

# ISWM

## Integrated Storm Water Management

6.2.2018 Pilar Meseguer

Dissemination Material

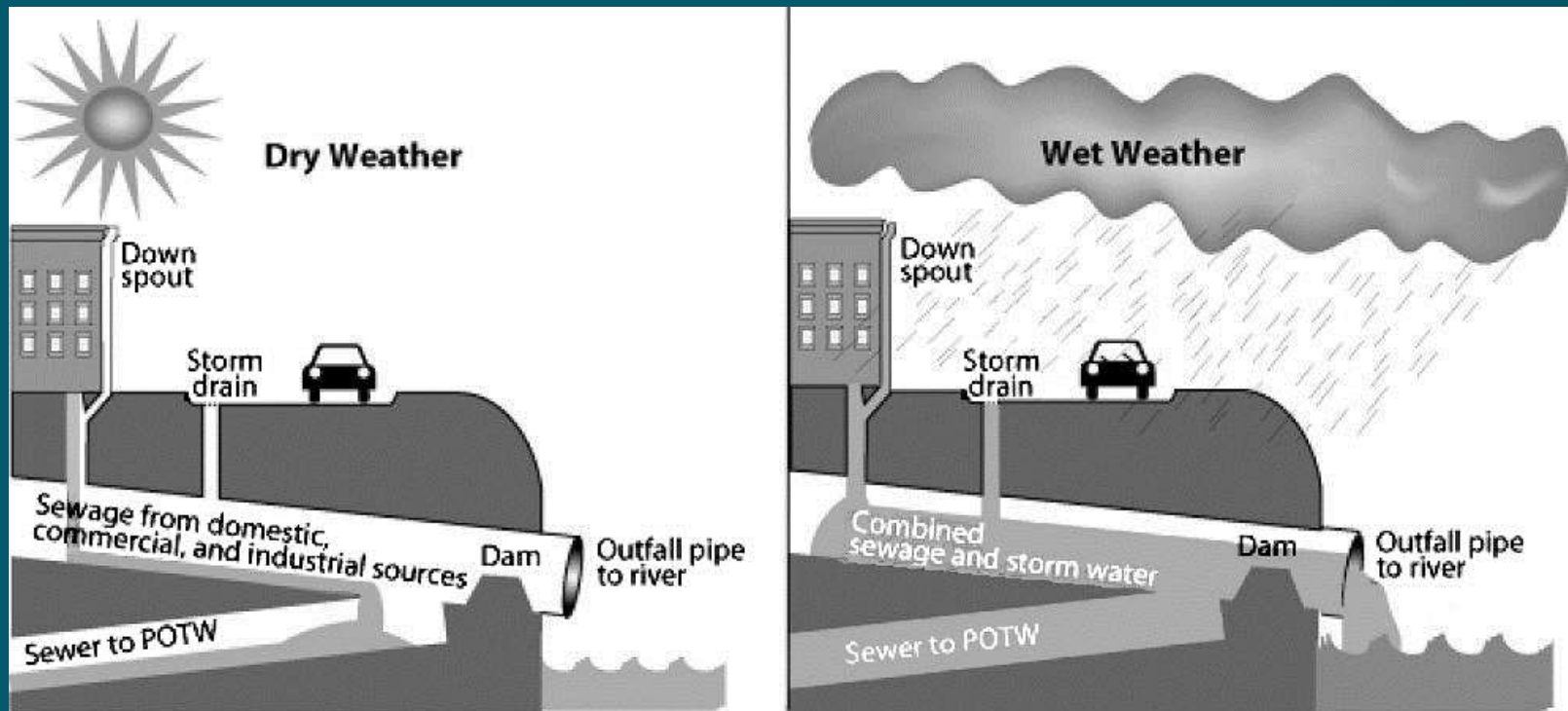


Integrated Stormwater Management  
[www.integratedstormwater.eu](http://www.integratedstormwater.eu)



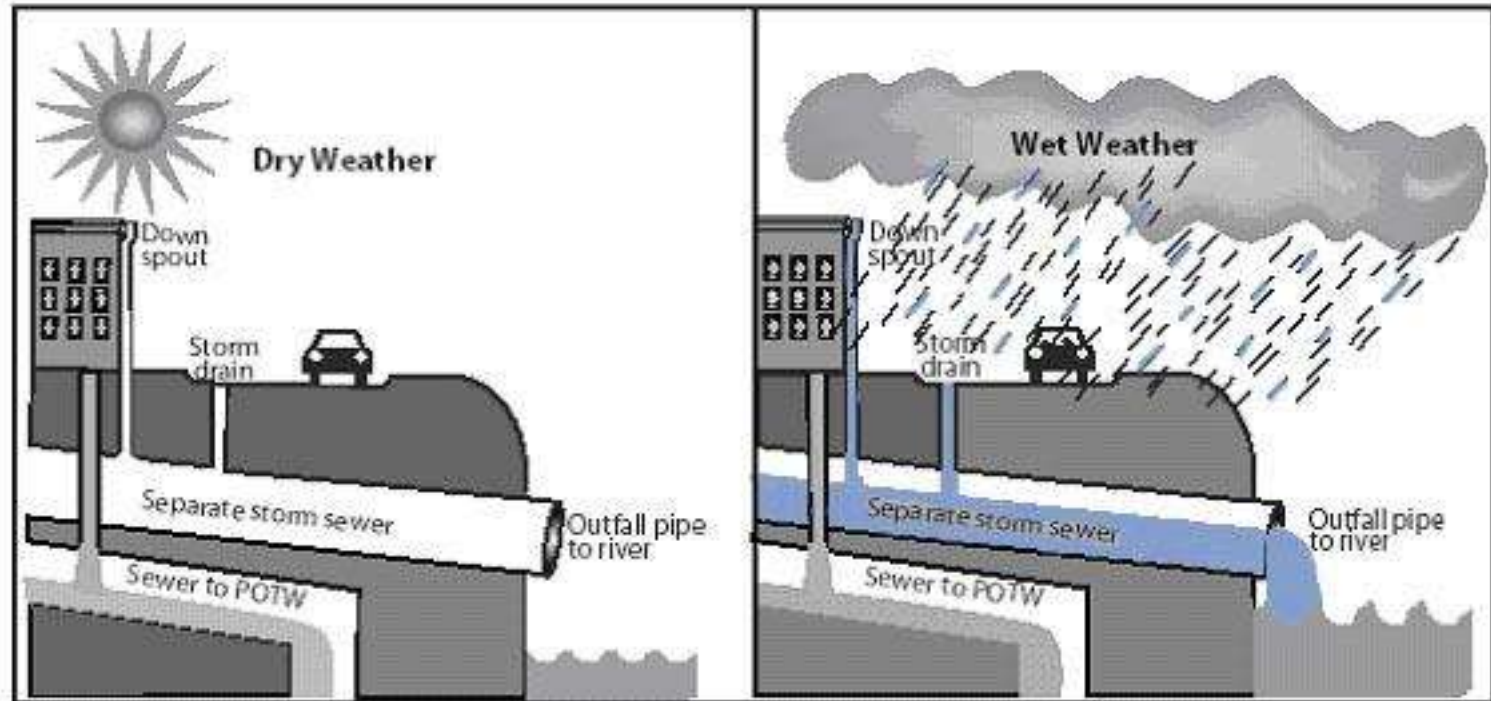
# CURRENT PRACTICE

## COMBINED SEWER SYSTEM



Source: CSO\_diagram\_US\_EPA

## SEPARATE SEWER SYSTEM



Source: CSO\_diagram\_US\_EPA

## **CURRENT PRACTICE**

**A unique solution = PIPES**

**“one size fits all”**

**Unidisciplinary = Pipeline engineer**

# ISWM

**Many solutions working together =  
Integrated**

**“case-by-case”**

**Multidisciplinary**

Preventive  
measures

Excedent  
runoff

Small source  
controls  
inside plots  
**ISWM**  
**Many integrated solutions**

Excedent  
runoff

Large structural  
controls at  
urban level

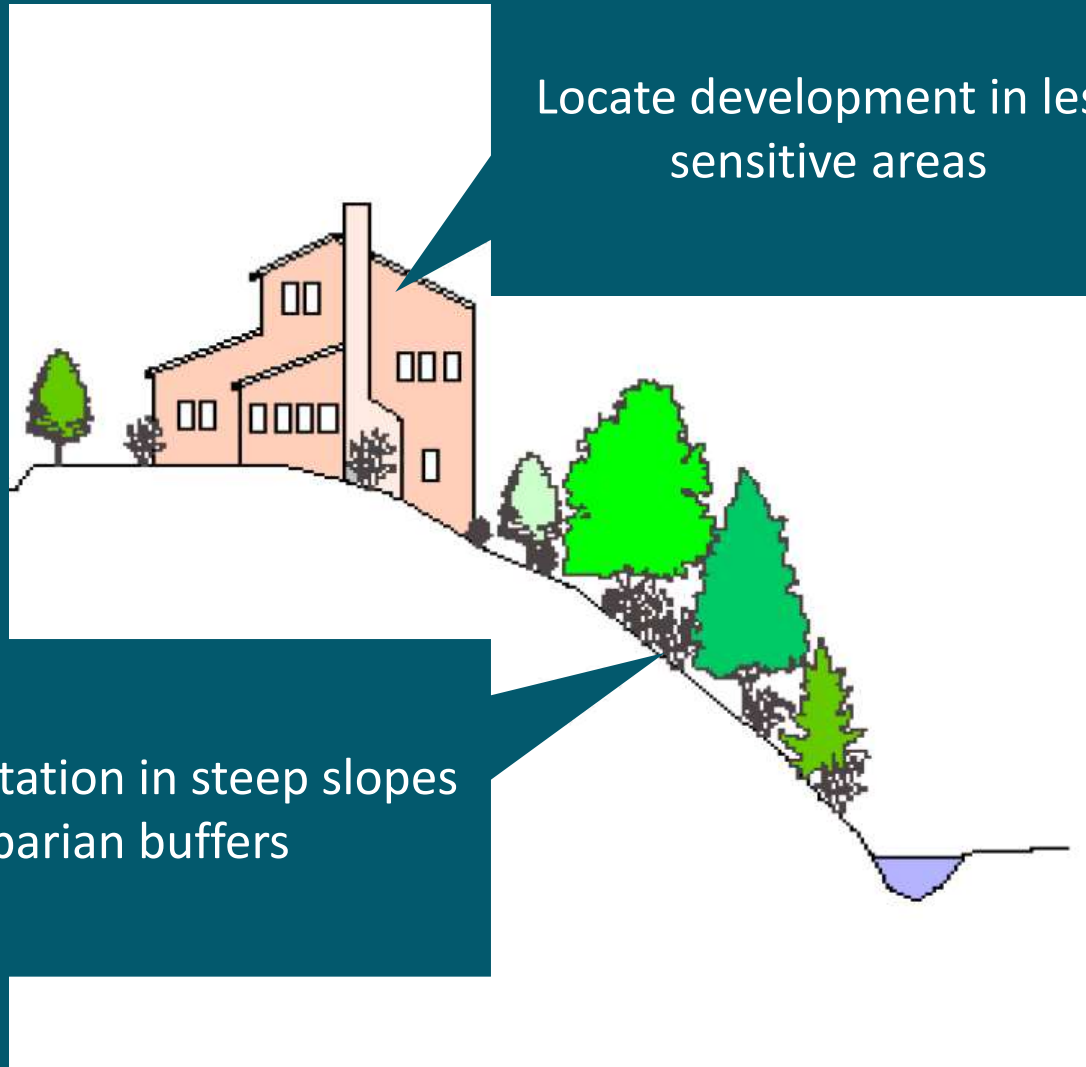
Preventive measures

=

DECISIONS MADE AT THE PLANNING PHASE



For example:



Adapted from iSWM\_North Central Texas Council of Governments

For example:

## Reduce impervious surfaces



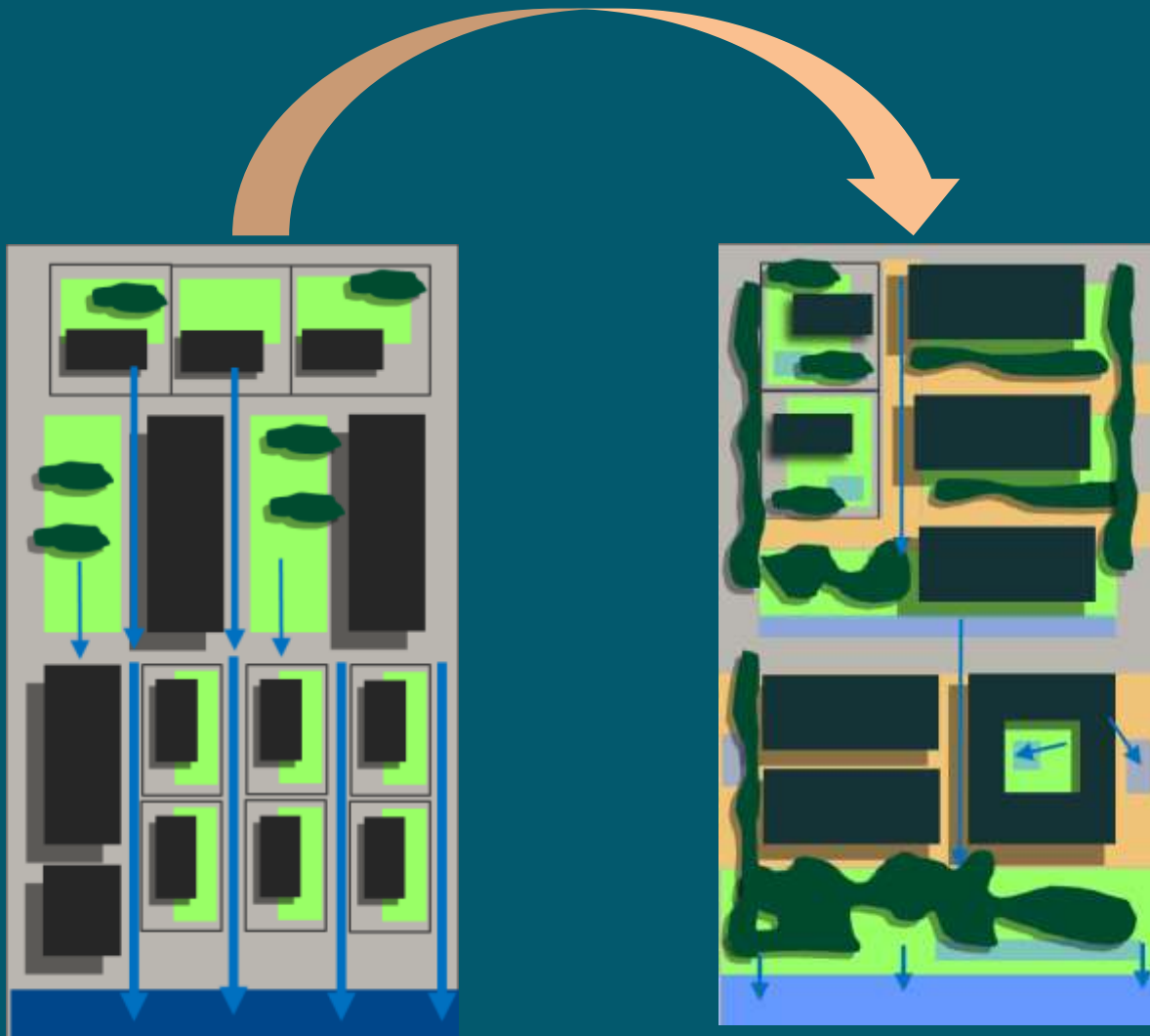
*Narrow Road. Lincoln, Christchurch. Photo: Robyn Simcock*



Narrow Road, Talbot Park subdivision, Auckland. Rain garden on right treating road runoff and forming a traffic-calming feature

For example:

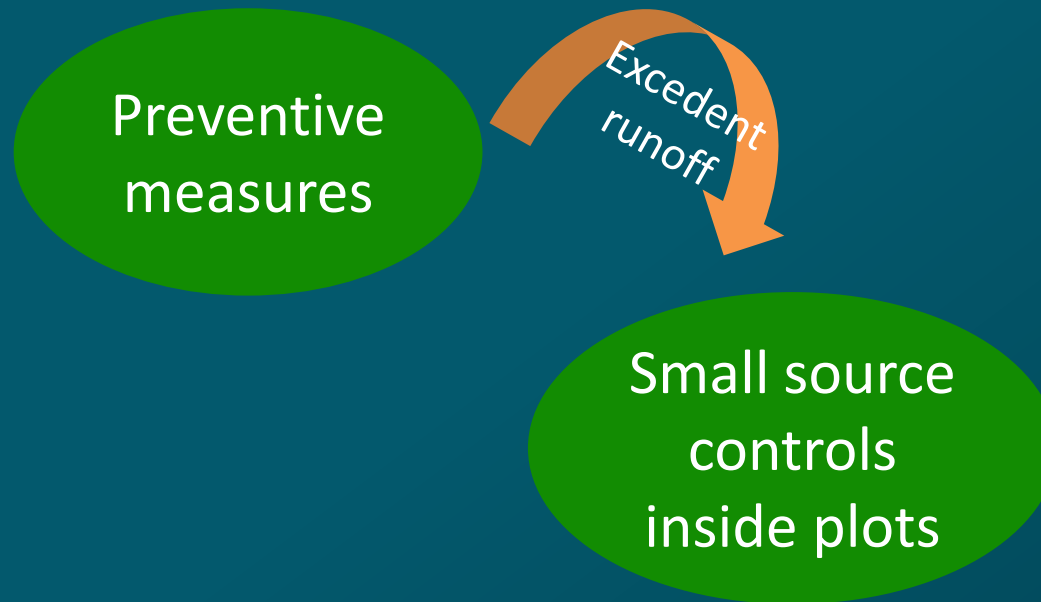
## Disconnect impervious surfaces



Adapted from Juanjo Galan. Aalto University

# ISWM

## Many integrated solutions







Small source controls in private plots

Augustenborg, Malmö



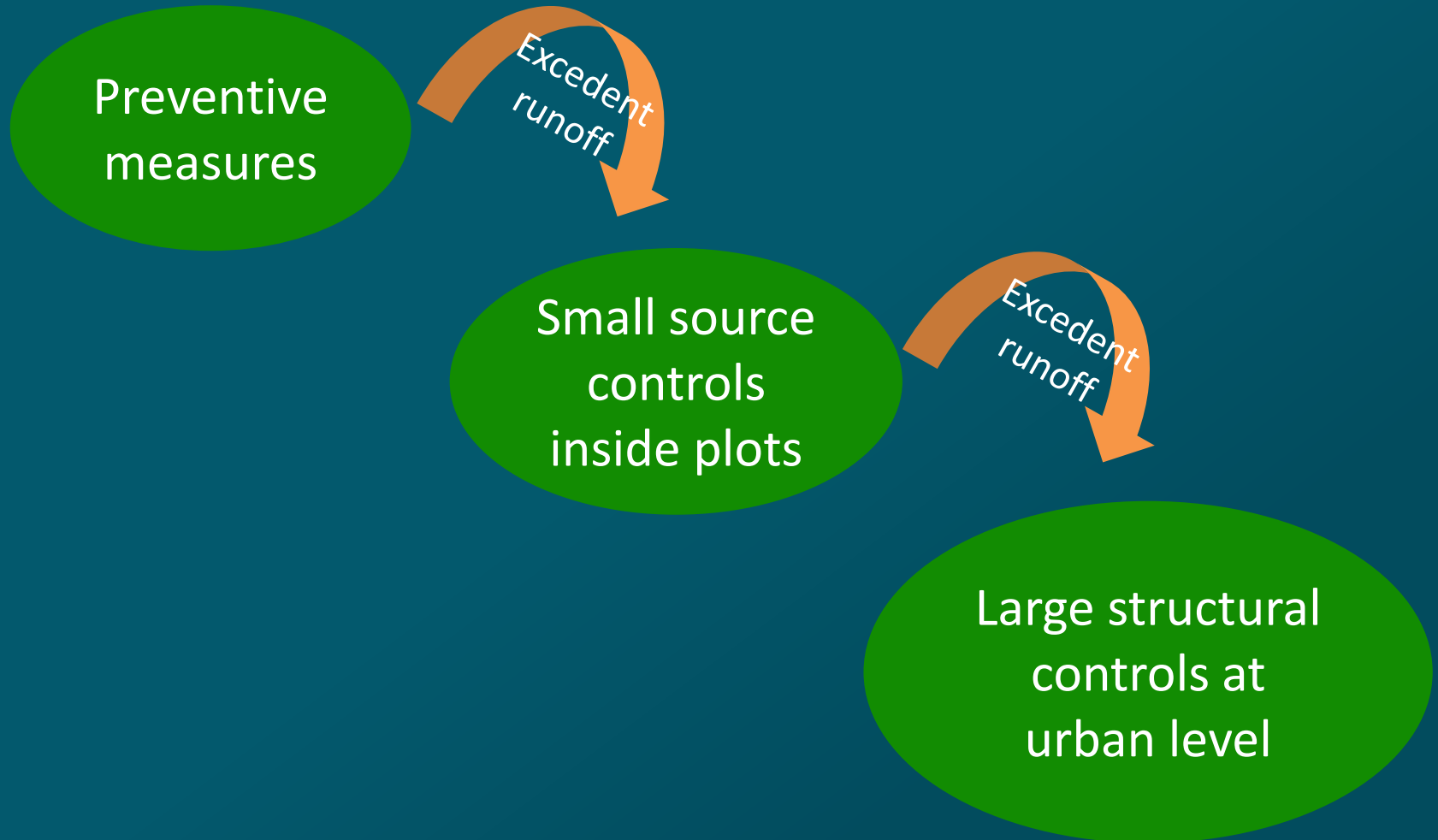


Small source controls in public spaces

Augustenborg, Malmö

# ISWM

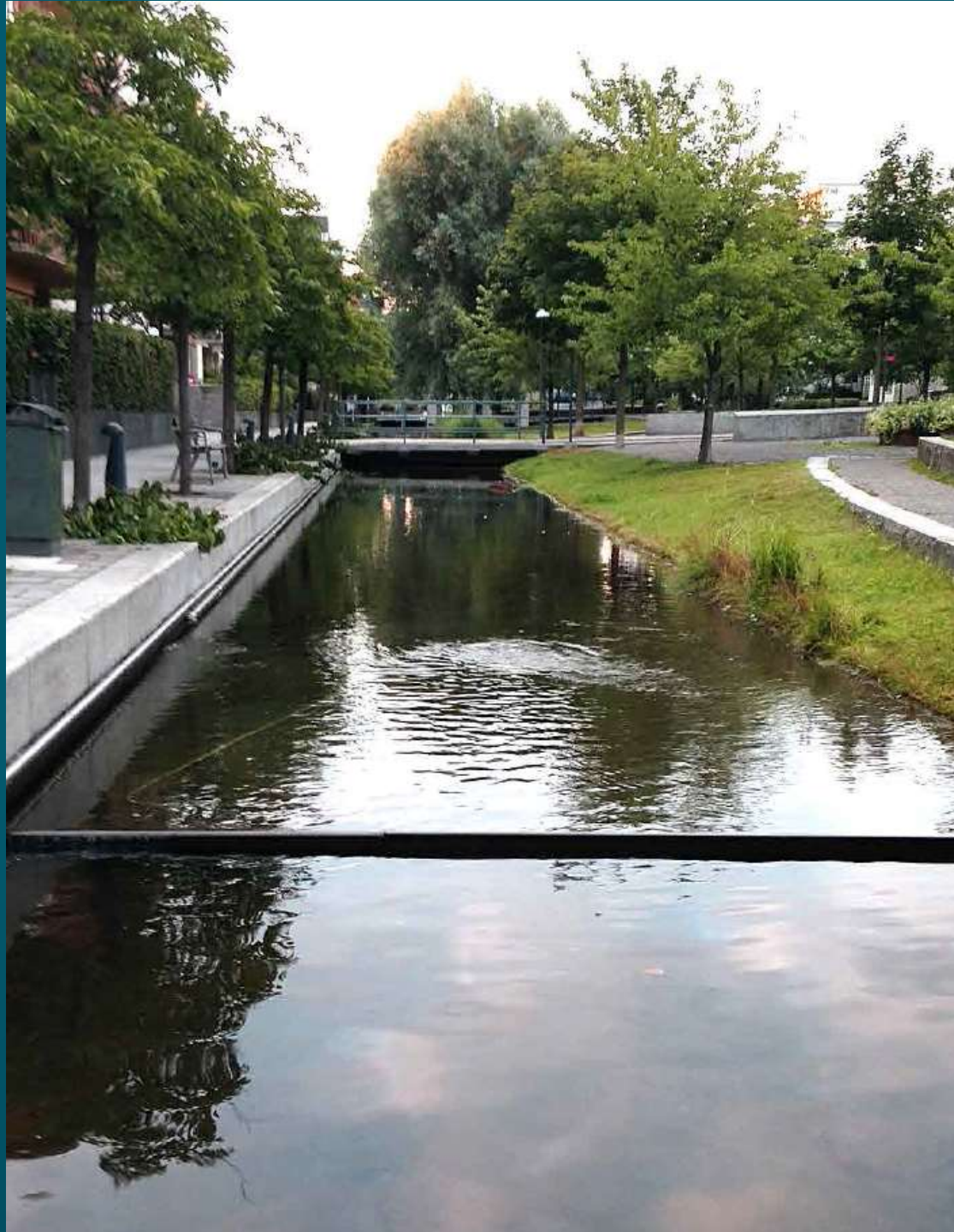
## Many integrated solutions





# Large structural controls in public spaces

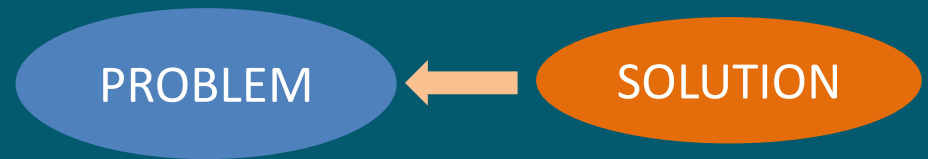
Hammarby Sjöstad, Stockholm

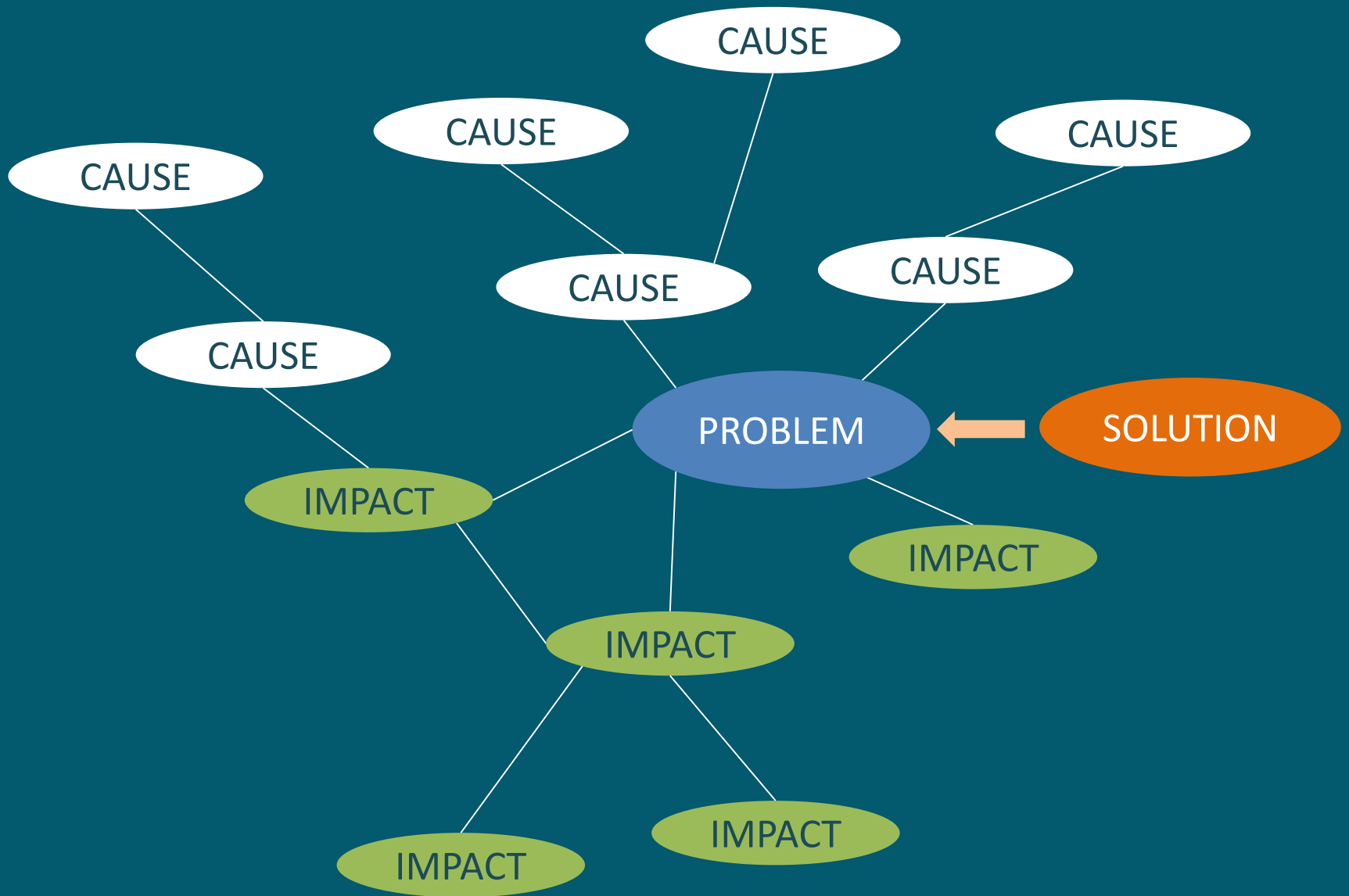




# ISWM

## Case-by-case solutions





# PORI



Source: City of Pori

# SHORT-TERM SOLUTION EXAMPLE



Source: City of Pori

# SIDE EFFECT: SEDIMENTATION



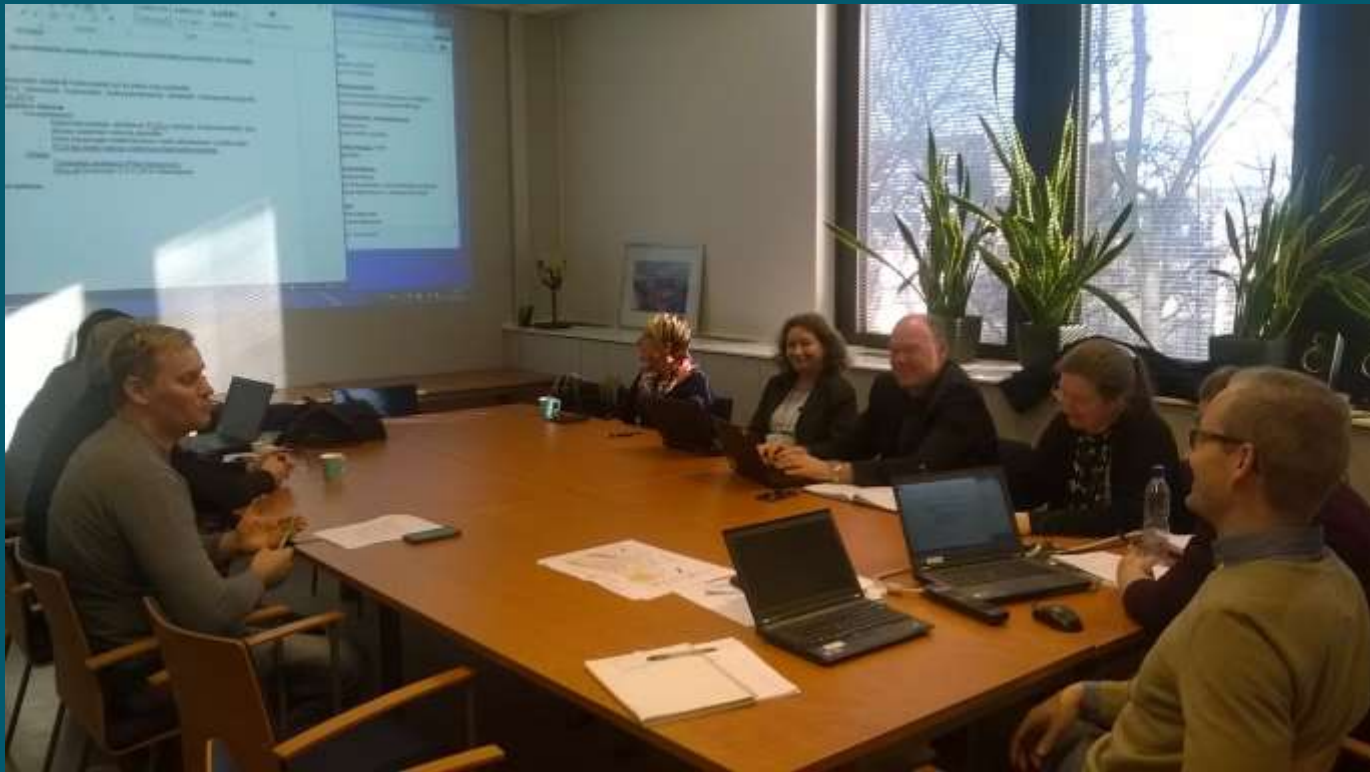
Source: City of Pori

**ISWM**

**Multidisciplinary solutions**

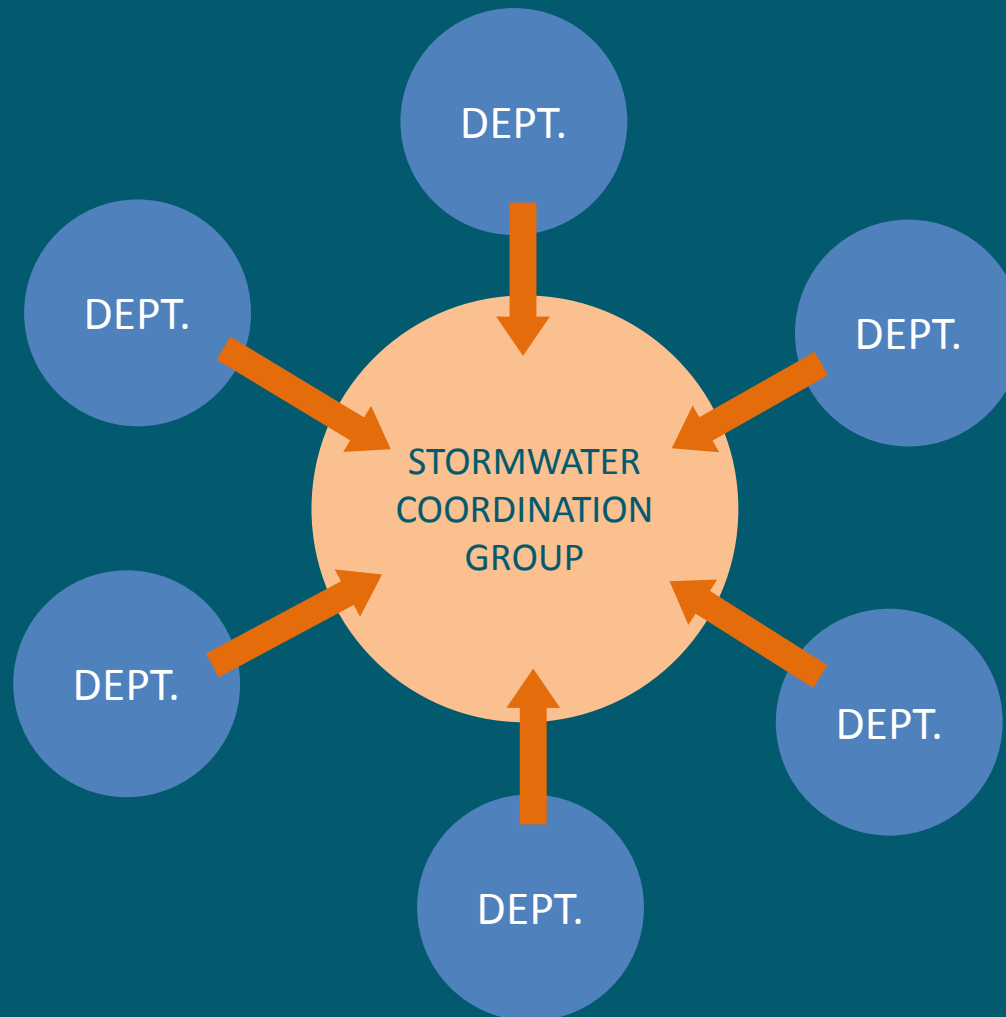


# STORMWATER **MULTISECTORIAL** COORDINATION GROUP



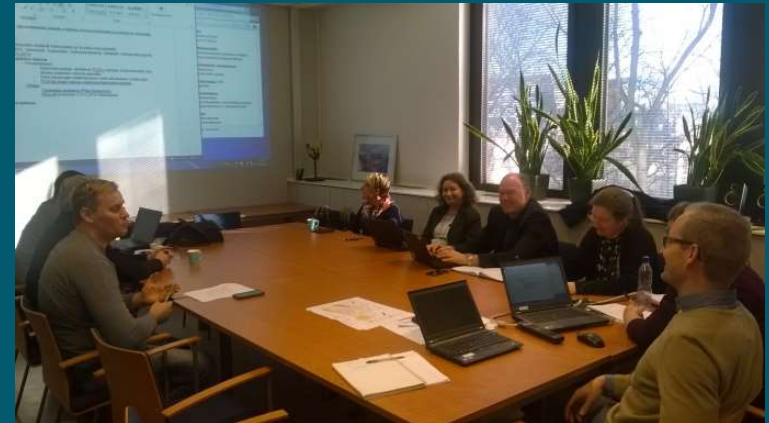


# STORMWATER MULTISECTORIAL COORDINATION GROUP



# TURKU's STORMWATER COORDINATION GROUP

DEPARTMENTS	MEMBERS
Environmental Division:	
Environmental Protection	2
City Planning Unit	2
Design Unit	2
Building Control	2
Property Management Division	3
Water Utility	2
Waste Water Treatment Plant	1
Emergency Services	1
TOTAL	15



# ISWM

**Many integrated solutions**

**Tailored = “case-by-case”**

**Multidisciplinary approach**

# Thank you!

Pilar Meseguer

**City of Turku**

Urban Environment Division  
Environmental Protection



Integrated Stormwater Management  
[www.integratedstormwater.eu](http://www.integratedstormwater.eu)



EUROPEAN UNION  
European Regional Development Fund

