This Covenant brings stakeholders together to create a framework that includes climate adaptation requirements in procurement procedures. This to ensure measures are taken in every (re) development initiated by the city.

WHAT?

This initiative ensures that climate adaptation measures are always included in the city's procurement procedures.

The Hague will be initiator in constructing, advocating and promoting the framework, bringing the relevant stakeholders together and facilitating knowledge and expertise sharing in order for the framework to benefit all stakeholders involved. We will draw on expertise and advice within The Hague, the Netherlands, and other cities in the 100RC Network.



WHO?

Lead: Municipality of The Hague: DSO, DSB, RTH, CFO, CPO, SKI

Partners: PmDH, province of South Holland, Arcadis, NEPROM, Housing cooperations

WHEN & HOW?

- This initiative started in 2018.
- The city will participate in the initiatives of the province of South Holland to include climate adaptation in tendering procedures.
- In 2019 the City will reach out to the stakeholders in The Hague, the Netherlands, and the 100RC Network to draw on expertise and practical examples.

Deputy Mayor Boudewijn Revis:

"It is important to involve the market in building with nature in the city."



100RC NETWORK INSPIRATION

New York: Adopt policies to incentivise climate resilient buildings

In One NYC plan, New York acknowledged that adapting building to climate change requires policies that encourage and incentivise investments in resilience. To support this, the city is in a process of aligning zoning and building code updates with reforms to the National Flood Insurance Program (NFIP) and expected changes to the Flood Insurance Rate Maps (FIRMs). By 2018, the City will work to develop and adopt consistent resilient design guidelines for buildings in areas vulnerable to flooding, extreme wind, and heat.





3.8 Assessing climate interventions with most impact

Informed decision-making is increasingly challenging in a complex city system faced by climate change threats. By piloting a new tool to assess which climate adaptation solutions are most effective in different neighbourhoods, the City will be able to maximise the benefits of interventions.

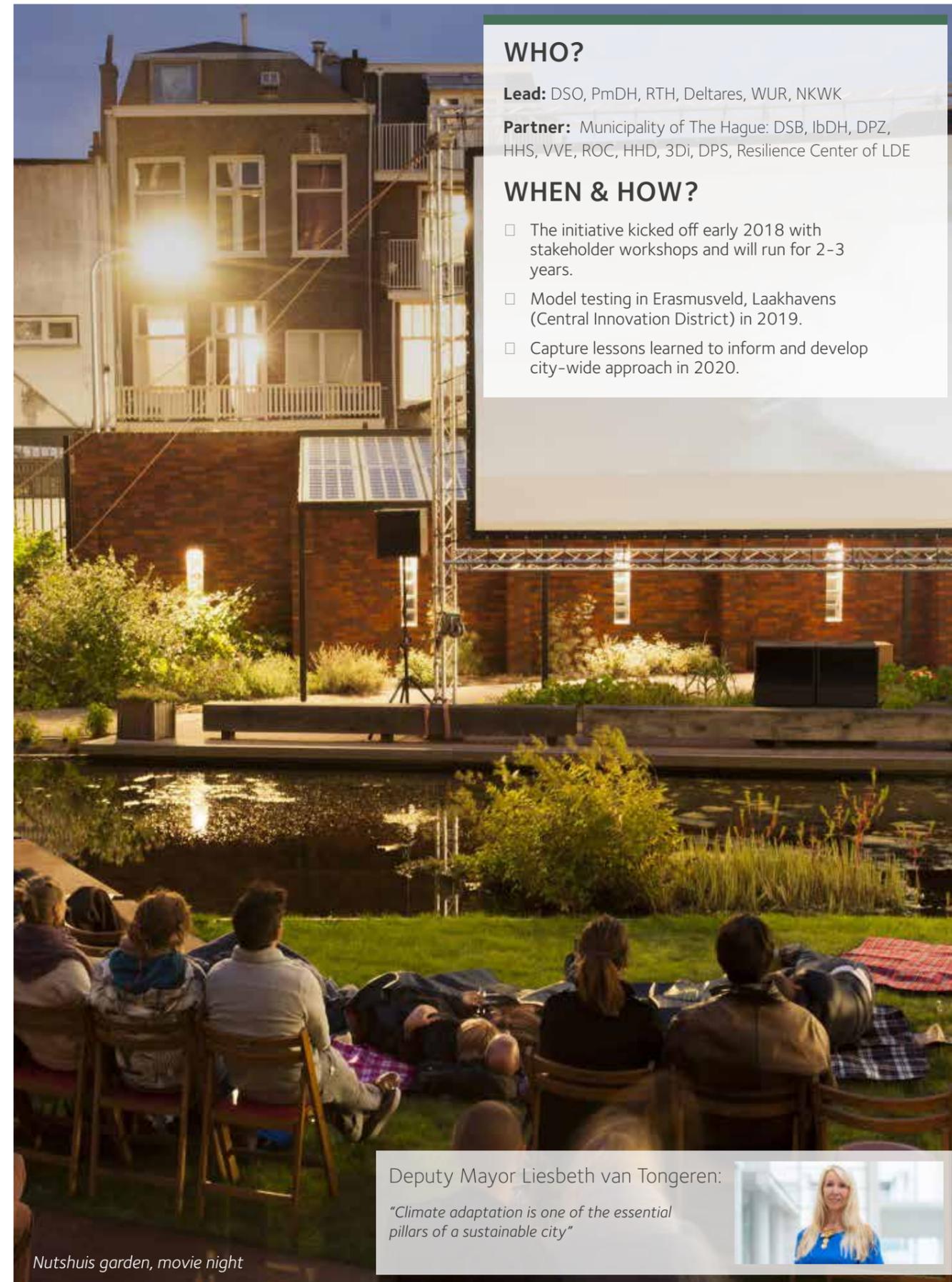
WHY?

Our city is a complex system prone to the effects of extreme weather events which will worsen under climate change. When we develop major green-blue infrastructure to address challenges such as flooding, we need more insight into the interaction between problems and solutions at neighbourhood, street and building level. With better information we can match interventions to the characteristics of the area, rather than applying a 'one size fits all' approach.

The Climate Adaptation tool will be introduced for the public space development in Laakhavens. Lessons learned from these models can be used to develop a city-wide approach on climate change adaptation. Using this model in the city of The Hague will increase insights on environmental, social and financial impacts of climate adaptation measures, and will give more insight into the dependencies between the city's systems.

WHAT?

This initiative investigates which climate adaptation measures have most impact in different neighbourhoods. We propose to link existing models - like the 3Di model developed by the city to show the impact of heavy flooding- with other resources, such as information on soil characteristics, so that we can develop more insight on each type of intervention. Models will be developed and tested in Erasmusveld and the Central Innovation District.



WHO?

Lead: DSO, PmDH, RTH, Deltares, WUR, NKWK

Partner: Municipality of The Hague: DSB, IbDH, DPZ, HHS, VVE, ROC, HHD, 3Di, DPS, Resilience Center of LDE

WHEN & HOW?

- The initiative kicked off early 2018 with stakeholder workshops and will run for 2-3 years.
- Model testing in Erasmusveld, Laakhavens (Central Innovation District) in 2019.
- Capture lessons learned to inform and develop city-wide approach in 2020.

Deputy Mayor Liesbeth van Tongeren:

"Climate adaptation is one of the essential pillars of a sustainable city"



Nutshuis garden, movie night

100RC NETWORK INSPIRATION

Paris: Transform schoolyards into cooling island “oases”

Since adopting its Climate Change Adaptation Strategy, Paris has launched several initiatives aimed at adapting urban spaces to high temperatures. A centrepiece of their approach is a programme aimed at Paris’ schoolyards, which cover more than 600,000m². Already underway at some pilot locations, it will aim to gradually replace asphalt walkways with trees and vegetation, and/or test new materials (e.g. stabilised materials, recycled wood, kinetic tiles) and new methods to cool schoolyards and dormitories. The schoolyards will become places for learning and improved wellbeing.

In The Hague we have already embarked on efforts to green our schoolyards, but as we look to expand the programme we have a valuable ally and knowledge sharing partner in Paris.



3.9 Developing cooler, greener schoolyards across the city



Too cool for school! Through subsidies to realise green schoolyards, the City of The Hague, Fonds 1818 and other partners are helping to create better learning environments while adapting our city to climate change.

The environments where children play can have a major influence on their behaviour. Evidence supports the view that children quarrel less, play more creatively and are generally safer in more natural spaces. Unfortunately, schoolyards are often paved areas that lack cooling capacity during summer.

In recent years, the City of The Hague has cooperated with Fonds 1818, Hoogheemraadschap Delfland and The Hague primary schools to bring green schoolyards to life. Using approaches such as de-paving and tree planting, green school yards increase cooling and water absorption, This adapts our neighbourhoods to climate change, while children can play in a more natural environment.

85 schools have applied for the start-up grant, leading to completion of 55 school squares (about 1/3 of all primary schools in The Hague!). New green school squares are still being delivered. The Water Board is taking the lead to further develop these spaces across our city.

Lead: City of The Hague DSB, OCW, HHD, Fonds 1818

Partners: NME, DDH

3.10 Increase the number of green roofs



The City of the Hague provides financial support for new green roofs.

Especially in a growing urban area such as The Hague, green roofs are an important tool for building climate-readiness. Green roofs help retain rainwater, save energy, improve amenity, regulate temperatures, and can increase the lifespan of roofs.

The Hague introduced a green roof subsidy in 2016. 77,000m² of green roofs have already been laid out in our city – that equates to greening of around 0.7% of the number of flat roofs available. A total surface of 11,243,705 m² of roof is still available (99.3%) for potential green roofs! The subsidy has recently been opened up to social housing cooperatives and a review into extending the subsidy is currently underway.

Lead: City of The Hague: DSO, DSB

Partners: DDH





3.11 Training municipal enforcement officers to pre-empt criminal behaviour

Maintaining a safe city for our residents is a top priority. This initiative unlocks extra capacity by training municipal enforcement officers on a new methodology that helps them detect and react to suspicious behaviour.

WHY?

As a city with an international reputation of peace and justice, The Hague is committed to offering a secure environment for its residents and visitors. Multiple public and private partners contribute to this goal by preventing or reacting to crime and other forms of malicious behaviour.

One of the approaches to identify potentially criminal intentions is behavioural profiling. This is a methodology intended to help law enforcement officers to accurately detect abnormal behaviours and potential criminal subjects and take pre-emptive action.

In 2018 The Netherlands saw an example of how suspects can be identified through suspicious patterns of behaviour. A man who stabbed two American tourists in Amsterdam Central station was stopped by police just nine seconds after he launched his attack.

One of the reasons for this quick intervention was that a few minutes after the suspect arrived at the train station his abnormal behaviour had come to the attention of a police officer trained to spot pickpockets and people potentially planning to undertake extremist acts.

Behavioural profiling techniques can be used by the police but also by private security firms, public transport personnel and municipal enforcement officers. Training multiple sectors facilitates cooperation between various stakeholders.

WHAT?

In 2018, several teams from The Hague Police Unit undertook training on behavioural profiling. Co-financed by RTH, this programme will be expanded to include municipal enforcement officers.

WHO?

Lead: City of The Hague: Department of Public Order and Safety, RTH, SDR Academy

Partners: a training provider will be selected through a procurement process.

WHEN & HOW?

Training to start in 2019





Partner across our region, the Netherlands and the world to tackle shared resilience challenges that transcend borders.

The big challenges facing The Hague do not stop at the city's boundaries. As a city, we can take a leading role on issues like climate change and cyber security, but true resilience also means learning from others in different sectors and geographies.

The Hague is part of the Randstad, one of Europe's most important economic regions. With one of Europe's major ports on our doorstep and two airports within close vicinity, a key reason for the region's success is its connectivity and eagerness to collaborate. Our city already works extensively with partners – such as universities and other knowledge institutes – to advance innovation and strengthen sustainable development. We regularly use cutting-edge science and data to inform our decision making, and we experiment with innovative

funding models such as Health Impact Bonds to deliver improved outcomes more cost-effectively for our citizens. However, we can always do more and we can do it more intelligently.

The Hague has a close connection with Rotterdam – together with neighbouring municipalities, the two cities collaborate in the Metropolitan Region Rotterdam The Hague (MRDH). As fellow 100RC cities we have an opportunity to lead the way in regional collaboration for resilience. We hope to share these lessons with the 100 Resilient Cities Network, as well as learn from the leading practices of other cities around the world.

This section proposes new cross-boundary collaborations which:

- Strengthen regional systems and critical infrastructure.
- Embed resilience thinking into our ways of working.
- Maximise opportunities from digitisation and build an inclusive job market.
- Promote The Hague's approach to resilience on the global stage.



SCALE 4

COLLABORATE IN THE REGION AND BEYOND



The Hague

Learning from other cities

Washington DC, *Cooperation on cyber security, the social value of infrastructure and public space*

New York, *Adopt policies to incentivise climate resilient buildings*, Pg. 87

Montreal, *The Centre for the Prevention of Radicalization Leading to Violence (CPRLV)*, Pg. 45

Atlanta, *Cyber resilience in an increasingly smart city*, Pg.81

Cooperation on cyber security and municipal continuity management

Los Angeles, *Expanding access to financial literacy and security resources*, Pg. 49

Prevent crime and violence through enhanced use of data, Pg. 79

New Orleans, *Building the resilience of interdependent systems*, Pg.103

Medellin, *Elevated metro system to contributing to a safer city*, Pg.63

Greater Manchester, *Cooperation on cyber security and social aspects of emergency response*

Glasgow, *Develop an understanding of what makes a strong community leader*, Pg. 43

Paris, *Transform schoolyards into cooling island "oases"*, Pg. 90

Vejle, *The FABlab@ schoolsdk Initiative*, Pg. 55

Rotterdam, *Cooperating on critical infrastructure robustness and resilience training for local government*

Wellington, *Business continuity planning support for small businesses*, Pg. 82

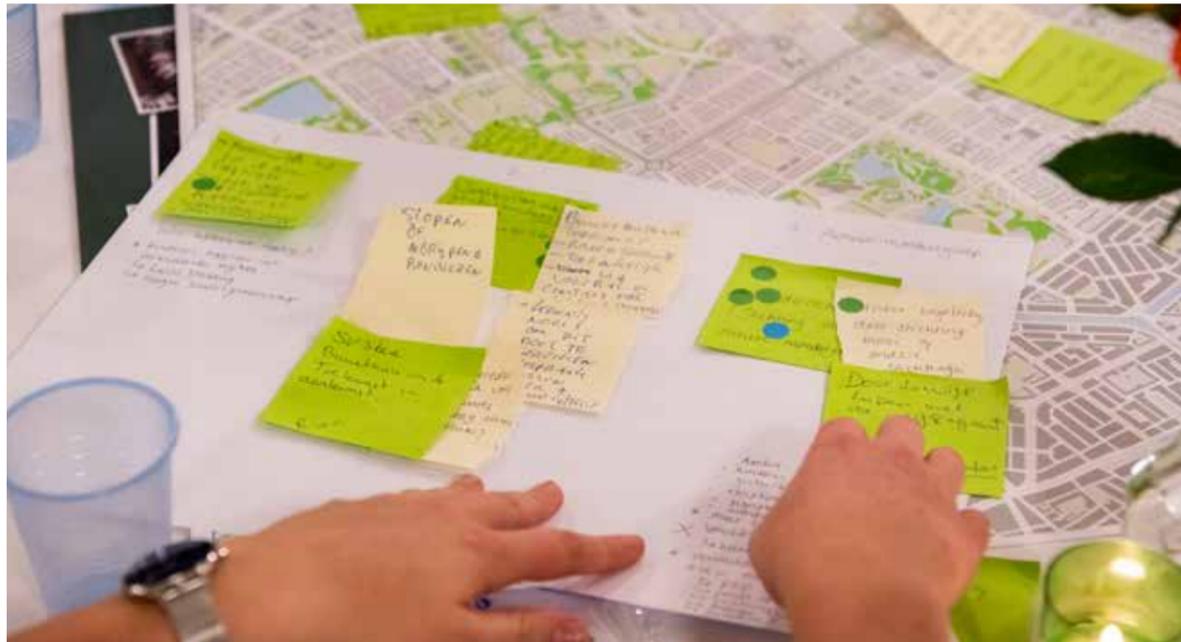
Sydney, *Get Prepared – 100,000 ready Sydneysiders*, Pg. 73

Cape Town, *Ikhaya le Langa Enterprise and Entrepreneur Academy*, Pg. 65

Cooperation on cyber security and inclusive community development

Melbourne, *Resilience training for local government*, Pg. 99

- Key:
- The Hague
 - 100RC Network Cities
 - Inspirations
 - Collaboration with other cities



4.1 Resilience training for the municipality of The Hague

Breaking siloes and improving collaboration between people in our city is core to a truly resilient The Hague. A resilience curriculum will be designed and delivered to support more people to practically apply and embed resilience thinking in their everyday work.

WHY?

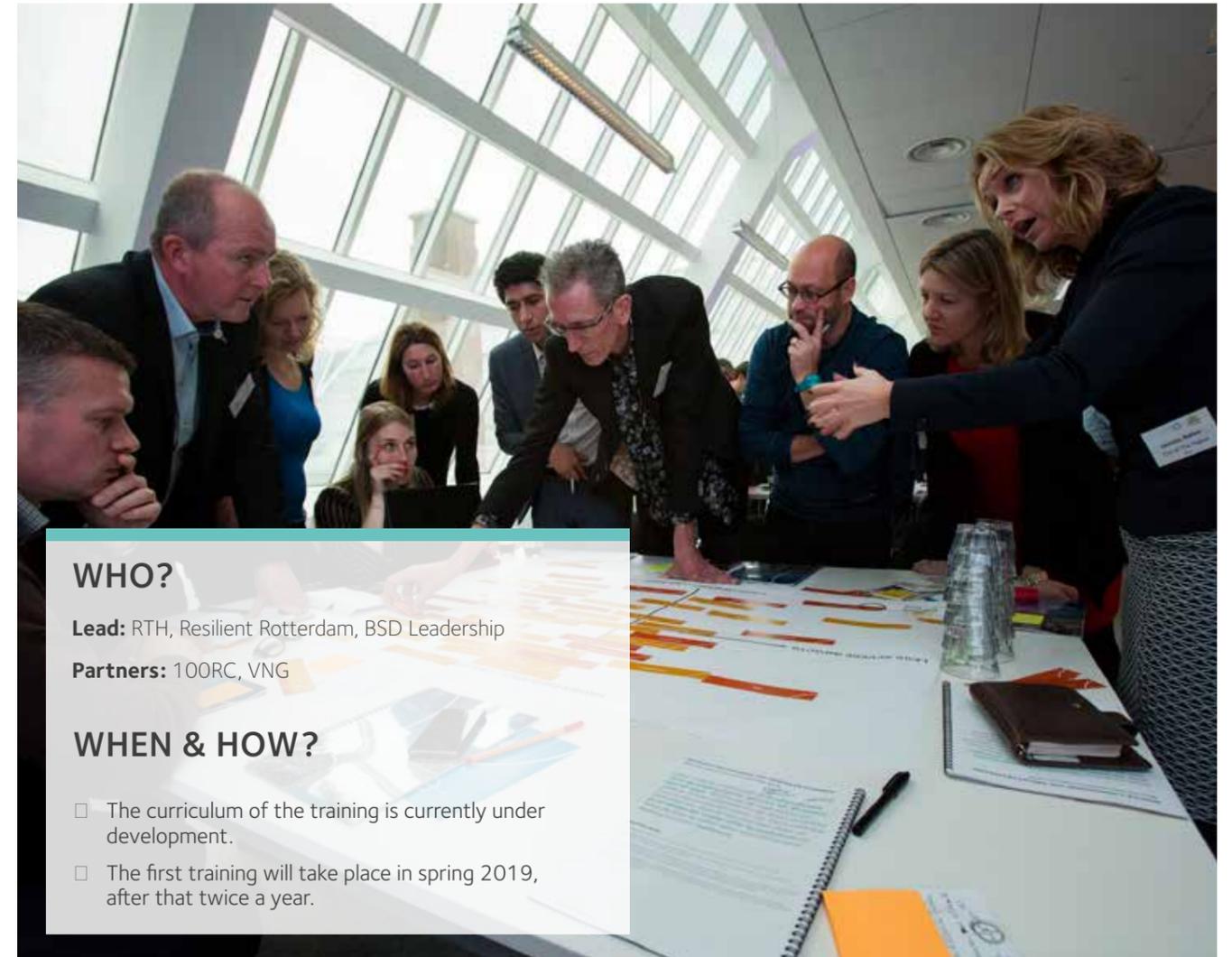
The Hague is home to many amazing examples of collaboration that improve quality of life for our citizens. But despite these best efforts, we can still be a city of silos where opportunities for integration are overlooked. A new way of thinking is necessary. One in which municipal and other leaders embed greater collaboration and integrated thinking into problem solving and project delivery.

WHAT?

Together with the City of Rotterdam we will develop a resilience training programme for managers. Covering both urban and personal resilience, the programme will result in managers who are better equipped to identify multiple opportunities in projects, can work more effectively across organisations, and can healthily withstand individual, day-to-day challenges that come with modern working life.

We will seek input from other cities in the 100RC network that have successfully developed similar training programmes, such as Melbourne. Lessons from our initial training for managers will be used to develop future modules for project managers, trainees and others in the city.

We will also explore integrating the 'resilience scan' into our training. Developed by 100RC and Rotterdam, this process and tool is designed to help evaluate the resilience benefits of proposed and existing projects in a city. Projects are analysed by means of seven resilience qualities: flexibility, inclusiveness, integration, reflectiveness, redundancy, robustness and resourcefulness. The more qualities that can be found in the project, the more it may assist a city to withstand and bounce back from shocks and stresses. A pilot of the training has been developed.



WHO?

Lead: RTH, Resilient Rotterdam, BSD Leadership

Partners: 100RC, VNG

WHEN & HOW?

- The curriculum of the training is currently under development.
- The first training will take place in spring 2019, after that twice a year.

100RC NETWORK INSPIRATION

Melbourne: Resilience training for Local Government

A major focus of Melbourne's Resilience Strategy is on embedding resilience principles and skills in the city's 32 municipalities. A key method for achieving this has been development of a new training program aimed at municipal officer level staff and above.

Since the release of Melbourne's strategy in 2016, Resilience Fundamentals, a full-day introductory training session, has been delivered to more than 120 participants representing 16 metropolitan Melbourne councils and an additional 27 organisations. Bespoke training on resilience theory, resilience frameworks, and applied activities has been developed and delivered to partner organisations such as Local Government Professionals and the UN Global Compact Cities Programme. In addition, Resilient Melbourne is supporting those who have completed training to act as resilience ambassadors within their own organisations. They are currently working with training providers to embed resilience into existing training run by these organisations, including leadership and induction suites.





4.2 Enhancing our Social Return on Investment policies on public procurement

By enhancing our Social Return on Investment policies on public procurement, we can boost the business climate for a specific category of social enterprises in our region, leading to sustainable participation of people with a distance to the job market.

WHY?

A job provides people with income and a social network: both important building blocks for resilience. However, getting and keeping a job is not for everyone. Some of our residents need intensive assistance and guidance, making them less employable in the regular job market.

30% of the workforce consists of people at a distance from the labor market.

This improves the business environment for this specific category of social enterprises, resulting in a professional and sustainable integration of people into the labor market.

WHAT?

The municipality of The Hague prescribes contractors of larger projects to achieve a social return on investment. This means that the contractor uses 5% of the contracted budget to help people with a distance to the labor market. Contractors can meet this obligation by (1) providing these people with work themselves, (2) by purchasing products or services from a social employment programme, or by (3) offering activities or training that reduce the distance between this group and the labour market.

Building on this experience, The Hague wants to offer contractors a fourth opportunity to meet their SROI obligations. In addition to the three existing options, contractors can also choose to purchase goods or services from regional social enterprises, of which at least

WHO?

Lead: City of The Hague: SZW

Partners: Dutch Employee Insurance Agency (UWV), RTH

WHEN & HOW?

Together with our neighbouring cities and the Dutch Employee Insurance Agency (UWV), The Hague will build a uniform SROI-policy in 2019. RTH will facilitate knowledge exchange with other cities from the 100RC network that have a tradition of using social enterprises to build an inclusive society.



Cyber Resilient cities event at One Conference of the Dutch National Cyber Security Center

4.3 Building a network of cyber resilient cities worldwide

Cities around the world increasingly face rapidly changing cyber threats. To facilitate an open dialogue of lessons learned and share expertise, The Hague will develop an exchange platform between cities in the 100RC Network on cyber resilience.

WHY?

Developing more sophisticated technology is not enough to be cyber resilient. As so many cities are facing cyber threats, exchanging expertise and knowledge is essential to keep up with new developments in this field.

This expertise will also feed into the G5 Smart City network in which The Hague has the lead for Safety and Security.

WHAT?

At the One Conference of the National Cyber Security Center in The Hague in 2018, The Hague, Atlanta and Greater Manchester exchanged experiences on digital resilience. It reinforced the urgent need to cooperate and learn from each other's experiences.

To facilitate the exchange of knowledge and experience on cyber resilience, RTH has initiated an online cyber security group for cities in the 100RC network. This group will post news, have online and face to face meetings, and identify ways to effectively share network expertise beyond the 100RC cities. The platform also serves as a hub for cyber security experts, so that they know who to approach in the event of a cyber incident.

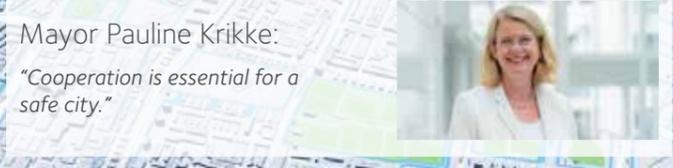
WHO?

Lead: City of The Hague: RTH, CIO office, DSO

Partners: 100RC, cities of Atlanta, Greater Manchester, Cape Town, Washington DC, Singapore, and others who are interested, G5 Smart Cities network, VNG

WHEN & HOW?

- In 2018 Resilient The Hague created an online group on the 100RC community platform.
- In 2019, RTH will be sharing news monthly, and will organise educational webinars and meetings.



Source: SIM-CI

4.4 Identify and mitigate risks from interdependent critical services

The Hague's critical infrastructure is highly connected. Without the proper precautions, a disruption of one service can lead to failure in other services. By collaboratively identifying the interdependencies between critical infrastructure, stakeholders in our region will be able to take practical, evidence-based steps to improve the robustness and flexibility of critical service delivery.

WHY?

Our city's critical infrastructure providers aim to maximise the reliability and quality of their services. Their reputation, and indeed the reputation of the Netherlands, is strong in this area; however, maintaining this reputation means continuing to invest and innovate.

More work is needed to understand possible 'cascading effects', which refers to when a disruption of one critical service leads to failures of other services that depend on it. As our city becomes more densely populated and complex, such events pose a larger risk. For example, building more high rises links water supply more closely to electricity supply, as the water needs to be pumped to the upper floors.

WHAT?

In the first phase we will deploy the Circle Tool developed by Deltares, which is a methodology that systematically identifies dependencies. Linking together stakeholders expertise and open data, the tool provides insight into the dependencies of a selection of The Hague's critical infrastructure networks. A potential second step is to explore the possibilities to create a visualisation that shows dependencies and models cascading effects in a model.

We will closely work with other cities and regions like Rotterdam and the region of the Waterboard Hollands Noorderkwartier, which have experience with using visualisations and simulation models. We will also connect with the EU DRIVER+ project, which tests tools for understanding cascading effects.



WHO?

Lead: RTH

Partners: City of The Hague: DSB, DSO, DPS, Deltares, Safety Region Haaglanden, Dunea, Stedin, HHD, HTM, City of Rotterdam, Province of South Holland. EU DRIVER+, 4TU Resilience Center. We welcome other partners that want to contribute to this initiative.

WHEN & HOW?

- This initiative will be implemented between 2019-2021
- The Deltares Circle workshop was held in January 2019. The participating organisations will decide on possible next steps, such as bringing together data in a visual model.

100RC NETWORK INSPIRATION

New Orleans: Building the resilience of interdependent systems

Hurricane Katrina in New Orleans is one of the most well-known examples of a low-lying city facing devastating impacts from an extreme weather event. Shocks like hurricanes have cascading effects on the city's critical infrastructure systems. When one system is compromised, it negatively impacts the function of other critical systems. For example, a power outage during a storm can affect energy-intensive pumping stations, resulting in severe street flooding.

The New Orleans Resilience Strategy provides a strong commitment to understanding and comprehensively managing these interdependencies. This includes major investment in comprehensive and innovative urban water management projects and new standards for resilient design. As a fellow low-lying city we stand to learn a great deal from New Orleans as we continue our journey in The Hague to understand and manage the risks posed by interdependent systems.



4.5 Mitigation of cyberattacks



Sharing good practices by creating a guide to mitigate cyberattacks.

To actively prepare ourselves for what we need to do in the event of a cyber crisis, a cyberattack mitigation guide will be developed by the four largest Dutch cities (Amsterdam, The Hague, Rotterdam, and Utrecht).

The guide will specify potential stakeholders to involve, their roles and instruments for intervention. The guide will not only increase resilience in the event of a crisis, but will also provide a picture of the critical networks in these cities and potential vulnerabilities.

Lead: G4, Gemeente Den Haag: Directie Veiligheid

Partners: Ministerie Justitie en Veiligheid

4.6 Coastar project



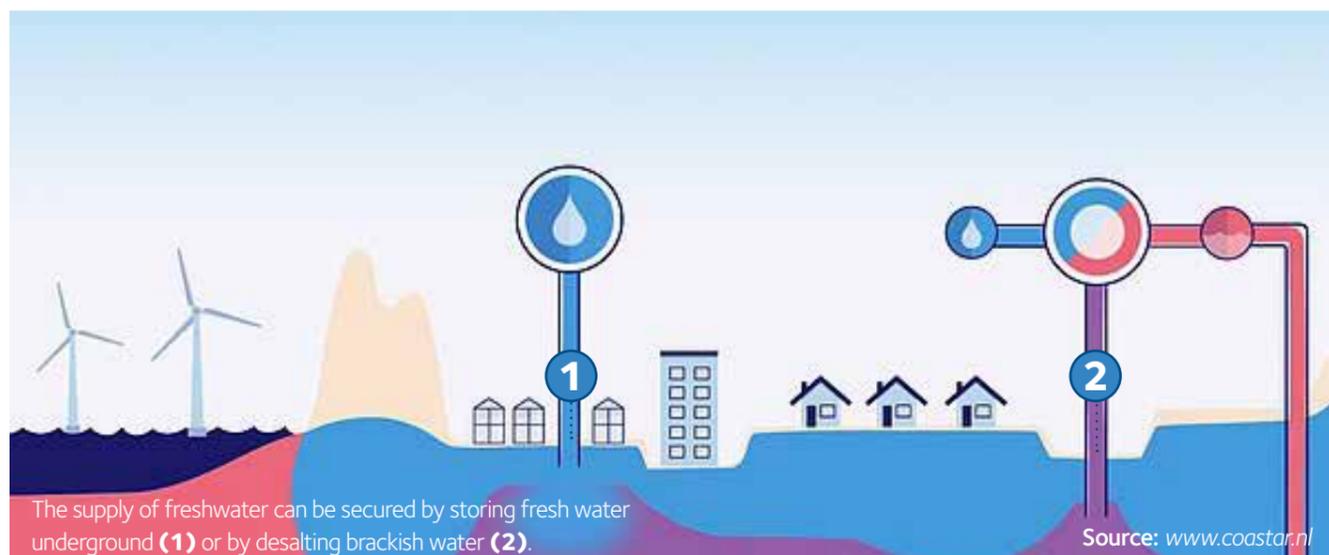
Water is life. This project explores alternative strategies for water management to increase the robustness and flexibility of our water supply.

A growing population and an increase in extreme weather events increasingly puts The Hague's fresh water supply under pressure. As a coastal city, we also must be aware of the risks of salinisation. Innovative thinking is necessary to address these challenges.

Deltares is working with KWR and Arcadis to study the feasibility of large-scale underground storage of fresh water in the The Hague-Westland-Rotterdam region. Commissioned by the Province of South Holland and Dunea and other organisations, this research will build our knowledge on how to increase the fresh water buffer under our city and make our water system more robust against future shocks. There is also potential for using the thermal energy of the groundwater storage, although further investigation is needed.

Lead: Province of South Holland

Partners: KWR, Arcadis, Deltares, Dunea, City of The Hague: DSB



The supply of freshwater can be secured by storing fresh water underground (1) or by desalting brackish water (2).

Source: www.coastar.nl

Relationships between our initiatives

Throughout this document we demonstrated the multiple benefits of initiatives by showing how they relate to various shocks and stresses, resilience opportunities, and the SDGs. Based on the work of one of The Netherlands' most famous artists, Piet Mondrian, this figure below shows how our initiatives will create benefits across the four dimensions of the City Resilience Framework (see page 11).





IMPLEMENTING RESILIENCE IN THE HAGUE

Monitoring and evaluating the Resilience Strategy

The Hague's Resilience Strategy is the result of the invaluable investment of many people. Time, insight and inspiration have been generously provided through discussions, brainstorming sessions, workshops and research. The result is a plan for the city with concrete actions to be built upon over the coming years.

However, resilience is not a final goal, but a dynamic process that regularly requires adjustments.

In response to the ever-changing characteristics of city life, the City makes a strong commitment to monitor, assess and evaluate the core elements of the Resilience Strategy:

The initiatives

The RTH team will evaluate initiatives in this strategy using an approach called Realist Evaluation. Initially developed by Ray Pawson and Nick Tilley, the approach recognises that the relations between cause and effect can be hard to determine in an adaptive and complex system like a city. Therefore, realist evaluations aim to understand not only if an initiative makes an impact, but also how and in what circumstances it does so. A key strength of the approach is the ability to take the lessons learnt from a specific initiative (e.g. in a neighbourhood of The Hague) and explore if it could be applied in different contexts, like other neighbourhoods and cities across the region and the 100RC network.

Methods for data collection and analysis will vary for each initiative, drawing both on qualitative and quantitative sources. Where possible we will draw on sources like The Hague's Urban Data Center, Dutch Statistics and the Leefbaarometer. 210/5000 To facilitate the exchange of knowledge between The Hague and the 100RC network, standardised indicators and models (such as the City Resilience Framework and the SDGs) will be used where possible.

The journey to embed resilience

Evaluating the Resilience Strategy is not limited to individual initiatives. In collaboration with the Mayor, Deputy Mayors, and other stakeholders inside and outside the municipal organisation, RTH also aims to track:

- Progress in encouraging new types of collaborations, both within and outside the Municipality.
- The awareness of the concept of resilience through events and the RTH website.
- The contribution of the initiatives to achieving the SDGs.

An active resilience movement

The City of The Hague welcomes new ideas from everyone in our city and region. The RTH team is ready to work side-by-side with each and every one of you. This is a vital part of creating a resilience movement in The Hague. RTH will continue to engage with the city and its organisations, communities and institutions by implementing actions throughout the year; this will include events, workshops, speak at conferences, and training sessions on resilience. On an annual basis, RTH will organise a resilience day to share the monitoring and evaluation of the initiatives that are part of the strategy.

Resilient The Hague provides regular updates through our website and through the network Futureproof The Hague. Futureproof The Hague has been initiated to activate people in the city on topics and projects related to sustainability, smart cities and resilience. Members can post blogs, share activities, organise meet-ups and inspire each other. The website will also host an interactive map with initiatives on the different topics, where people can also add their own initiatives and ideas.

Visit: www.resilientthehague.nl or www.futureproofthehague.com
Email: resilient@denhaag.nl **Follow:** @resilienthague



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Over the last year, the Resilient The Hague team consisted of Anne-Marie Hitipeuw (Chief Resilience Officer), Olivier Hendriks (Deputy Chief Resilience Officer), Ali el Messaoudi (Programme Advisor), Inge Toussaint (Communication advisor), Elles de Vogel, Dewi Eshuis, Nahid Jafarov (participants of the municipal work experience program), Mirjam van der Kraats and Anouk Roeling (interns).

The Hague Resilience Strategy is the result of the efforts of hundreds of people. We would like to thank all of them and more, in particular:

The Mayor and Deputy Mayors of The Hague, the City Manager, the Municipal Management Team, the colleagues of all The Hague municipal departments (BSD, DPZ, DSB, DSO, OCW, SZW).

The Resilient The Hague Advisory Committee: Chairman Pauline Krikke (Mayor of The Hague), Maarten van Aalst (director Red Cross Climate Center), Mohamed el Achkar (director The Hague Department of Public Affairs), Karin van Dreven (director Haag Wonen), Peter Hennephof (City Manager), Esther Lieben (commander Fire Brigade Haaglanden), Marc van der Linden (CEO Stedin), Paul van Musscher (chief of police The Hague), Kim Putters (director The Netherlands Institute for Social Research), Hans van der Vet (director The Hague Department of Public order and Safety), Wim Drossaert (director Dunea), Marijn Fraanje (CIO The Hague), Henk Ovink (Special Envoy International Water Affairs).

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Abbreviations

Abbr.	Meaning
100RC	100 Resilient Cities
BART	Civilian Alert Real Time
BHV	Inhouse emergency response
BIBOB	Promotion of integrity assessments by the public administration
BSD	Department of Municipal Administration
CBS	Central Bureau for Statistics
CFO	Chief Finance Officer
CGI	Client Global Insights
CID	Central Innovation District
CIO	Chief Information Officer
CISO	Chief Information Security Officer
CJG	Centre for Youth & Family
CPO	Chief Procurement Officer
CRF	City Resilience Framework
CRO	Chief Resilience Officer
CZ	Central Healthcare Insurance Fund
DA	Discovery Area
DDH	Sustainable The Hague
DPS	Department of Public order and Safety
DPZ	Department of Civilian Affairs
DSB	Department of City Management
DSO	Department of Urban Development
DSO-PSO	Department of City Planning - Programme management, Strategy and Research
DTC	Digital Trust Centre
DV	Department of Public order and Safety
ECP	Electronic Commerce Platform Nederland
HCSS	The Hague Centre for Strategic Studies
HEIT	The Hague Economic Intervention Team
HHD	District Water Control Board of Delfland
HHS	The Hague School of Applied Sciences
HSD	The Hague Security Delta
HTM	The Hague Tramcompany
IbDH	Engineering Agency The Hague
ICP	Intermediary Contact Point
IVN	Institute for Nature Education and Sustainability
JPF	Youth Perspective Fund
KWR	Water cycle Research Institute
LUMC	Leiden University Medical Centre
MICT	The Mechanism for International Criminal Tribunals
NCSC	National Cyber Security Centre
NEMO	New Metropolis Science Museum
NEPROM	Association of Dutch Development Companies
NME	Nature and Environment Education
OAT	Opportunity Assessment Toolkit
(O)CTO	(Office of) Chief Technology Officer
OCW	Department of Education, Culture, Welfare
OPCW	Organisation for the Prohibition of Chemical Weapons
PmDH	Department of Project Management of The Hague
PRA	Preliminary Resilience Assessment
RR	Resilient Rotterdam
RTH	Resilient The Hague
SCP	The Netherlands Institute for Social Research
SDG	Sustainable Development Goals
SKI	Strategy, Framework Development, Purchase
SME	Small & Medium Enterprises
SROI	Social Return on Investment
SVB	Social Insurance bank
SZW	Department of Social Affairs and Employment Projects
TIH	Technical Innovation House
TNO	The Netherlands Organisation for applied scientific research
TNS NIPO	The Netherlands Institute for Public Opinion and Market Research
TU Delft	Technical University Delft
UWV	Employee Insurance Agency
VGZ	Public Health Insurance Institute
VNG-IBD	Association for Dutch Municipalities - Data Security Services
VNO-NCW	Federation of Dutch Enterprises - Dutch Association for Christian Employers
VVE	Property Owners Association
WUR	Wageningen University & Research



Zuiderpret, nature education playground in Zuiderpark

10 simple things you can do right now to become more resilient:

1. Make sure your phone settings allow you to receive alerts from NLAlert. <https://crisis.nl/nl-alert/>
2. If you don't have smoke detectors in your home, order and install them now.
3. Download the free Red Cross First Aid app to receive expert advice for everyday emergencies. For this and more apps go to <https://www.redcross.org/get-help/how-to-prepare-for-emergencies/mobile-apps.html>
4. Learn how to switch off the electricity, gas and water.
5. Check your home's risk of flooding at www.overstroomik.nl.
6. Find out the location of your nearest Automated External Defibrillator (AED) at <https://aed.rodekruis.nl/>
7. Change your online passwords so that you have a different one for each account. <https://crisis.nl/wees-voorbereid/cyberaanval/>
8. Store an emergency kit at a high and dry spot in your house (think about bottles of water, waterproof matches, toolbox, blankets, first aid kit and non-perishable food). See <https://crisis.nl/wees-voorbereid/noodpakketten/> for more details.
9. Learn at least one relative or friend's phone number by heart so you can contact them in case of an emergency.
10. Download the BurgernetApp to contribute to the safety in your neighbourhood. <https://www.burgernet.nl/>



Urban resilience is the capacity of individuals, communities, institutions, businesses and systems within a city to survive, adapt and grow no matter what kinds of chronic stresses and acute shocks they experience.

The 100 Resilient Cities Network - pioneered by The Rockefeller Foundation, helps cities around the world to become more resilient to social, economic and physical challenges that are a growing part of the 21st century.

For further more information or questions please email: resilience@denhaag.nl or visit our website www.resilientthehague.nl.

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