

RISING TIDES, SHIFTING COMMUNITIES: ROTTERDAM'S INNOVATIVE APPROACH TO CLIMATE GENTRIFICATION AND URBAN RESILIENCE

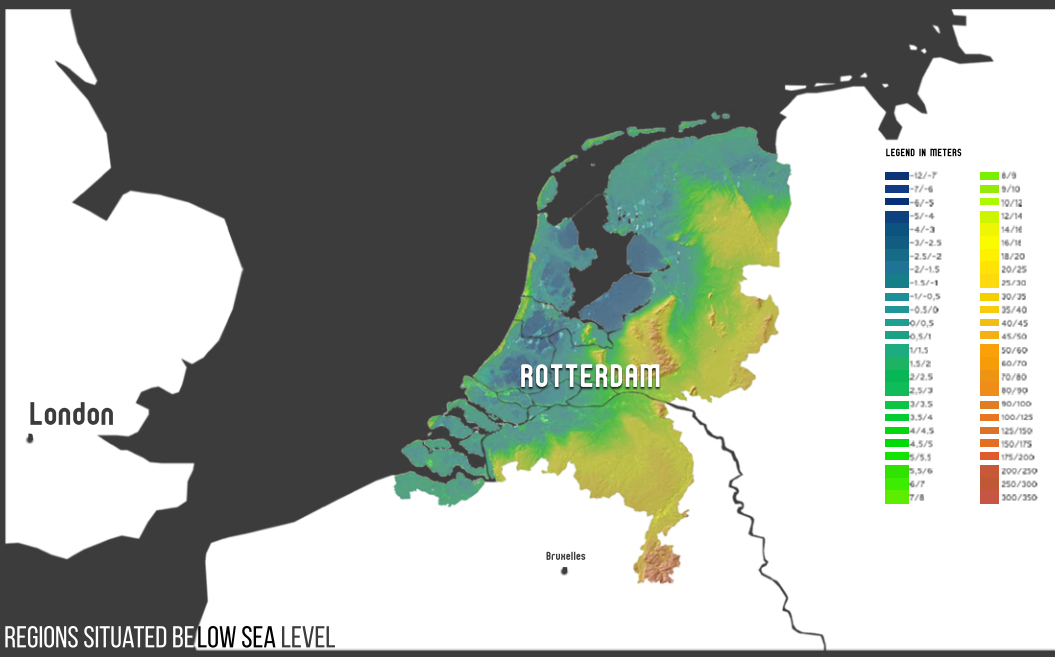
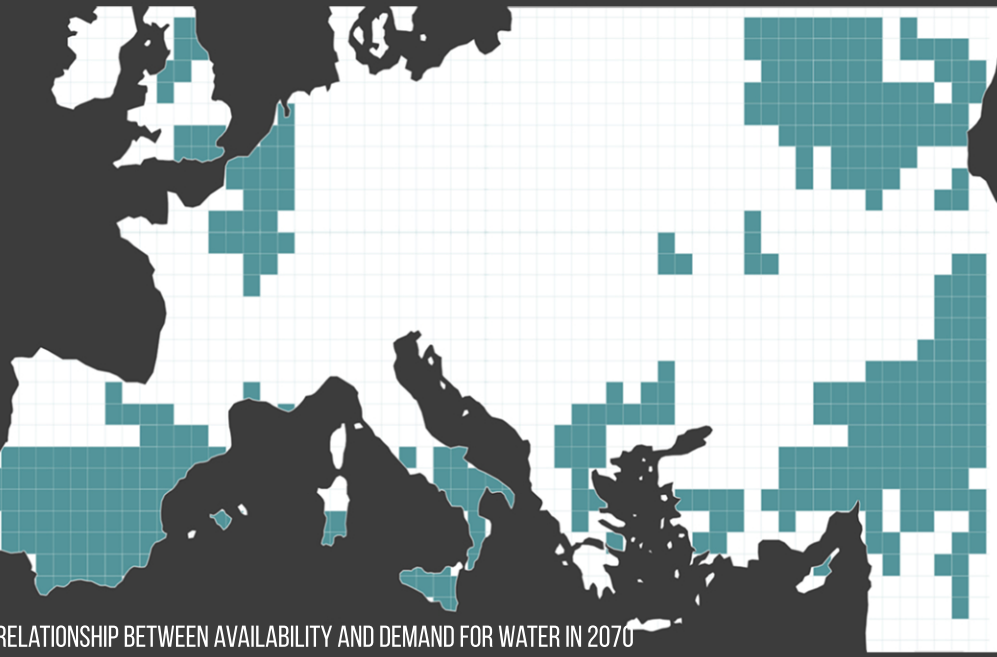
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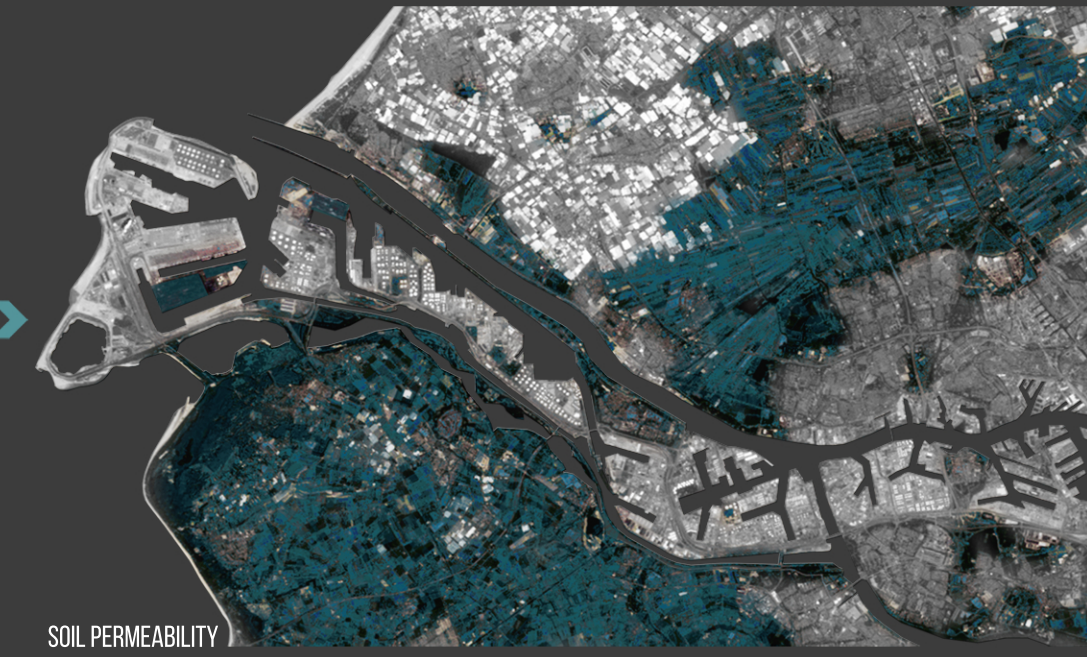
THIS RESEARCH EXAMINES THE RELATIONSHIP BETWEEN URBAN SUSTAINABILITY AND CLIMATE GENTRIFICATION, WITH ROTTERDAM AS A CASE STUDY. AS CITIES FACE THE TWIN CHALLENGES OF RAPID URBANISATION AND CLIMATE CHANGE, ROTTERDAM'S SHIFT FROM AN INDUSTRIAL CENTRE TO A WATER-RESILIENT CITY OFFERS VALUABLE LESSONS. THE CITY HAS REDEVELOPED FORMER PORT AREAS LIKE STADSHAVENS INTO FLOOD-RESISTANT SPACES, INTEGRATING WATER MANAGEMENT INTO URBAN DESIGN. ADAPTIVE FLOOD DEFENCES, FLOATING COMMUNITIES, SUSTAINABLE TRANSPORT, WATER SQUARES, AND GREEN ROOFS ILLUSTRATE ITS APPROACH TO RESILIENCE AND URBAN REGENERATION. THIS STUDY ASSESSES THESE INITIATIVES, OFFERING INSIGHTS FOR CITIES SEEKING TO COMBINE CLIMATE ADAPTATION WITH SUSTAINABLE, INCLUSIVE DEVELOPMENT.



SITUATED IN A DELTA, ROTTERDAM IS HIGHLY VULNERABLE TO RISING SEA LEVELS AND FLOODING. CHALLENGES WORSENER BY CLIMATE CHANGE, THE CITY'S RESPONSE COMBINES INNOVATIVE WATER MANAGEMENT AND URBAN REGENERATION. AS A MEMBER OF THE "DELTA CITIES NETWORK," ROTTERDAM COLLABORATES WITH OTHER AT-RISK CITIES, SHAPING ITS CLIMATE-RESILIENT INFRASTRUCTURE STRATEGY.



DELTA CITIES NETWORK SHARING CONCERNED LONG-TERM STRATEGIES
HIGHLIGHTED IN BLUE ARE THE REGIONS CHARACTERISED BY PERMEABLE SOILS.



LOCALLY, THE CITY ADDRESSES SUSTAINABILITY CHALLENGES, INCLUDING SECURING A RELIABLE DRINKING WATER SUPPLY

DIFFICULTIES IN ENSURING POTABLE WATER SUPPLY



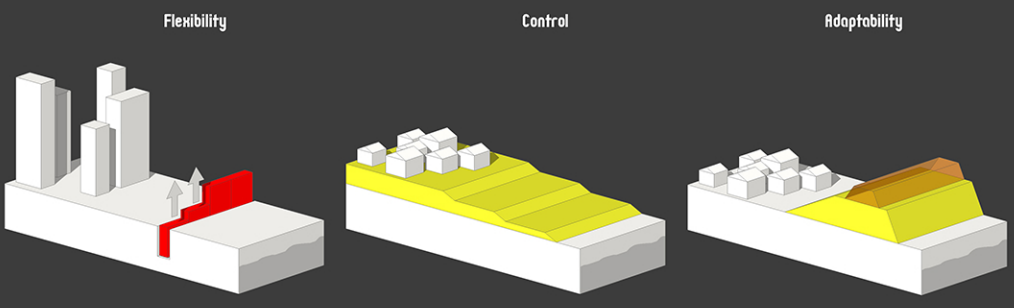
WATER OVERFLOW LEADING TO FLOODING



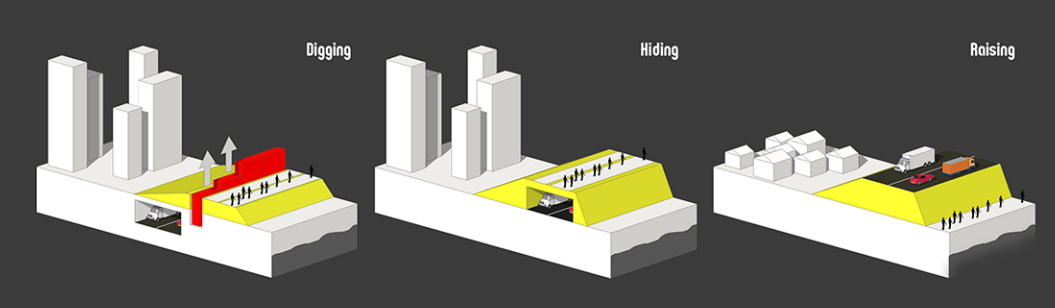
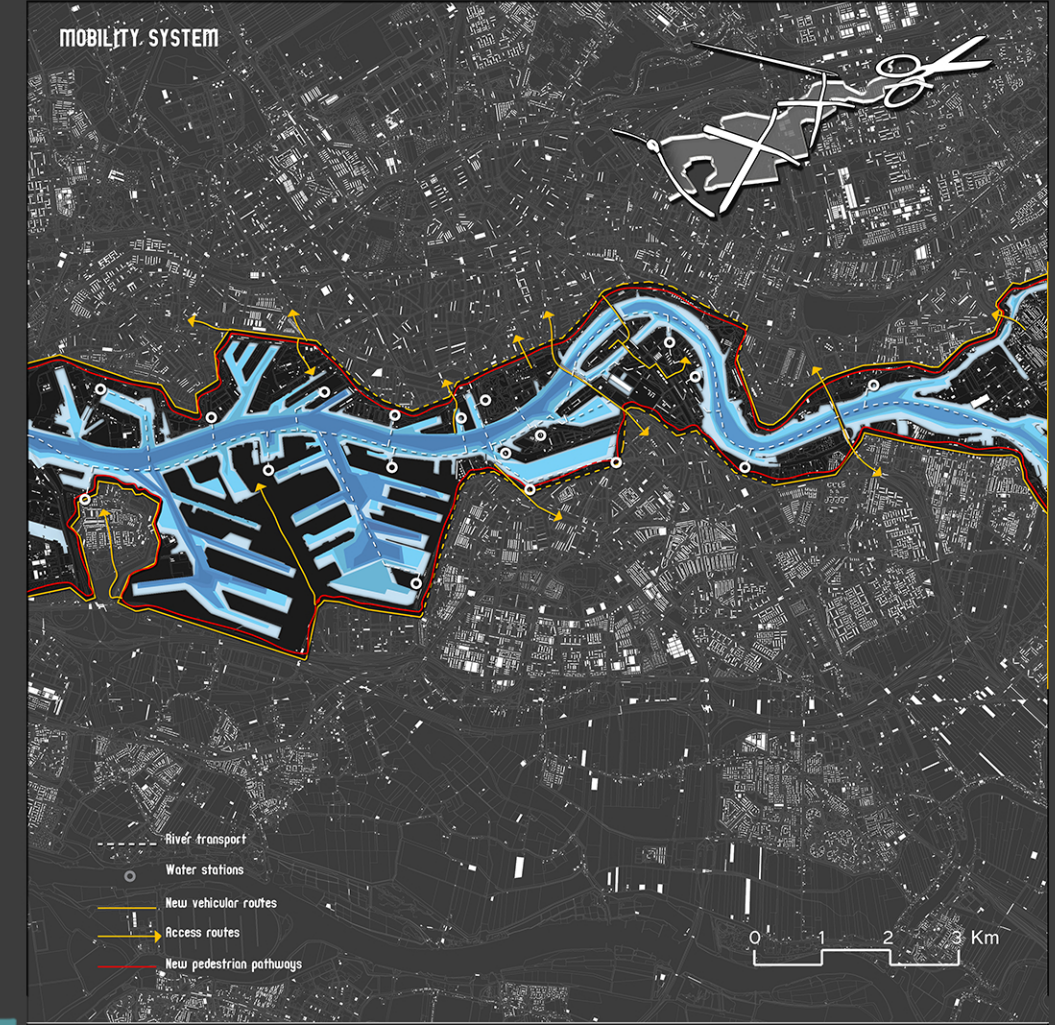
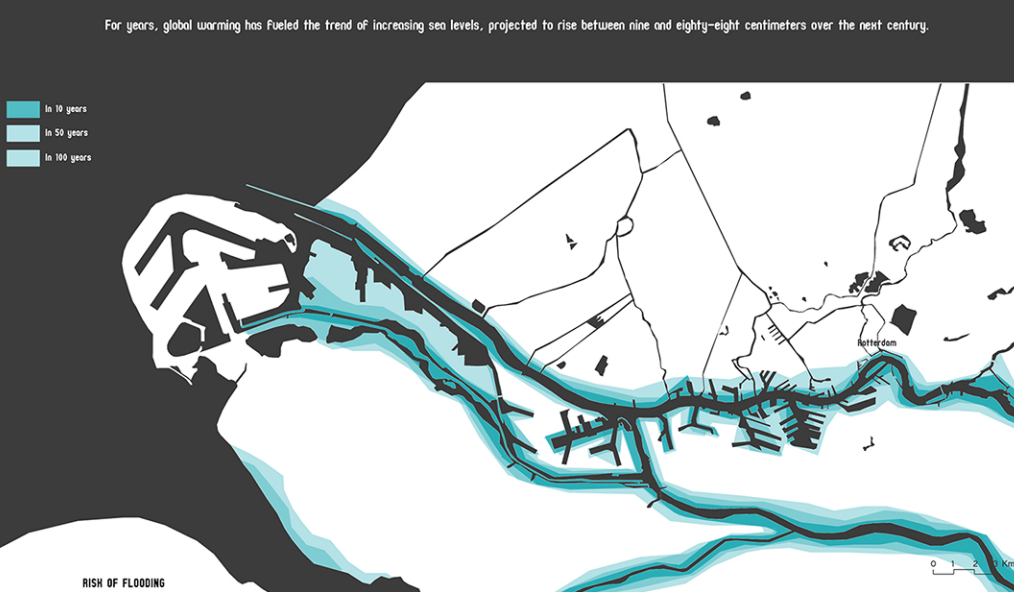
97.5% SALTWATER

2.5% FRESHWATER

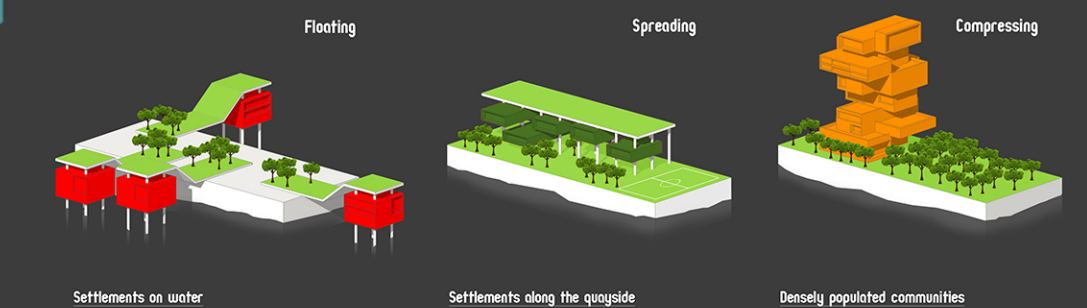
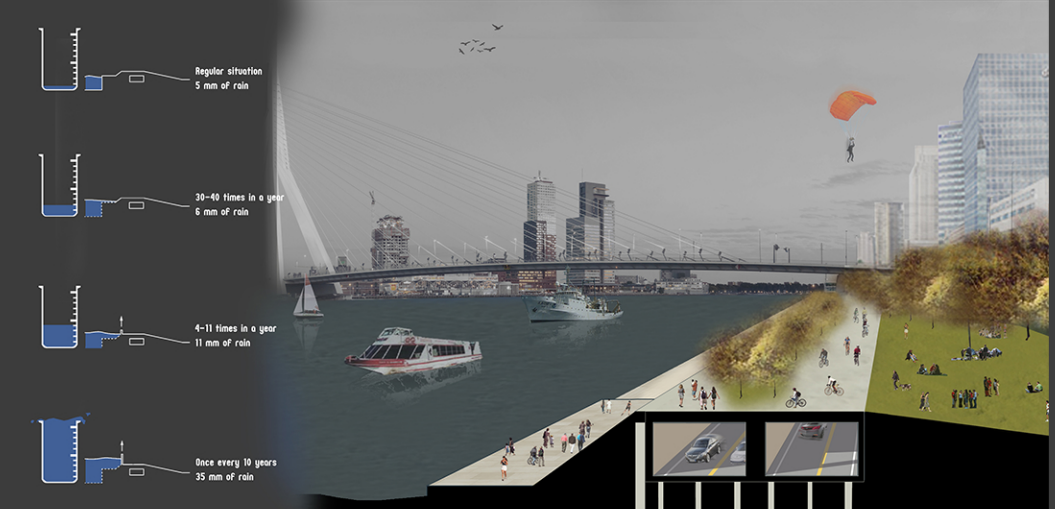
THIS RESEARCH HIGHLIGHTS FOUR KEY INITIATIVES CENTRAL TO ROTTERDAM'S CLIMATE RESILIENCE, ALIGNING WITH UN SUSTAINABLE DEVELOPMENT GOAL 13, "CLIMATE ACTION": ADAPTIVE FLOOD PROTECTION, FLOATING COMMUNITIES, SUSTAINABLE MOBILITY, AND REVITALISED PUBLIC SPACES WITH WATER SQUARES AND GREEN ROOFTOPS. TOGETHER, THEY PROMOTE A RESILIENT, INCLUSIVE, AND LIVEABLE CITY.



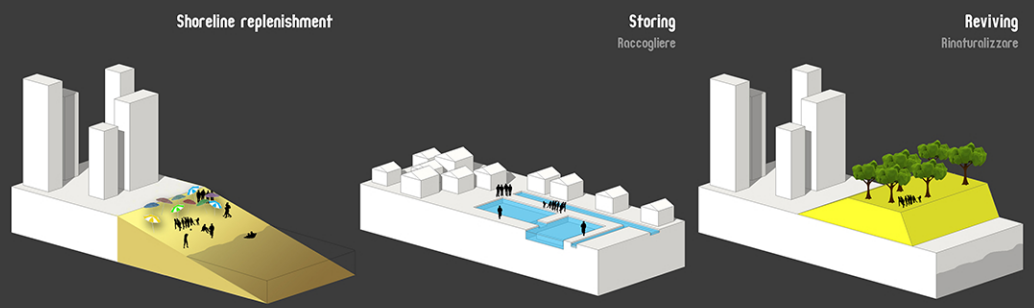
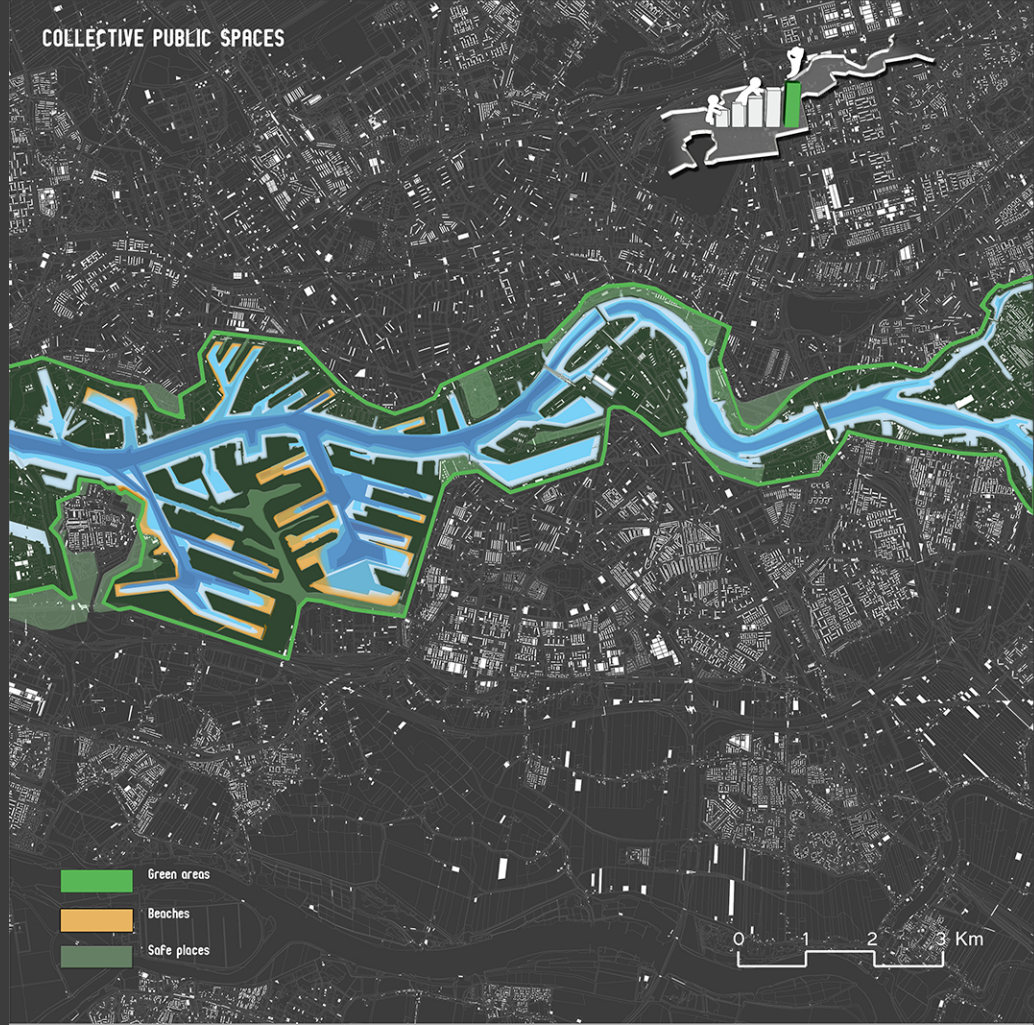
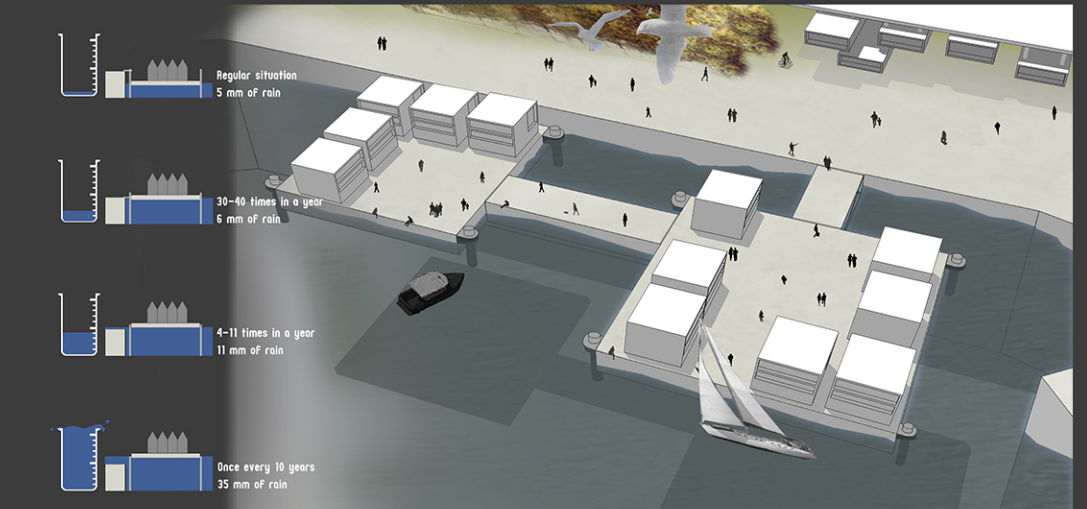
Present the establishment of permanent visual barriers in the city centre by utilizing movable guards.



Integration with the mobile dams



Settlements on water



Rehabilitation and shoreline replenishment of disused industrial docks.

