

# EVERY DROP COUNTS IN MAKING NEW YORK RAINPROOF



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From the relative safety of Amsterdam, we watched in shock the devastation caused by Ida to properties and infrastructure, listened to the personal suffering, and were horrified by the number of deaths. While it is critical to have immediate action and funding to recover, such storms also underline the need for long-term planning. Cynically as it may sound, it is important to leverage this crisis into the funding necessary for “rainproofing” New York. Watching these events repeat again and again, not only in the US but all over the world, we feel that forward planning will bring justice to impacted communities and to the climate crisis we are in. With funding critical, we hope that by learning from each other we will also manage to use funds efficiently. This is necessary if we want to meet the scale of the challenge ahead. Rather than waiting for the cloud to burst over your city and pay for the damage, it is better to proactively make sure that all investment decisions in infrastructure and real-estate are made Rainproof. That is what we have experienced in Amsterdam.

## Amsterdam Rainproof

Amsterdam learned from the cloudburst in Copenhagen in 2011 and recognized its own vulnerability to flash foods. The public water-cycle company, Waternet, launched “Amsterdam Rainproof,” a semi-independent program for making the capital

of The Netherlands “cloudburst resilient” by reducing damage from heavy rainfall while creating a healthier, greener city by investing in infrastructure that capture, detain, infiltrate, or transport stormwater, as well as projects that “harvest” rain for reuse or waterproof basement and metro entrances. Eight years later, successes can be seen on multiple scales in rainproof projects on public and private land. Rainproof enabled many policy changes and created an awareness that reached far beyond the more than 120 organizations participating in the still growing Rainproof network.

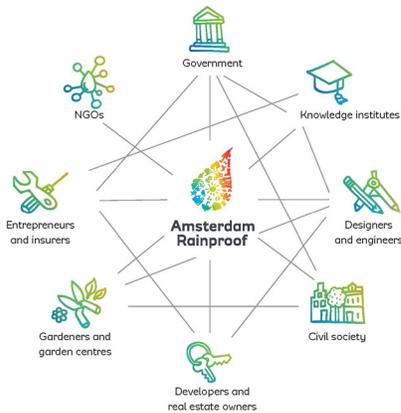
There are three important components that can be translated to New York: a network strategy is key, clear communication is essential, and capacity building in the public sector is required.

**“THE MOTTO ‘EVERY DROP COUNTS,’ HELPS TO MAKE THE PEOPLE AWARE THAT THEY ARE CO-OWNERS OF BOTH THE PROBLEM AND ITS SOLUTIONS”**

A network strategy is key

The most important lesson learned from Amsterdam Rainproof is that dealing with

cloudburst events demands a collaborative, comprehensive approach that can't be done by one agency alone. Rain falls everywhere. Therefore, the whole city – its streets, parks, private gardens and roofs – should act as a sponge. From the start, Rainproof was tasked with involving all stakeholders in rainproofing Amsterdam: this includes the municipality and water authority along with businesses, property owners, residents, consultants, and education institutions. Rainproof started as a network strategy to connect and activate all parties that can contribute. It incentivized private parties such as insurers, garden retail centers, and housing corporations structurally to act as middlemen for reaching larger groups, particularly home-owners. Additionally, it collaborated with existing government and non-government initiatives where the interests aligned to work together, broadening our reach.



### Clear communication is essential

The motto “Every drop counts,” helps to make the people aware that they are co-owners of both the problem and its solutions. Rainproof developed a tone that is accessible and inviting, utilizing drawn images so people want to take part. All communication demonstrates the variety of situations that are reflected in an online platform and folders with tips and tricks for the user’s garden, street, or neighborhood and how they (as citizens, as investors, or as civil servants) can take actions to make it more rainproof over time.

### Capacity building in the public sector is required

To be successful we need all departments and organizations of the public sector to be involved. We must ensure that they understand

how Rainproof influences their own work, their policies, and their investment decisions within and across departments. Even though the sewer system plays a key role, cloudburst resilience can't be solved in technical pipes and pumps alone. Therefore, Amsterdam Rainproof has mainstreamed Rainproof into public policies and technical guidelines regarding streets, parks, procurement, and others. It has played a part in connecting different departments and has been training civil servants in all sectors involved so that when they do what they do, they do it Rainproof.

### Every investment Rainproof

Whilst Amsterdam is different from New York, we can take a Rainproof approach. We can make New York rainproof by making sure that climate change is taken into account in every investment decision, by any actor made (from how to plant your garden to how to organize and maintain your street to how to build a new building), and that all these measures, taken over a period of time, taken during their natural investment cycles, will make communities rainproof. Every action counts, every step counts, every drop counts.

## Make your neighbourhood rainproof.

### How? Use these tips!

Amsterdam Rainproof  
Amsterdam Rainproof shows you, and all the people of Amsterdam working together. We show a concrete goal to help Amsterdam handle the increasingly frequent downpours. Each letter we want to make better use of the free rainwater that currently flows directly into the drains. The extreme rainwater causes damage, primarily because the city is increasingly covered in buildings, asphalt and paved gardens – no raindrops can seep through!

Introducing Rainproof initiatives together:  
If you add improvements to your house or garden, make them Rainproof if you'd like to make an even bigger difference, work with others on joint initiatives. Rainproof wants to link citizens, entrepreneurs, knowledge workers and public servants in ongoing projects and new initiatives. When we work together, we can transform Amsterdam into a city that uses smart solutions to make the best of heavy rainfall.

What makes the difference:  
The following suggestions offer tangible tips for what you can do – as a local resident or as professional. Visit Rainproof for a comprehensive overview. If you have an idea, strategy or other contribution for Rainproofing your city, let us know! We'd be happy to link you to other Rainproof local.

Together, we are Amsterdam Rainproof!

**1 Green / blue roof**  
A green roof or blue roof captures rainwater and stores it in a reservoir. This water can be used for irrigation, flushing toilets, or watering plants. It also reduces the amount of rainwater that runs off into the drains. Green roofs also provide insulation and reduce the urban heat island effect. Blue roofs are designed to store rainwater temporarily and release it slowly, reducing the peak flow into the drains.

**2 Small front garden**  
On a small front garden, rainwater is absorbed by the soil and plants. This reduces the amount of rainwater that runs off into the drains. Small front gardens also provide a natural habitat for insects and birds.

**3 Clean gutter**  
An open gutter is a drain that captures rainwater and carries it away from the building. It is important to keep gutters clean to ensure they work properly. Dirty gutters can cause water to overflow and damage the building.

**4 Urban infiltration strips**  
Urban infiltration strips are narrow strips of permeable material that are installed between buildings and the street. They allow rainwater to infiltrate the ground, reducing the amount of rainwater that runs off into the drains.

**5 Infiltration zones**  
Infiltration zones are areas of permeable material that are installed in the street or in the garden. They allow rainwater to infiltrate the ground, reducing the amount of rainwater that runs off into the drains.

**6 Green between the rain rolls**  
The area between the rain rolls is the area where rainwater runs down the roof. It is important to keep this area green to reduce the amount of rainwater that runs off into the drains. Green roofs also provide insulation and reduce the urban heat island effect.

**7 Water-permeable paving**  
Water-permeable paving is a type of paving that allows rainwater to infiltrate the ground. It is made of permeable materials like gravel, sand, or permeable concrete. It reduces the amount of rainwater that runs off into the drains.

**8 Speed bumps**  
Speed bumps are raised areas of the road that slow down vehicles. They are made of concrete or asphalt. They reduce the amount of rainwater that runs off into the drains by slowing down the flow of water.

**9 Grass concrete blocks**  
Grass concrete blocks are concrete blocks with a central hole for grass. They allow rainwater to infiltrate the ground through the grass. They reduce the amount of rainwater that runs off into the drains.

**10 Water square**  
Water squares are areas of permeable material that are installed in the street or in the garden. They allow rainwater to infiltrate the ground, reducing the amount of rainwater that runs off into the drains.

**11 Infiltration grid**  
Infiltration grids are made of permeable material and are installed in the street or in the garden. They allow rainwater to infiltrate the ground, reducing the amount of rainwater that runs off into the drains.

**12 Rainwater barrel**  
Rainwater barrels are used to collect rainwater from the roof. They are made of plastic or metal. They reduce the amount of rainwater that runs off into the drains by storing it for later use.

**13 Rainproof ground**  
Rainproof ground is a type of ground that is designed to absorb rainwater. It is made of permeable materials like gravel, sand, or permeable concrete. It reduces the amount of rainwater that runs off into the drains.

**14 Detached Guttercap**  
Detached guttercaps are used to prevent rainwater from entering the gutter. They are made of plastic or metal. They reduce the amount of rainwater that runs off into the drains by preventing it from entering the gutter.