



Aalto University  
School of Arts, Design  
and Architecture

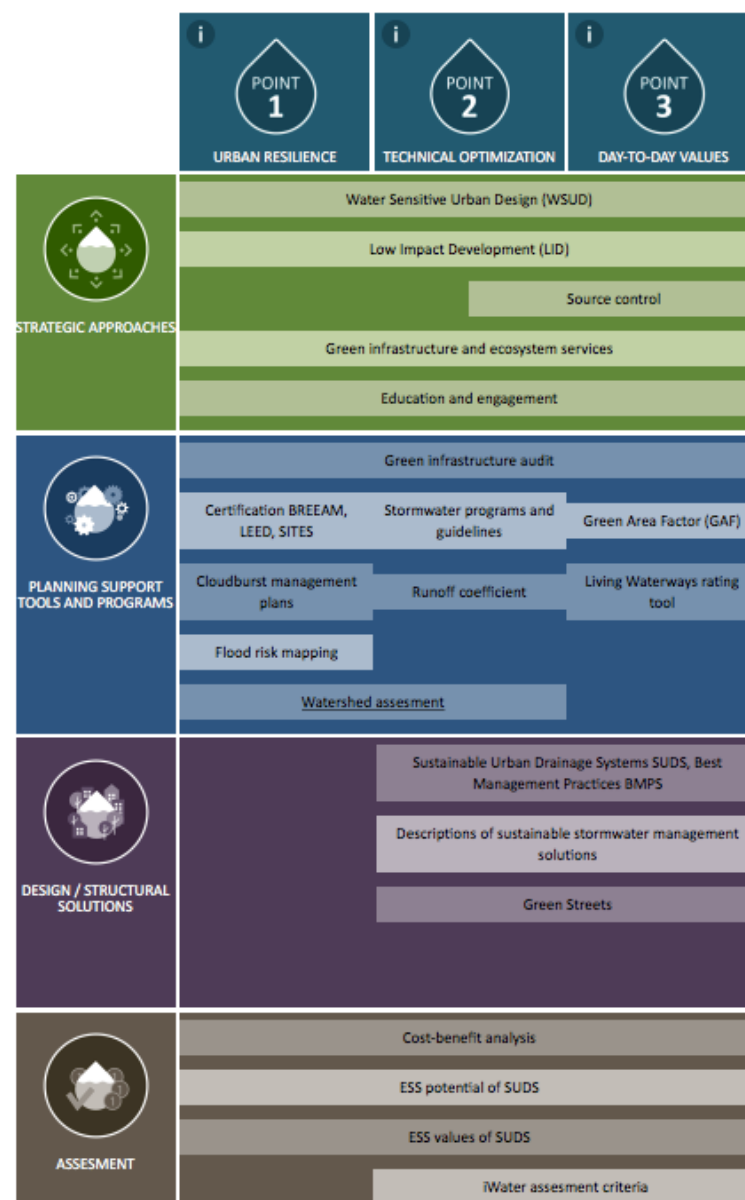
# iWater toolbox

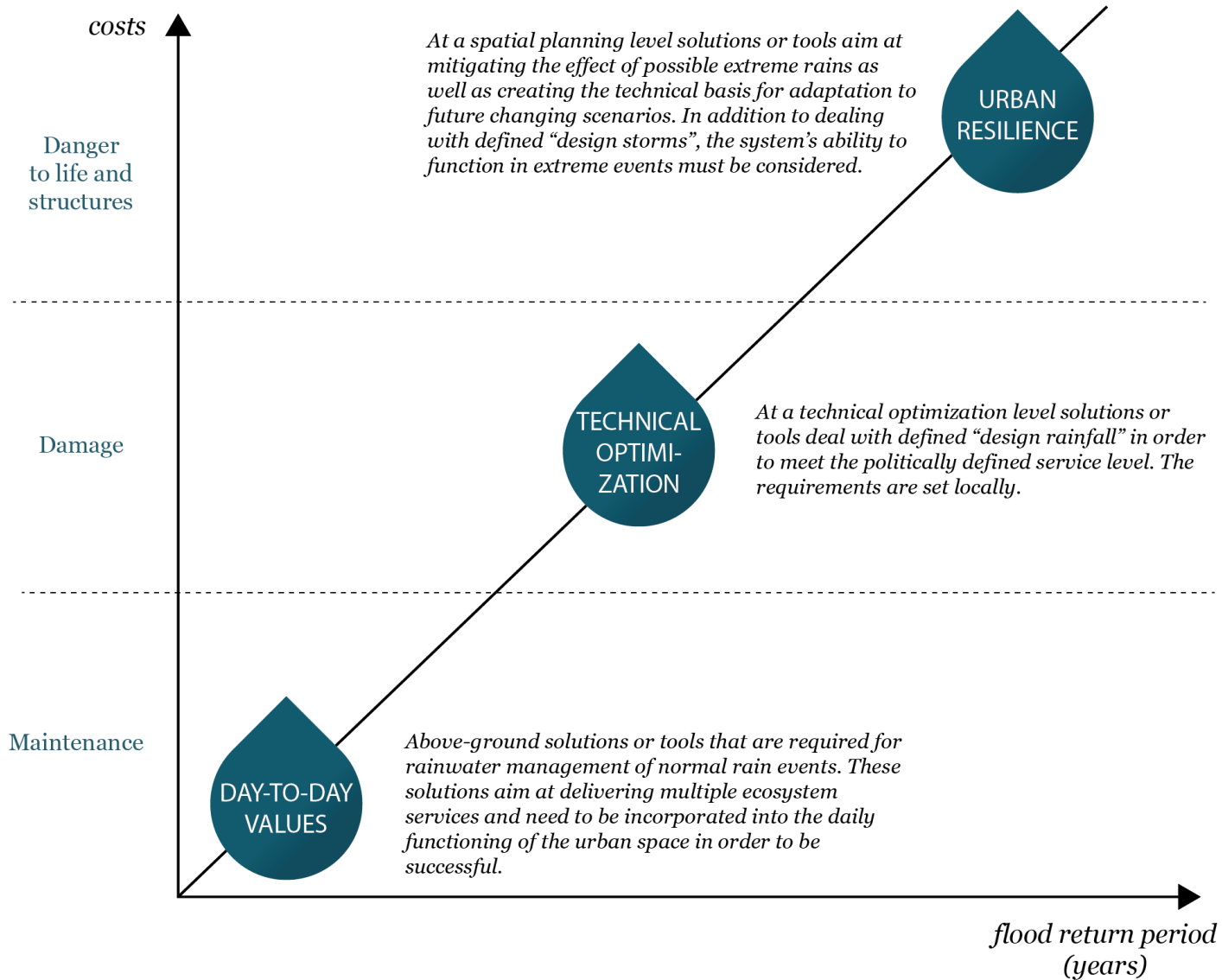
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*7.5.2018*

# iWater toolbox

[www.integratedstormwater.eu/iwatertoolbox](http://www.integratedstormwater.eu/iwatertoolbox)







STRATEGIC  
APPROACHES



PLANNING SUPPORT  
TOOLS AND PROGRAMS



DESIGN / STRUCTURAL  
SOLUTIONS



ASSESSMENT

# Green Infrastructure

*Green infrastructure is often defined as a network of natural and semi-natural features that intersperse and connect the built environment and structures. This network may include elements, such as forests, parks, green roofs, and street trees, as well as blue elements including rivers and wetlands. This infrastructure delivers ecosystem services.*



POINT 1  
SPATIAL  
PLANNING

POINT 2  
TECHNICAL  
OPTIMI-  
ZATION

POINT 3  
DAY-TO-DAY  
VALUES







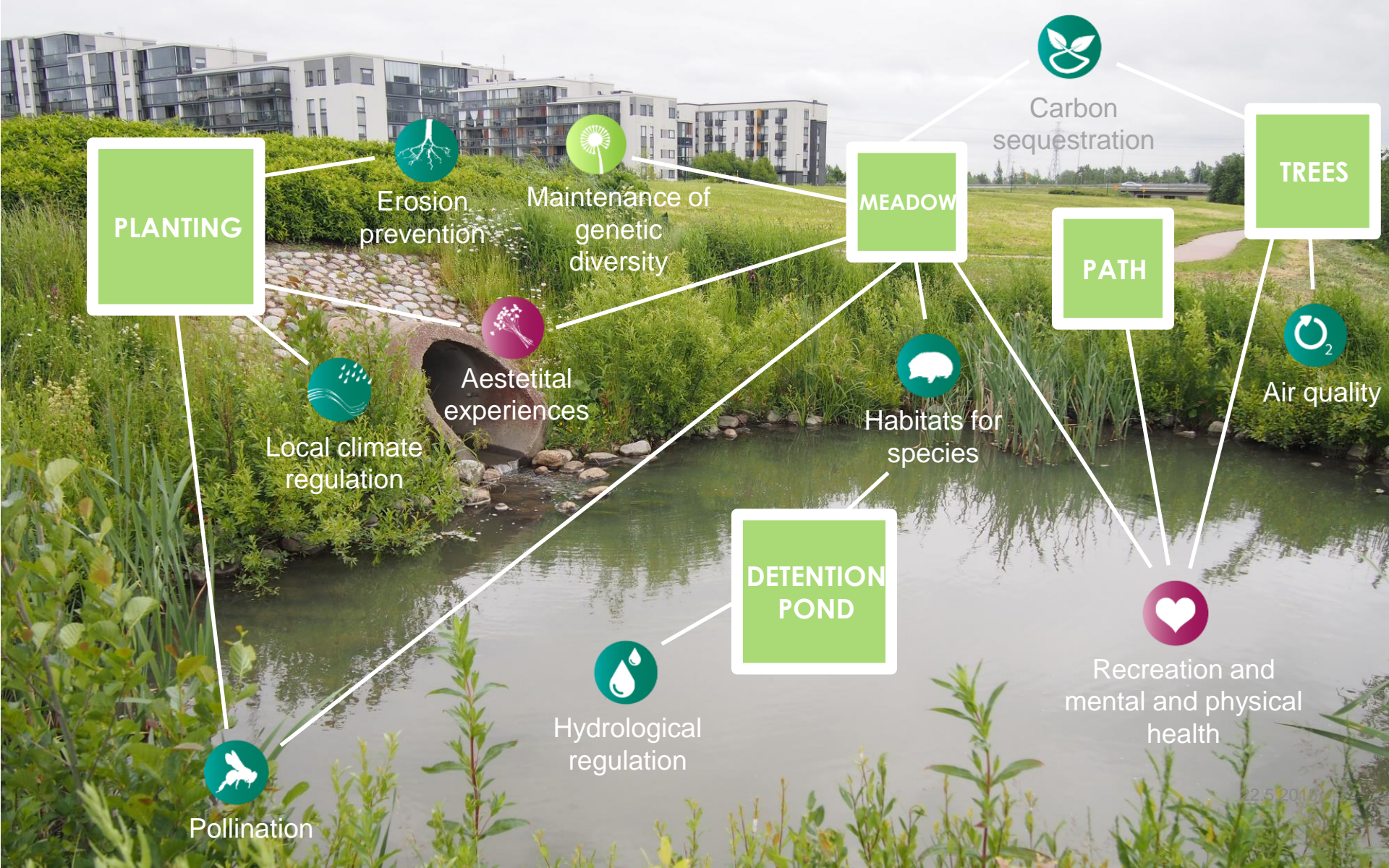
PLANTING

MEADOW

TREES

PATH

DETENTION  
POND



**PLANTING**



Erosion prevention



Maintenance of genetic diversity



Local climate regulation



Aesthetic experiences



Pollination

**MEADOW**



Habitats for species

**DETENTION POND**



Hydrological regulation



Carbon sequestration

**PATH**



Recreation and mental and physical health

**TREES**



Air quality



# Sustainable stormwater management solutions

*The toolsheet introduces various different techniques for sustainable stormwater management. The purpose is to give an idea of different kinds of solutions and techniques available and commonly utilised.*



POINT 1  
URBAN  
RESILIENCE

POINT 2  
TECHNICAL  
OPTIMI-  
ZATION

POINT 3  
DAY-TO-DAY  
VALUES



# iWater assessment criteria

## 6/6

### Climate change adaptation

Climate change will probably increase the amount and frequency of precipitation. The problems related to the conventional drainage systems are: limited capacity, poor water quality management, and inflexibility. The natural hydrology of the site is often changed. Multifunctional and innovative sustainable stormwater management has the potential to increase the resiliency of the site.

- What is the space requirement for the solution?
- Does the solution limit other urban functions?
- Does the solution allow natural hydrological fluctuation?
- Does the solution function in different circumstances (dry season, normal rain event, rainstorm)?
- Does the solution provide opportunities for flexibility and adaptation in different circumstances and possibly increasing precipitation?
- Is the solution potentially resilient? What kind of rainfall event can be handled by the solution and does a backup system need to be organized?



POINT 1  
SPATIAL  
PLANNING

POINT 2  
TECHNICAL  
OPTIMI-  
ZATION

POINT 3  
DAY-TO-DAY  
VALUES

# Thank you

[toolbox.integratedstormwater.eu](http://toolbox.integratedstormwater.eu)

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