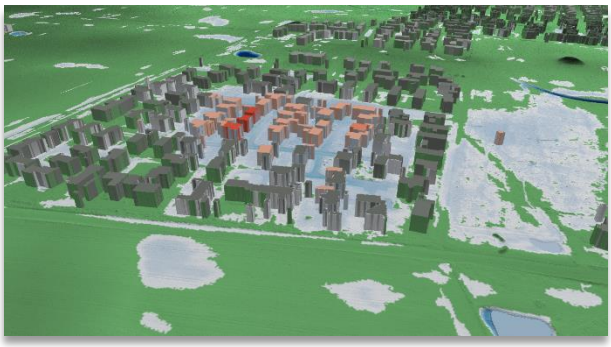
# Digital Climate Adaptation Tools

## New technologies for planning and prioritization of climate adaptations

Climate changes affect us in terms of more frequent and more severe flooding caused by cloud bursts, storm surges or riverine overtopping. Every flood poses a potential risk for damages – material as well as immaterial.

Floods can to some extent be prevented through climate mitigations – and damages can be prevented or reduced by adapting our infrastructure to cope with the future climate conditions.



Climate adaptations involve a variety of aspects, such as:

- The changes in frequency and magnitude of flood events – including the underlying sources of the floods.
- The vulnerability of our infrastructure. What kind of damages can we expect on an annual basis – now and in the future? How will they be distributed geographically?
- New technologies for prevention of floods or damages from floods. How do we select the optimal solution(s) among the many options?
- Indirect consequences, such as the $CO_2$ emissions associated with the climate adaptation measures.

The overall objective of the project "Digital Climate Adaptation Tools" is to develop new digital tools and services, which build upon existing GIS- and modelling tools and which can assist the authorities and utilities in creating a better overview of:

- Where are the most urgent investment needs – and why?
- What is the right level of investments from a total cost of ownership perspective?
- What type of solutions is most optimal – from an economic point of view as well as a $CO_2$-emission point of view?

The tools and services will be a combination of computational tools – building upon risk analyses – and tools for knowledge sharing including a concept for benchmarking of climate adaptation measures.

An integral part of the project is stakeholder engagement with participation from utilities, municipalities, and knowledge organizations as well as the private sector.

The Ministry of Environment of Denmark is supporting the project financially through its Ecoinnovation MUDP programme.

***"Digital Climate Adaptation Tools" is carried out by:***

- *CBMC Group (team leader)*
- *Atkins Denmark*
- *Hydroinform*
- *DNNK Development*

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