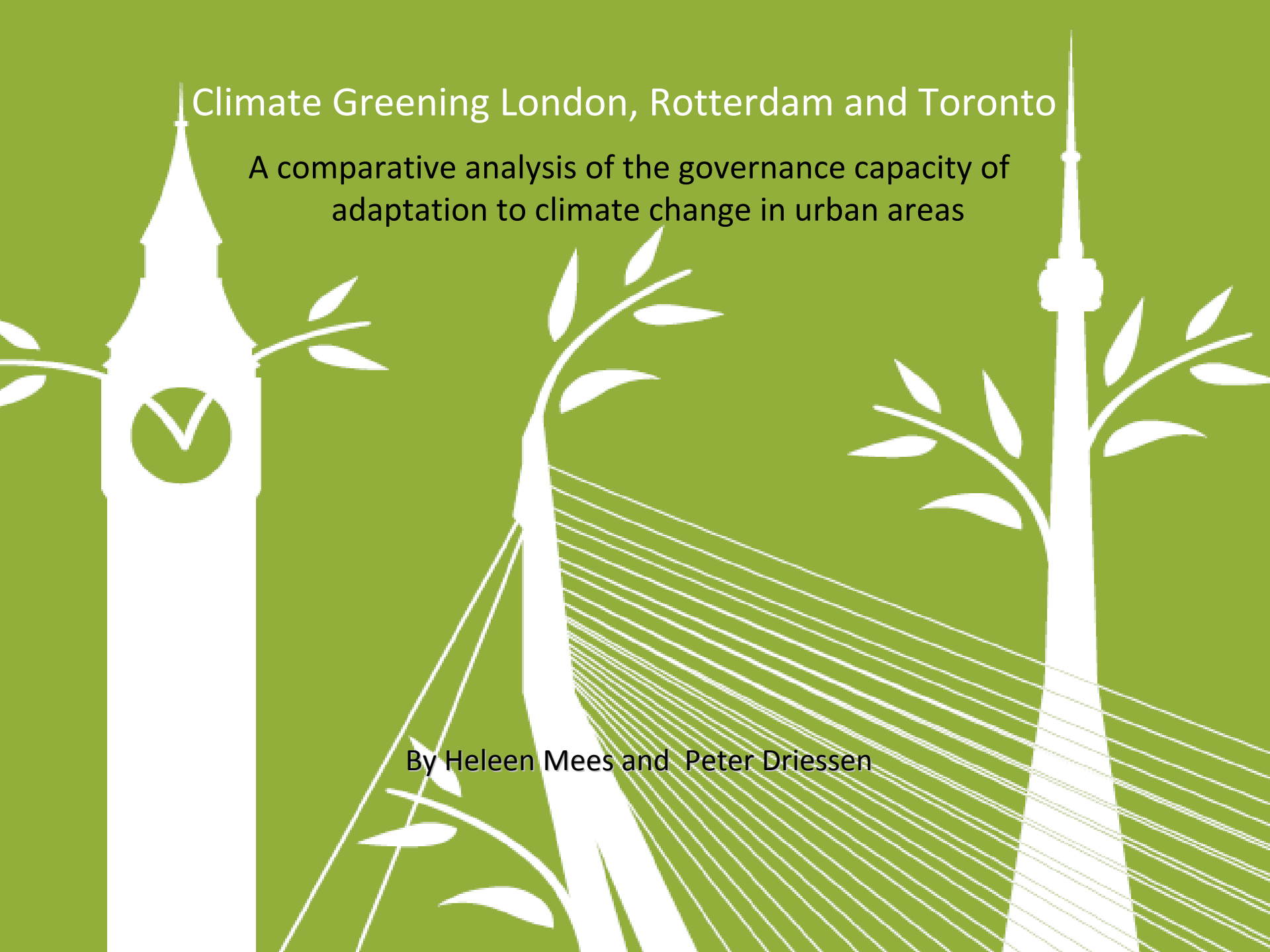


# Climate Greening London, Rotterdam and Toronto

A comparative analysis of the governance capacity of adaptation to climate change in urban areas

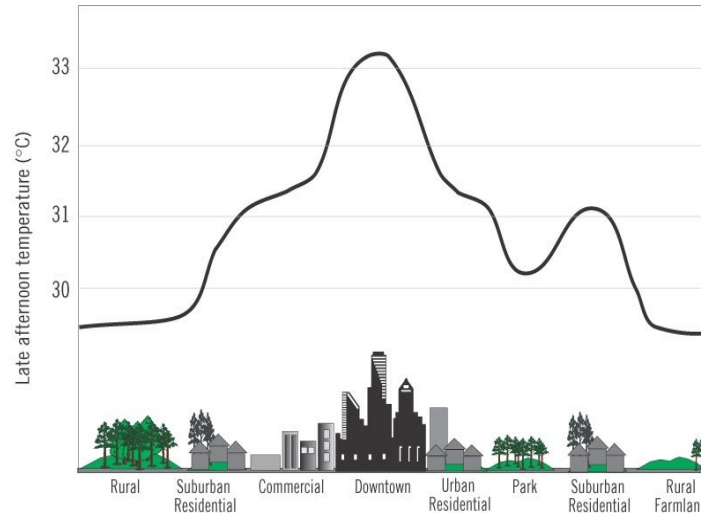
By Heleen Mees and Peter Driessen





# Cities and the governance of adaptation

- ❖ Cities are **more vulnerable** to climate change
- ❖ **Urban Heat Island** specific phenomenon in cities
- ❖ Most common issues are **flood risk, heat stress and drought**





# Role of green space

- ❖ **Climate greening = adapting to climate change through green space**
- ❖ **Green space is a no-regret adaptation strategy:**
  - ▶ Green space moderates excessive rainfall and heat
  - ▶ Green space has many societal co-benefits
- ❖ **Green roofs are a very popular adaptation measure**





# Role of spatial planning

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- ❖ **Common recognition of role of Spatial Planning in Adaptation:**
  - ▶ Its effects on land use affects vulnerability to climate impacts
  - ▶ Most adaptation measures require space, through grey or green infrastructural measures
- ❖ **Climate change has had little impact on Spatial Planning:**
  - ▶ Integration of adaptation considerations into Spatial Planning is limited
  - ▶ Lack of institutional frameworks in spatial planning to support adaptation
- ❖ **Knowledge regarding the capacity of Spatial Planning to govern adaptation is missing:**
  - ▶ Little research into the institutional dimensions of the governance of adaptation
  - ▶ Limited knowledge of practical experiences





# Research Objective

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To gain insight into the governance conditions of spatial planning to climate green cities by analysing and comparing the governance capacity in London, Rotterdam and Toronto

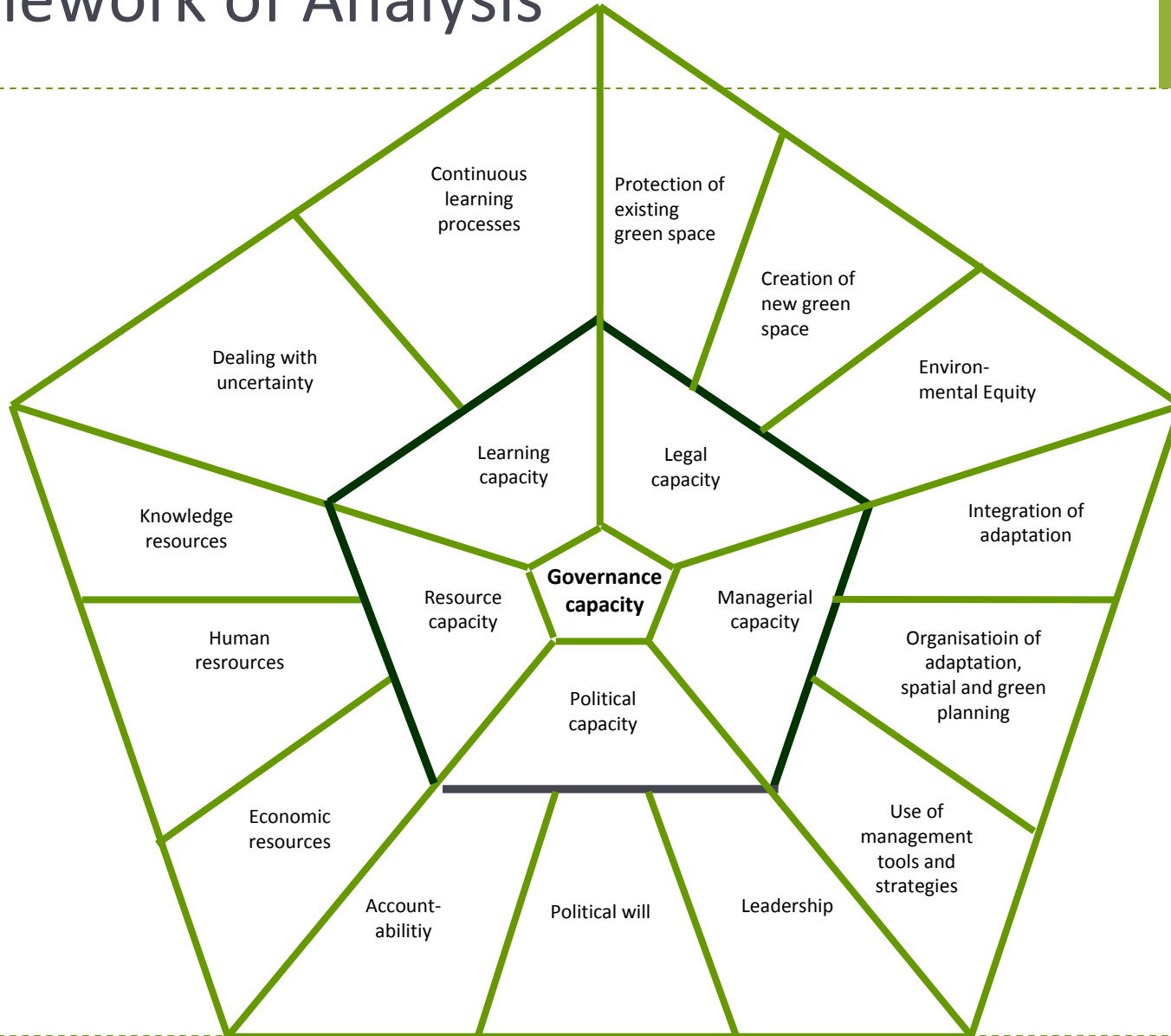
## **Definition of governance capacity:**

*“the degree to which a public-private network of actors is able to resolve societal issues by applying principles of good governance “*





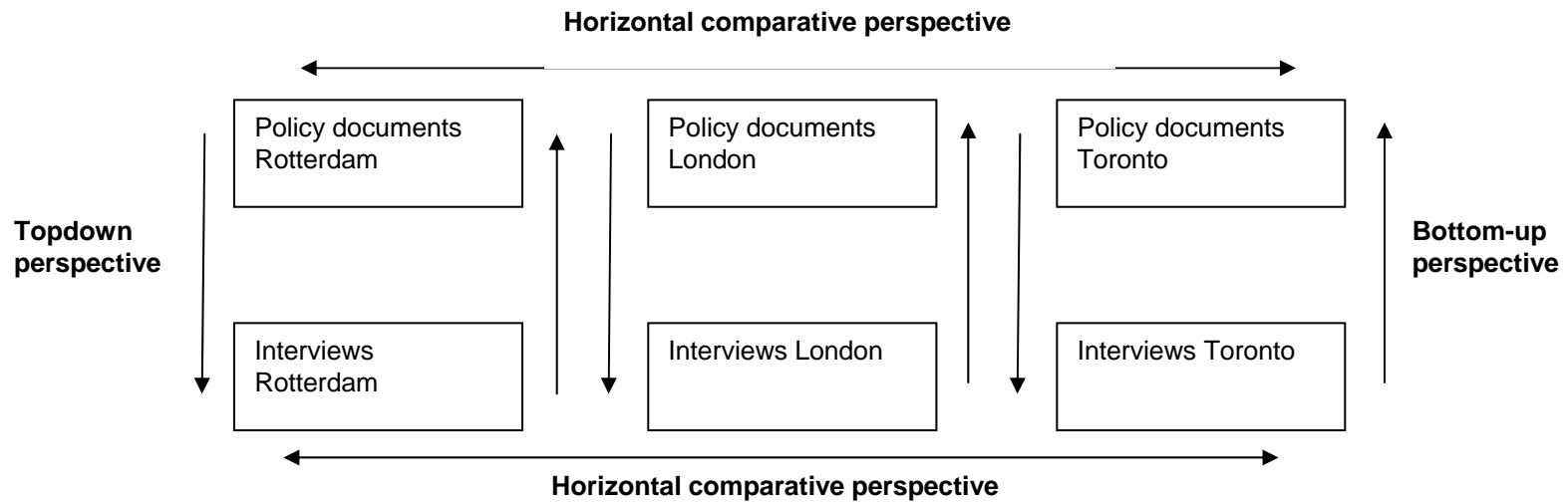
# Framework of Analysis





# Comparative research

- ❖ In-depth qualitative case studies of 3 cities
- ❖ Top-down perspective: main policy documents, expert interviews
- ❖ Bottom-up perspective: interviews with stakeholders





# Extent of governance capacity

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## Governance capacity in these cities is (slightly) above average:

- ❖ **Legal** capacity is strong as a result of spatial regulations that protect existing green space and stimulate the creation of new green space
- ❖ **Managerial** capacity is average, and quite constrained as a result of compartmentalisation and institutional fragmentation
- ❖ **Political** capacity is strong due to considerable political buy-in and leadership
- ❖ **Resource** capacity is medium weak, owing to lack of economic resources and limited skills and know-how of planning staff
- ❖ **Learning** capacity is rather weak, because of the challenging task to handle uncertainty and to facilitate continuous learning processes







# Key barriers to the governance capacity

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- ❖ **Key barriers are:**
  - ❖ Compartmentalisation
  - ❖ Institutional Fragmentation
  - ❖ Uncertainty
  
- ❖ Institutional fragmentation and uncertainty are reconfirmed in recent literature on adaptation planning





# Key opportunities to the governance capacity



- ❖ **Key opportunities are:**
  - ❖ Linking adaptation to other important governance themes
  - ❖ Integration of adaptation into spatial planning processes, building codes, environmental impact assessments.
  - ❖ Multi-functional forms of land use





# Importance of spatial planning

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- ❖ **Spatial planning has a notable influence,** but adaptation cannot rely completely on spatial planning
  
- ❖ **Main contributions:**
  - ❖ Strength of spatial regulations and policies
  - ❖ Strong influence on new- and redevelopment
  - ❖ Multi-functional land use as spatial concept to make the city compact, green and climate resilient
  
- ❖ **Main limitations:**
  - ❖ Limited influence on retrofitting of existing stock
  - ❖ Integrative character of spatial planning cannot entirely overcome fragmentation and compartmentalisation





# Governance conditions

## Legal conditions:

- Adequate protection of existing green space
- **Adequate provisions to create new green space**
- Adequate geospatial information provision to inform redistribution policies that promote environmental equity

## Managerial conditions:

- **Statutory consultees to control the integration of adaptation into spatial planning processes**
- Integration of adaptation concerns into existing codes for sustainable building
- Application of a combination of management techniques (suited to the local governance context) to promote horizontal, vertical and geographical coordination
- Promotion of a multi-functional land use approach which includes adaptation measures

## Political conditions:

- Real stakeholder and public involvement in adaptation planning
- Explicit political support for adaptation as full-fledged part of climate policy
- Creation of win-win solution with multiple benefits for society
- **Fostering of three types of leadership that mutually strengthen each other**

## Resource conditions:

- Improvement of political support so that adaptation planning gets adequate resource allocated
- **Training programmes as investment in the know-how and skills of human resources**
- Investments into building technical and social scientific knowledge

## Learning conditions:

- Containment of uncertainty through both technical and managerial techniques
- **Mental space for learning by doing through pilots and innovations**
- Organisational and technical infrastructures for continuous learning
- Exchange of information, experiences and best practices in networks

Questions?





# Case studies

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## Similarities

- ⊙ Frontrunners in adaptation
- ⊙ Green cities
- ⊙ Green Belt/Smart growth
- ⊙ C40 network

## Differences

- ⊙ Governance regimes
- ⊙ Spatial planning system
- ⊙ Cultural & political context





# Future research

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- ❖ **Broaden the number of cases to check universality:**
  - ❖ Similar cases: Western democratic cities
  - ❖ Different cases: cities in developing countries
  - ❖ Rural areas
  
- ❖ **Effectiveness of adaptation policies in 5 years time**
  
- ❖ **Adaptation policies for specific sectors**
  - ❖ Transport / infrastructure sector, public health, etc.





# Research Questions

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***Which conditions contribute to the governance capacity of the spatial planning policy field for climate greening cities?***

*What is the extent of governance capacity of the spatial planning policy field in London, Rotterdam and Toronto for climate greening their cities, and what are the main barriers and opportunities to this governance capacity?*

*What are the main similarities and differences in the governance capacities and their barriers and opportunities among these cities?*

*What can be learnt from this comparison?*







# Legal Capacity

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- ❖ Spatial planning has many regulations and policies at its disposal to protect existing green space
- ❖ It also has the capacity to add new green space through regulations and policy; Green roofs most popular measure
- ❖ Legal capacity is a key asset of spatial planning





# Managerial Capacity

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- ❖ Adaptation is slowly, but gradually starting to get embedded in spatial policy documents and processes
- ❖ The managerial capacity is severely constrained: compartmentalisation and institutional fragmentation are key barriers to cooperation across policy divisions
- ❖ Cities do use many management strategies and tools to increase the effectiveness of adaptation policy, such as project management structures, committees, task forces, partnerships





# Political Capacity

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- ❖ Strong capacity, delivered by a combination of policy fields/actors
- ❖ Accountability is a strong asset from spatial planning policy field
- ❖ Frontrunner status of these cities seems driven by considerable political buy-in and leadership
- ❖ Leadership is present in three forms: top-down, bottom-up and from external parties





# Resource Capacity

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- ❖ Resource capacity is generally weak
- ❖ Presenting barrier is lack of economic resources
- ❖ Real and prevailing barriers are lack of skills and know-how of the planning staff
- ❖ Knowledge resources are quite developed (with bias on natural scientific research programmes)





# Learning Capacity

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- ❖ Learning capacity is still rather weak, but offers significant potential for growth
- ❖ Dealing with uncertainty is a very difficult task; uncertainty is seen as a key barrier
- ❖ Facilitation of continuous learning processes and learning cycles is still underdeveloped, but networks are rapidly filling this gap

