

## Research questions

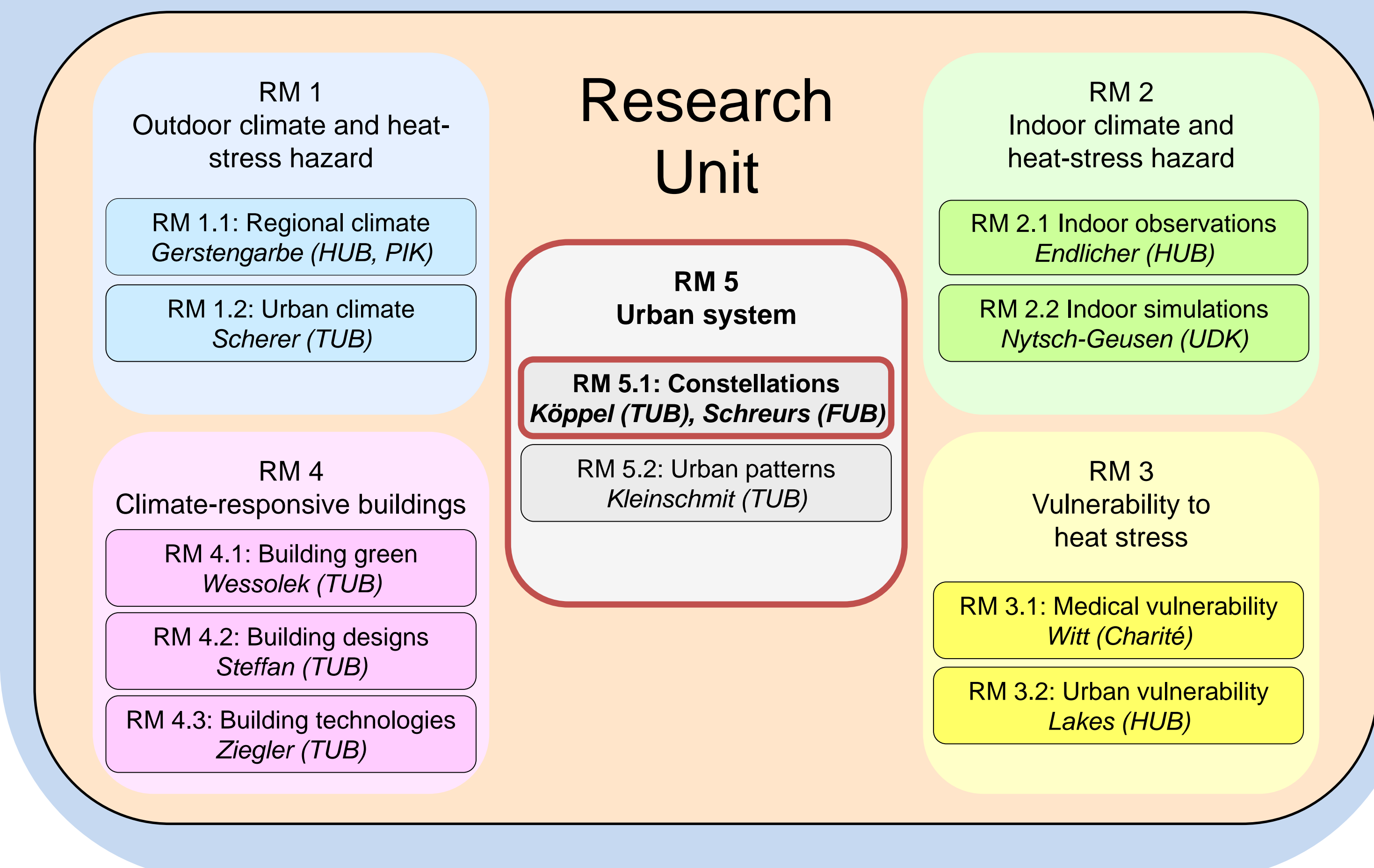
**Applicant Johann Köppel** (with contributions from M. Scheurs)

- What are the core elements of the resulting heterogeneous constellations to be addressed?
- Which policy levels and institutional contexts are the most promising for releasing, steering and fostering supportive interventions for the integration of mitigation and adaptation policies in urban planning?
- What are the legal and socio-economic conditions that might have to be changed?
- What might be an adequate basic set of urban planning tools as far as heat stress is concerned?

**Applicant Miranda Scheurs** (with contributions from J. Köppel)

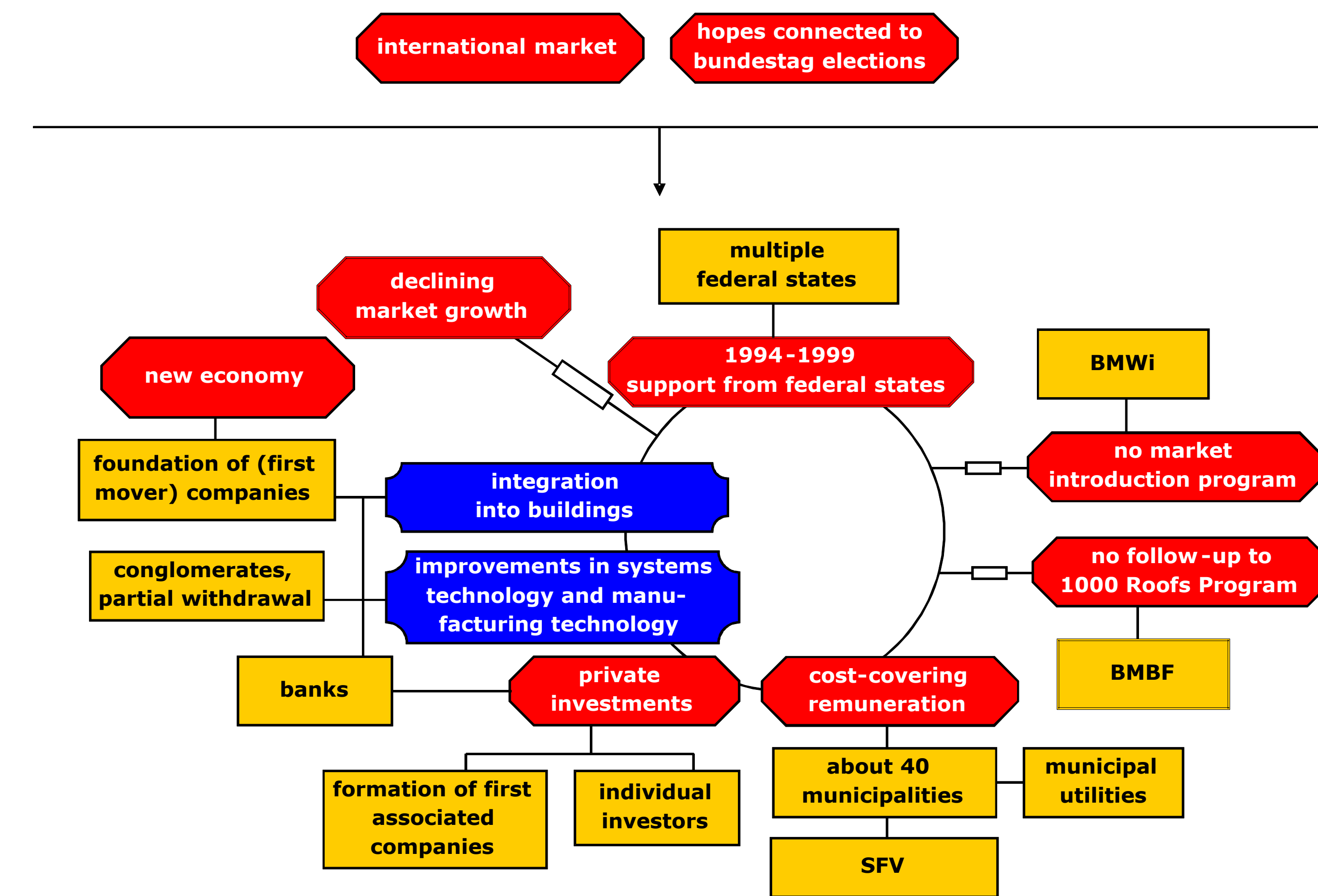
- Which set of implementation policies (self-governing, governing through enabling, by authority or others) might turn out as most promising?
- Approaches to involve the public in local climate change policy and governance strategies at the local level?
- What can cities learn from each other? International networks, model cities, diffusion of local action plans, NGO's support?
- Local initiatives are hardly a substitute for central, regional or supranational actions. But then, how can they work cooperatively?

## Sub-project 5.1 Constellations



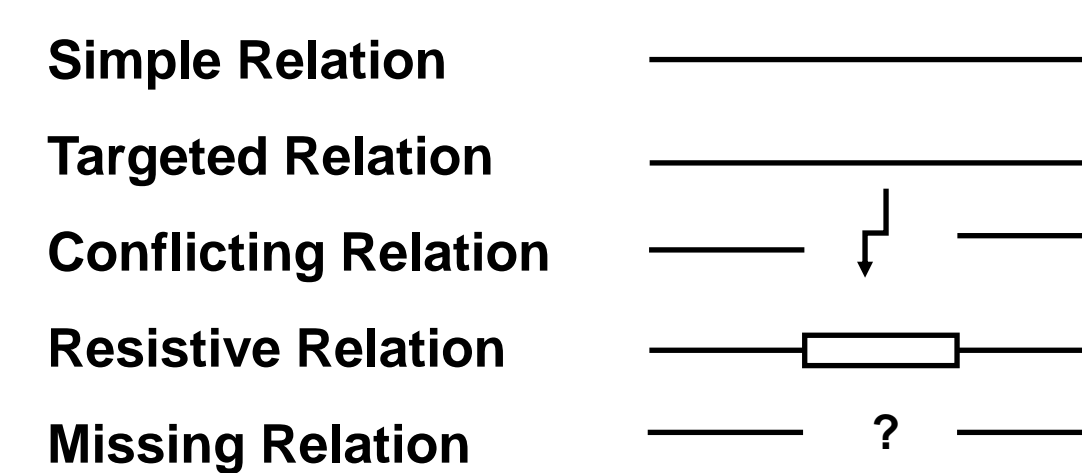
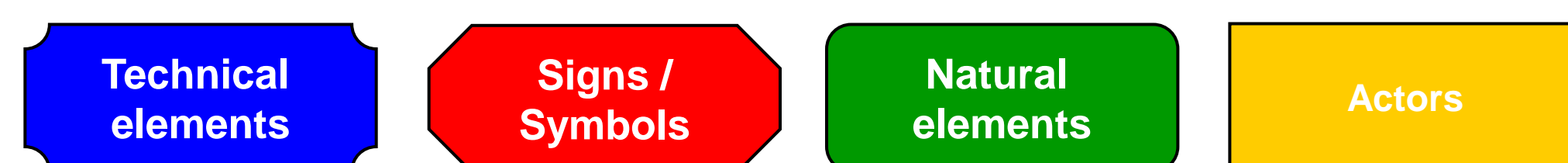
## Methodology

Solar power generation in Germany: Uncertainty and slowdown 1994-1998

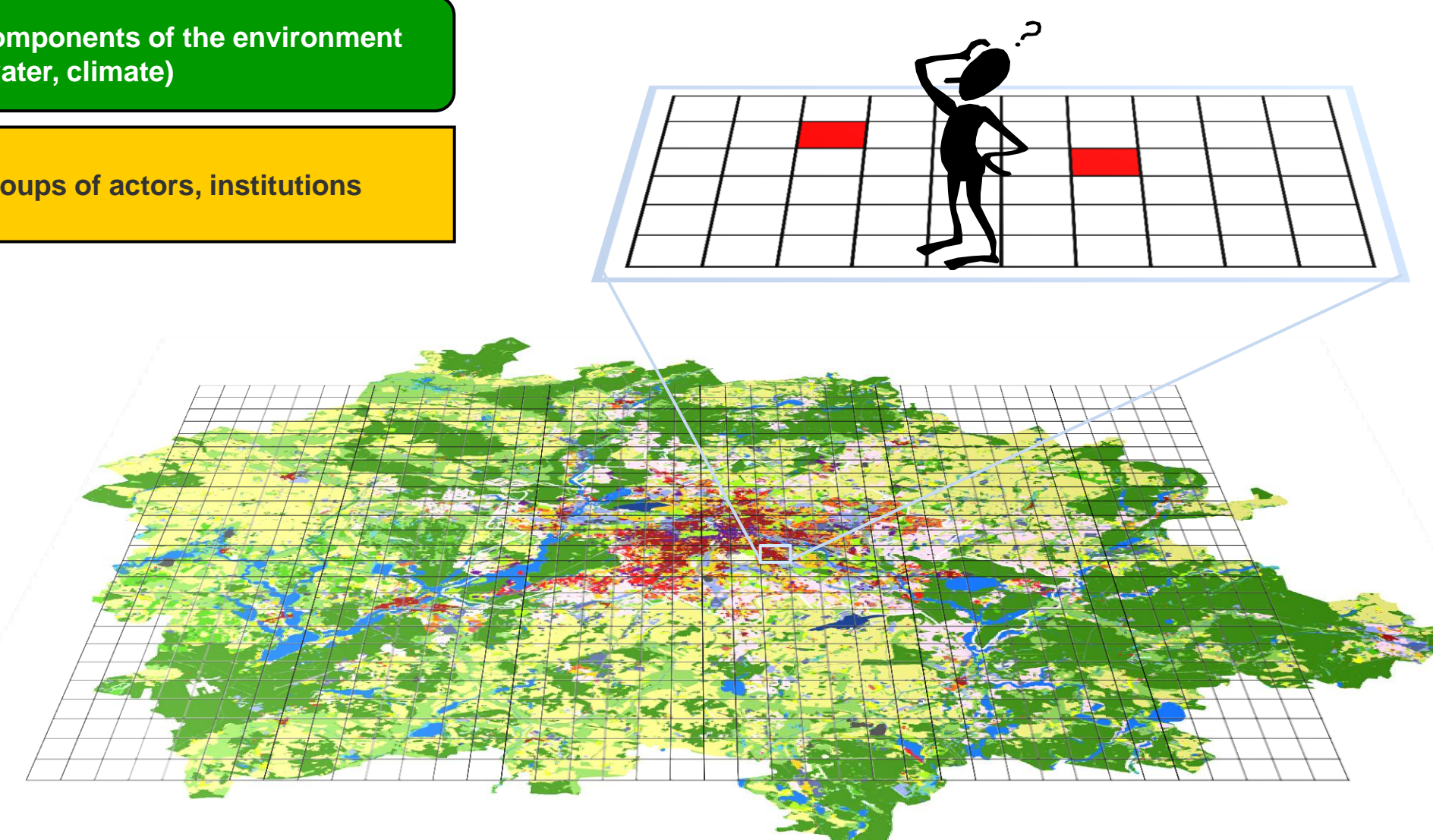
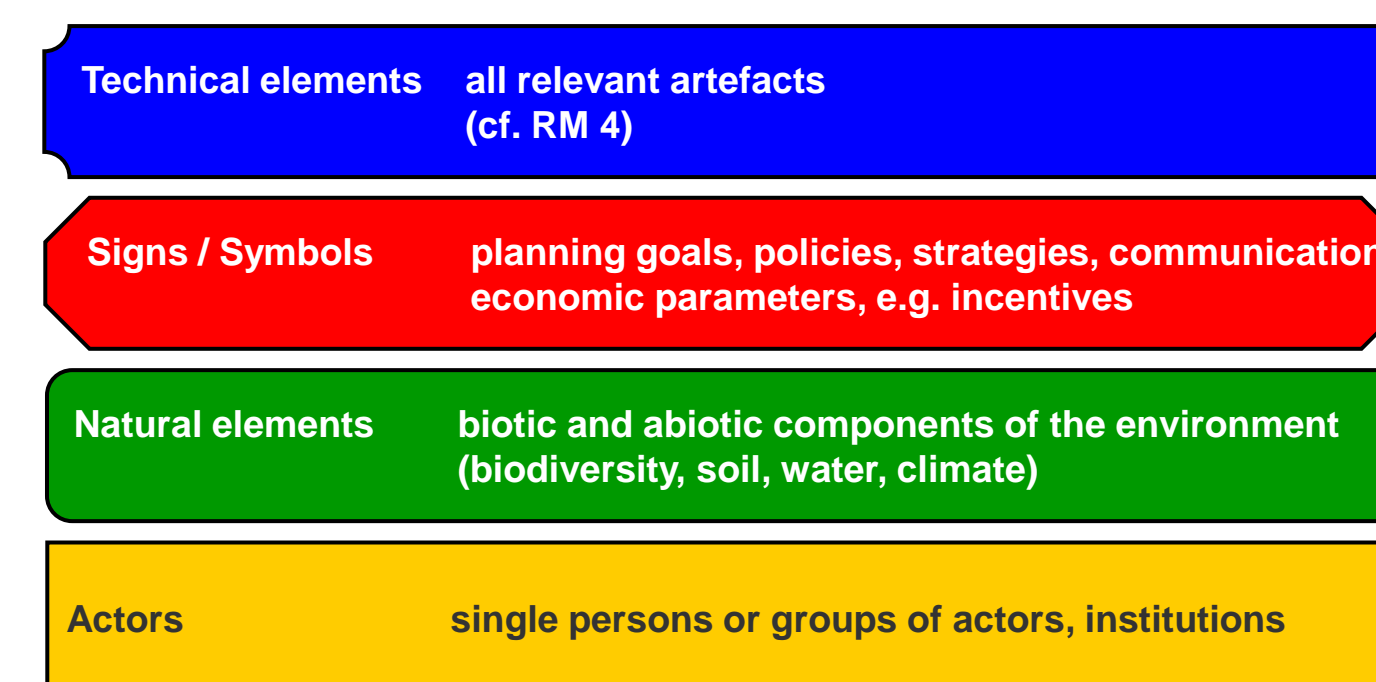


## Research approach

Constellation Analysis focuses on relevant governance approaches and seeks to identify the driving forces and impediments to policy change. It addresses radical, incremental or additive processes that can be used to look at mitigation and adaptation measures. Lessons learned from previous applications found that it is important to connect different policy levels, harmonise steering instruments and governance processes, motivate relevant actors, promote networking, and optimise technical infrastructure and economic innovations.



Constellation Analysis considers also “non-humans”, thus characterising socio-technical constellations of stakeholders, technical systems, social systems and natural elements. The method also looks at relations between the elements as missing, neutral, resistive, supporting etc. The elements and their relationships are visualised in order to support interdisciplinary and transdisciplinary discussions and negotiation processes.



## Projections

Change of heat-stress (HS) hazard and risks as assessed from nine different projections of urban climate (UC) and urban development (UD)

	UD 1	UD 2	UD 3
UC 1	HS 1.1	HS 1.2	HS 1.3
UC 2	HS 2.1	HS 2.2	HS 2.3
UC 3	HS 3.1	HS 3.2	HS 3.3

## Work schedule

Table 3.1: Work packages (WP) and associated schedule (in half-yearly intervals)

WP	Description	Schedule
<b>100</b>	<b>Project management</b>	
110	Reporting	
120	Logistics and organisation	
<b>200</b>	<b>Individual research</b>	
210	Current constellations of urban heat stress related planning and governance	
220	Interviews and document analysis of RMs	
230	Analysis of international networks, model cities, diffusion of local action plans	
240	Interviews and document analysis of pivotal stakeholders	
250	Exploration of potential for cross-urban climate learning	
260	Mapping and iteration of constellations and governance constellations	
270	Interpretative synthesizing of relevant constellation's outputs	
280	Contribution to planning and governance theory using Constellation Analysis	
<b>300</b>	<b>Collaboration within the Research Module (RM)</b>	
310	Promising planning and governance constellations to tackle heat stress	
<b>400</b>	<b>Collaboration within Research Links (RL)</b>	
460	Requirements and efficiency of modified building designs	
470	Political and societal influences on vulnerability to heat stress	
490	Urban climate projections	
<b>500</b>	<b>Collaboration within Research Clusters (RC)</b>	
530	Effectiveness of actions for reducing heat-stress risks	
540	Efficiency of actions for reducing heat-stress risks	
<b>600</b>	<b>Collaboration within the Research Unit (RU)</b>	
610	Projected heat-stress hazards, vulnerabilities and risks	
620	Transferability of the methodology to other mid-latitude cities	
630	Identification of future research and development activities	
640	Preparation of the follow-up proposal	