

STORMWATER MANAGEMENT AND CREATING SUSTAINABLE AND LIVABLE CITIES



Jes Clauson-Kaas,
Senior Consultant,
HOFOR

UBC Webinar
April 28, 2020

PLATFORM
BSR WATER

 **Interreg**
Baltic Sea Region



EUROPEAN
REGIONAL
DEVELOPMENT
FUND

HOFOR

GREATER COPENHAGEN MULTI UTILITY

- ▶ Denmark's largest utility company
- ▶ 1,300 employees
- ▶ One million customers



SWIMMING IN THE HARBOR 1905





RECEIVING WATER QUALITY 1970-2000

- ▶ Wastewater masterplan 1976
- ▶ Retention tanks
- ▶ Closing many overflow to the harbor.
- ▶ Three advanced wastewater treatment plants

COLOSEUM RETENTION TANK



THE HARBOR BATH 2002



COPENHAGEN 2. JULI 2011

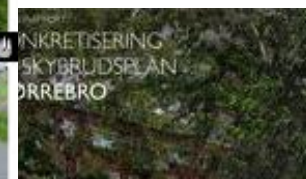
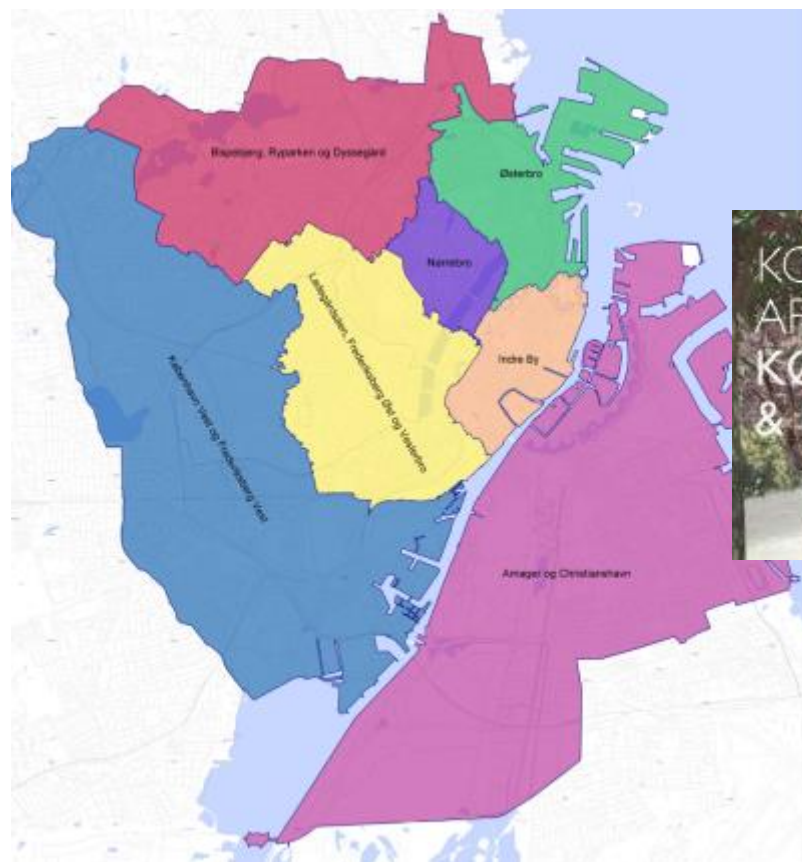




THE CLOUDBURST MANAGEMENT PLAN

Initial screening, 7 catchments

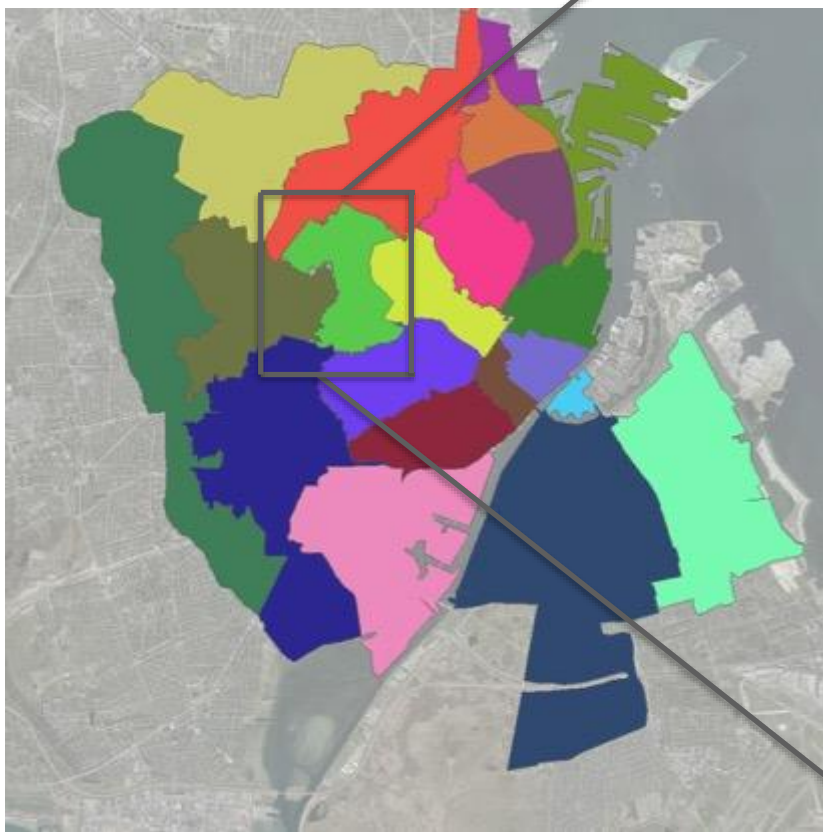
Conceptual solutions



THE CLOUDBURST MANAGEMENT PLAN

Dividing into sub-catchments

Surface and piped solutions

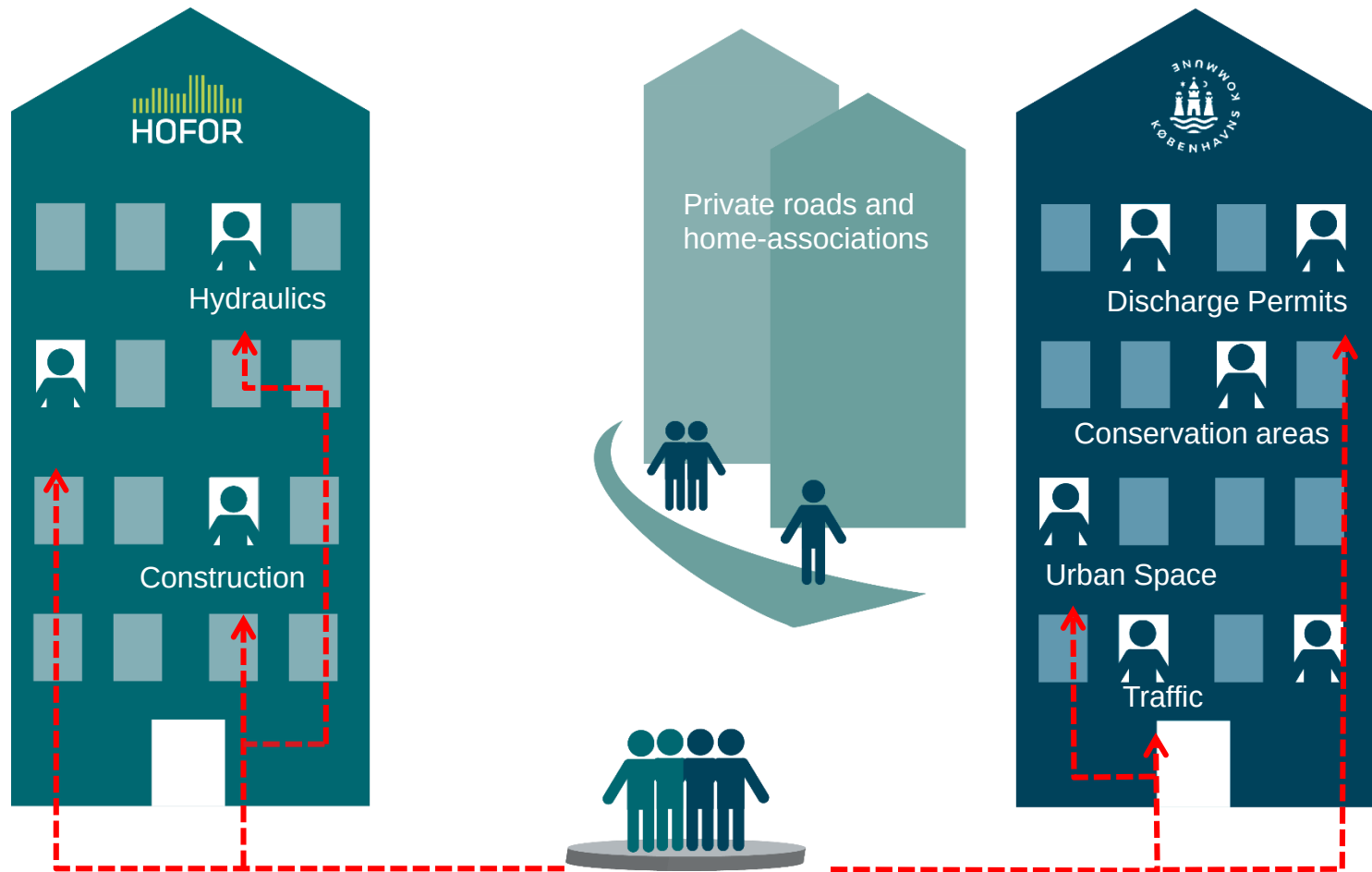


URBAN RENEWAL PLANS



HOFOR

ORGANIZATION



CLOUDBURST BRANCH LERSØPARKEN

Bispebjerg
Kirkegård

Bispebjerg
Hospital

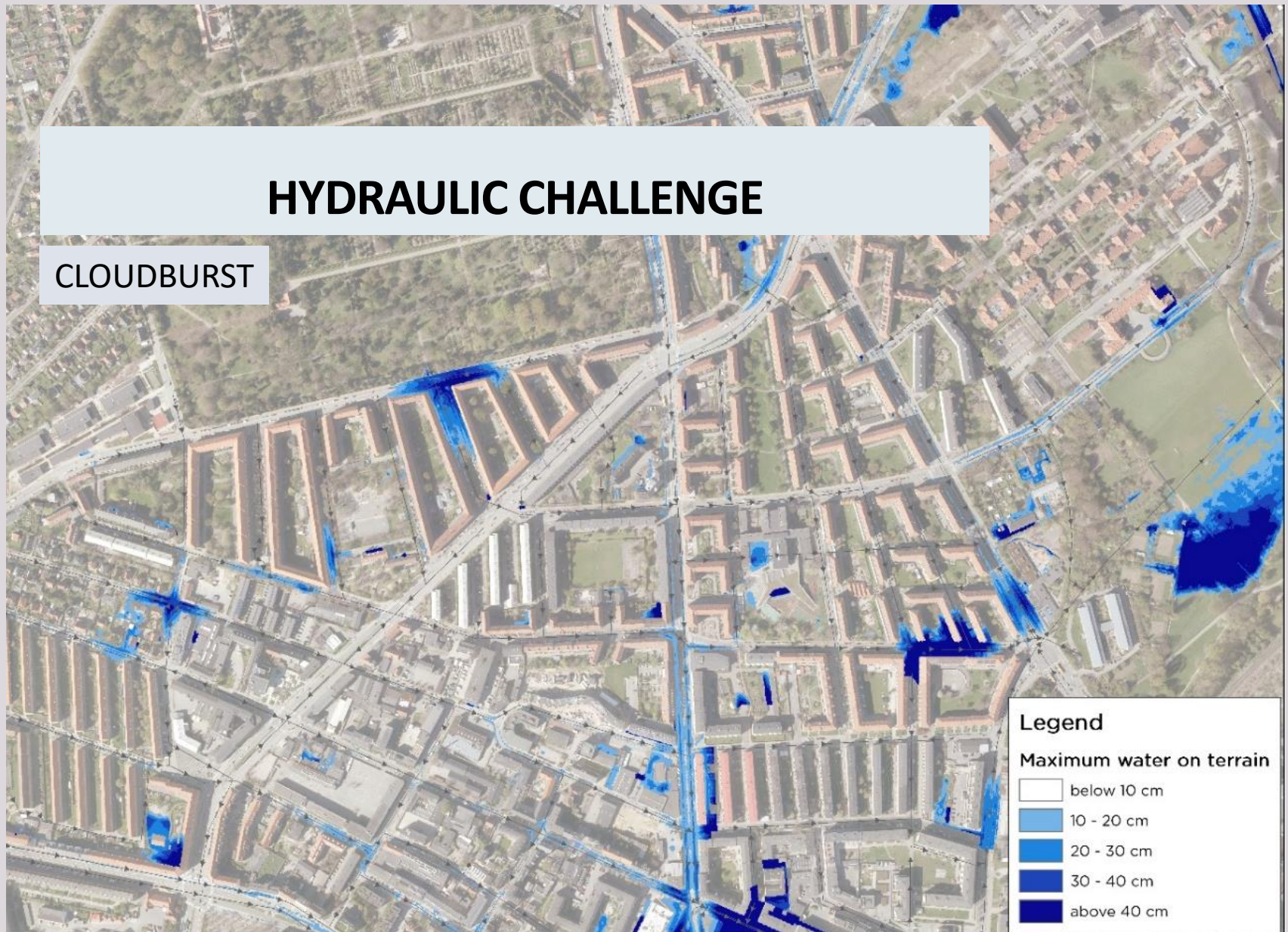
Lersøparken

Total area: 218 ha

No of inhabitants: approx. 20.000

HYDRAULIC CHALLENGE

CLOUDBURST



DAILY RAIN

SIGNATUR

STATUS - CDS_10 - SF 1,0 - varighed 4 timer

Max dybde



SKYBRUDSGREN LERSØPARKEN



0 50 100 150 m

- | | | | |
|--|-------------------|--|------------------------|
| | Skybrudsvej | | Skybrudstunnel |
| | Forsinkelsesvej | | Skakt |
| | Forsinkelsesplads | | Transport på overflade |
| | Regnbed/vejbed | | Klimarende |
| | Grøn vej | | Hævet kansten/bump |
| | Skybrudsledning | | Vandets retning |



LINE DRAINS



BLUE AND GREEN SOLUTIONS



CLOUDBURST STORAGE IN CENTRAL PARK



CLIMATE-RESILIENT NEIGHBORHOOD



FACILITY IN FUNCTION 28. JULI 2019



SAINT ANNAE SQUARE

Extensive damage to roads and buildings during 2011 cloudburst





IWA WORLD WATER CONGRESS & EXHIBITION 2020



JOIN US IN COPENHAGEN

WATER FOR SMART LIVEABLE CITIES
18-23 OCTOBER 2020



WWW.IWA2020COPENHAGEN.DK