

Urban Maestro

Masterclass:
New governance
strategies for
Urban Design

Room for the River

Added value for people, place and planet

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Fig. 2: Room for the Waal in Lent/ Nijmegen © Johan Roerink / Aeropicture

Introduction

Cities and regions around the world are facing major transformation challenges, involving actors with opposing interests, whether it be climate change-related issues, or other urgent matters, such as rapid urbanisation and environmental pollution. Worldwide, the scarcity or excess of water represents one of the biggest challenges of the 21st century.¹ Historically, governments have prepared to meet water-related emergencies through top-down decision making.² However, a demand for the integration of additional values is becoming apparent as water management systems increasingly influence whole landscapes and settlements. As a consequence, the need to balance top-down planning and bottom-up demands grows,³ leading to a pressing call for governance tools that enable negotiation and collaboration.⁴ Nevertheless, empirical sources of successful and replicable tools in water management remain scarce.

This study focuses on the role of design governance tools in the case of the Dutch Room for the River programme (RfR), a large-scale transformation project, internationally known for the *Dutch approach*.⁵ We are highlighting the tools implemented to address friction specifically because we understand it as a culture-shaping power arising in “heterogeneous and unequal encounters”,⁶ relevant in the face of global and local transformation challenges. We assume the boundary spanning role of design governance tools to be essential as a value-adding mechanism when friction is present. These tools enable the integration and mediation of natural and cultural spheres and therefore the establishment of sustainable inter-organisational relationships.⁷ This study tries to systematise the tools with the help of the European Typology of Design Governance Tools that distinguishes between formal and informal, quality delivery and quality culture tools.⁸

The study uses evidence from document research (evaluations, reports, websites) and discussions with three key stakeholders. It examines the historical development of Dutch water management assuming this knowledge of paradigm changes in water management is conditional for the understanding of the Dutch approach. It introduces what design governance tools are used throughout the process and how, by illustrating the case study of Nijmegen.

Room for the River

Large parts of the Netherlands are below sea level, with 60% of the land being prone to flooding.⁹ Over centuries, the Dutch have created an anthropogenic landscape, claiming land from the sea through a complex system of dikes and polders;¹⁰ a landscape destined to suffer hard consequences related to climate change.

In the 1990's, two major flood events resulted in a paradigm shift in the approach to water management in order to ease inherent and century-old flood-related problems. Instead of continuously raising dikes and embankments, as standardised practices had dictated for many decades, the government decided to give more room to the natural course of the rivers Rhine, Meuse, Waal and IJssel, which had been marginalised over the past century.¹¹

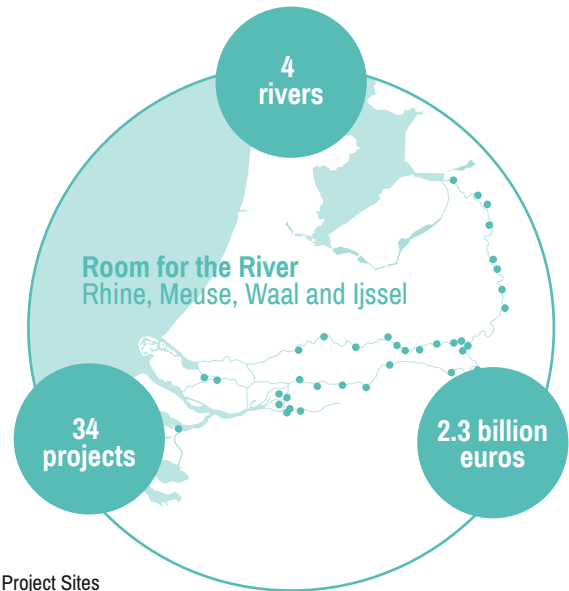


Fig. 2: Project Sites

The programme had two goals: ensuring lasting safety by taking measures such as lowering the flood plains and creating buffer zones, while simultaneously enhancing the spatial quality in the areas of transformation.

After a ten year period of feasibility studies and environmental impact assessments, the project was initiated in 2007 by the Ministry of Infrastructure and the Environment to be carried out by Rijkswaterstaat (Directorate-General for Public Works and Water Management) as the executive agency. After a long survey process that discussed several hundred possibilities to lower the water level, 34 projects were selected for implementation. Ambitions, knowledge and a budget of € 3.2 billion fuelled a new way of managing old problems. While the measures were decided on a national level, their implementation was decentralised to regional and local authorities and/or private parties, which increasingly had to interact with local stakeholders and civil society actors.¹²

The Development of the Dutch Approach

Due to the constant threat of floods, the Dutch have long strived for a manageable water system, constantly reiterating their approach to water management within their limited land resources. The first major paradigm shift, between 1200 and 1400, paved the way for a democratisation of the decision-making process, by introducing water boards. Ongoing urbanisation and the development of vulnerable land resulted in an increasing complexity and scale of the necessary water control measures to ensure the populations safety. The second major paradigm shift occurred during the 1990s with the aforementioned floods. This shift changed the approach to water management from dominating nature through technology, to understanding the causes and effects of these long-lasting, anthropogenic interventions on natural processes.¹³

This change manifests in the RfR programme and its attempt to integrate and work with natural, spatial and social conditions. Moreover, it bridges gaps between top-down and bottom-up strategies, using participatory planning approaches involving multiple stakeholders.¹⁴

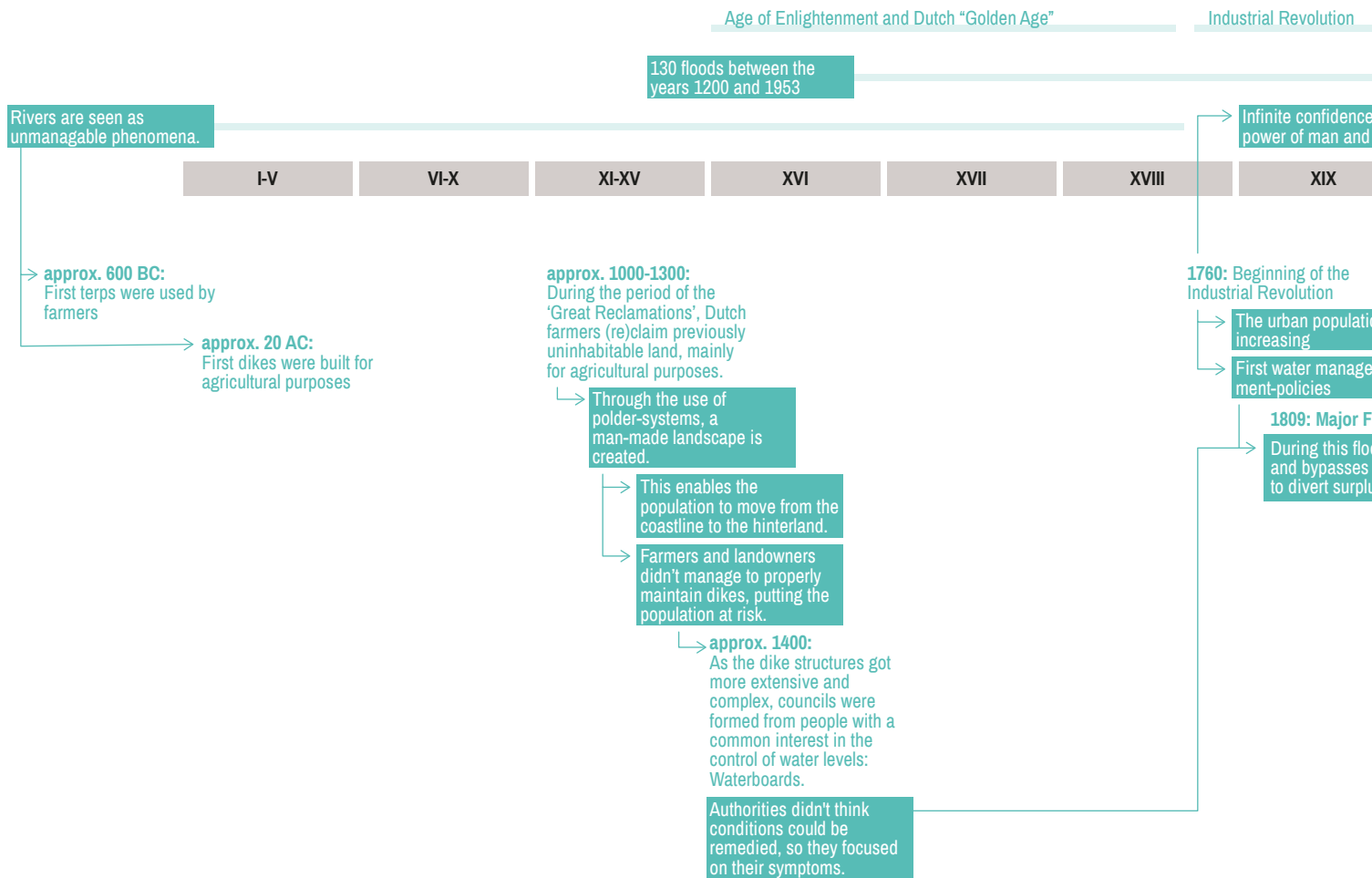


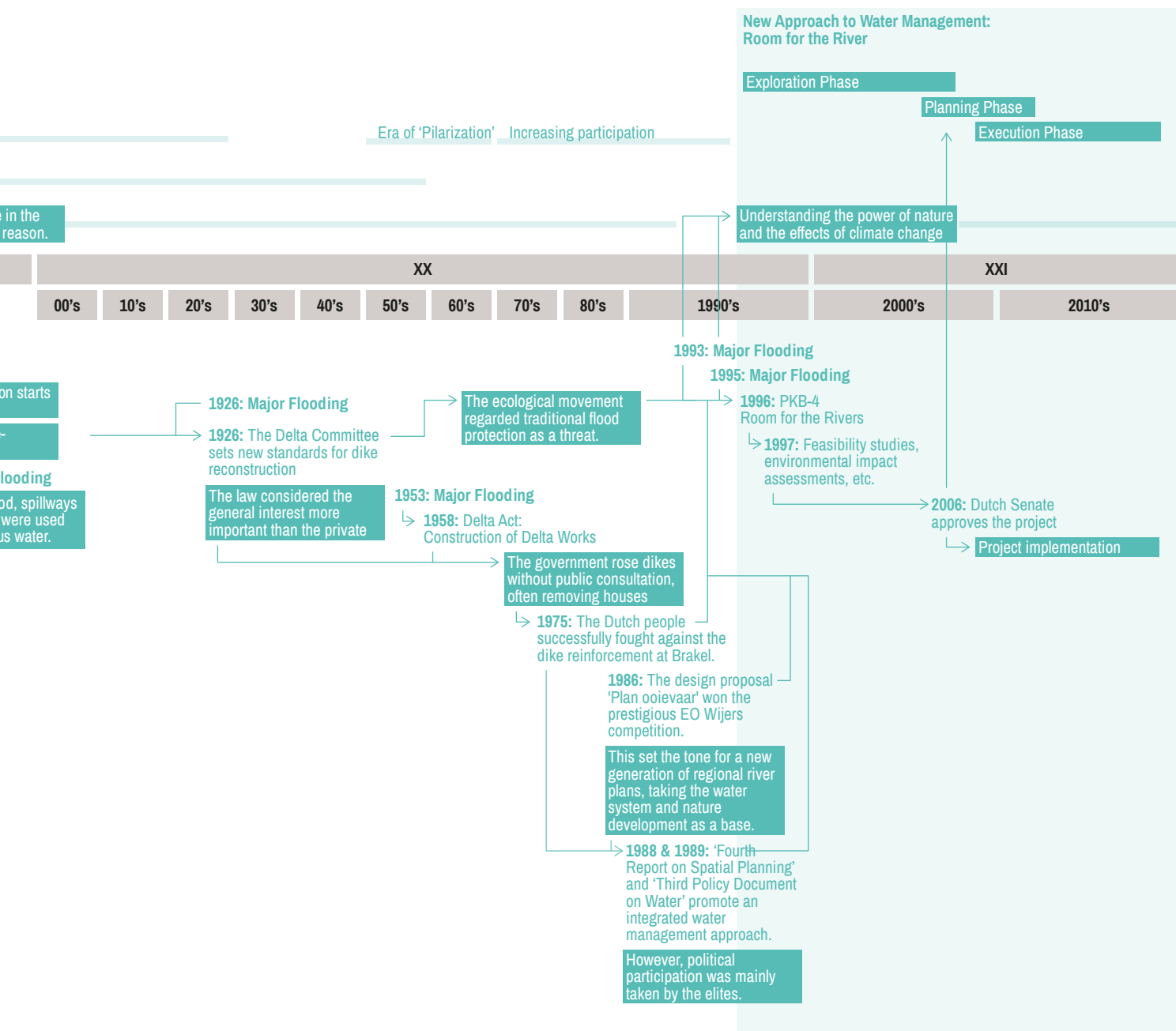
Fig. 3: Historic Development of Water Management in the Netherlands¹⁵

Spatial Formations

In the first century before the Common Era, the first dikes were built and maintained by farmers and landowners, who directly benefited from them (see Fig. 3). Through the use of terraforming, they eventually reclaimed the land from the water, thus, creating productive land.¹⁶ As these water control measures increased in size and complexity, more actors became economically dependent on their functioning and maintenance. Disagreements and conflicting interests became a risk and therefore necessitated a better organisation. Hence, water boards were established among people with an interest in controlling the water levels surrounding their land. These water boards represent the first institutionalised form of water management. While over time the water boards developed into larger, regional organisations, water management remained a task for the local people.¹⁷ The shaping of dikes and other structures can be understood as architecture of common interest: for the people, by the people. This "particular form of self-government [...] formed a strong foundation for the democratic structure of the present Dutch society".¹⁸

Societal Influence

During the *Age of Enlightenment*, the Dutch *Golden Age* and the *Industrial Revolution*, the Dutch increasingly incorporated technical and human-centred approaches to water management. With an "infinite confidence in the power of human reason and the desire for a socially engineered society",¹⁹ the Dutch landscape was engineered according to human needs. Large-scale terraforming allowed an intensified urbanisation process. Rivers and man-made canals were equipped for shipping traffic, commodifying the landscape. The approaches to water management were mainly technocratic. The local population was negligibly involved and the natural environment was increasingly marginalised in these processes.



Environmental Awareness

Despite all these technological solutions, flooding remained a constant companion. With the beginning of the 1970s, political protests and public resistance emerged and demanded a new approach to water control, with a civil society organisation successfully fighting the unilateral implementation of flood protection in court.²⁰ Meanwhile, public involvement increased. In the 1980's, *Plan Ooievaar* set the base for a nature-based approach to water management.²¹ The plan incorporated the river and natural systems and worked with their metabolic processes.

However, it was not until the mid-nineties that a fundamental change took place. The force of a crisis bears the potential to challenge social, technological and economic dimensions and to function as a catalyst for systemic change.²² In this case, two floods and a growing awareness of climate change led to the realisation that continuously building higher dikes and reinforcements would not save the Dutch population from flooding in the long term.²³

These shifts in perspective resulted in the ambition to combine safety and spatial quality in the RftR programme, acknowledging the necessity of an integrated planning approach. The programme developed and worked with tools and methods that enabled the integration of spatial, social and natural qualities and values, and supported the negotiation of opposing interests.

Governance Tools Bridging the Gaps

RftR aimed to improve safety and spatial quality. While the former proved to be a straightforward goal to achieve, the latter appeared to be more difficult. For the RftR programme, the general definition was changed into “the balance between *hydraulic effectiveness, ecological robustness, and cultural meaning and aesthetics* [emphasis added]”;²⁴ thus, including spatial, social and natural aspects. In addition, RftR invested in tools enabling and supporting this aim by creating settings for negotiation and integration of opposing views and interests – or in other words, friction. The observed tools can be grouped in boundary spanners and hands-on tools. The former facilitated the multi-level approach from within the government or as external consultants. The latter enabled the teams and designers to stimulate the dialogue between actors, to enable negotiation and to develop integrated design solutions, guides and frameworks.

Boundary Spanners

The Spatial Quality Cluster (SQC) formed part of the Programme Directorate (PDR) and it was responsible for the coordination of the programme's spatial quality objective. The SQC worked as an intermediary between the different stakeholders (see Fig. 4), by setting a general frame and developing guides for the regional spatial quality objectives and creative freedom in individual projects. Additionally, they informed the PDR about the contributions these made to the previously established goals. Overall, this team had a large influence on spatial quality and the communication between different stakeholders.²⁵

The Q-Team was an independent entity that coached planners and designers, peer-reviewed the proposals, and reported to the ministry about the achievements; thus supporting the multi-level approach. This interdisciplinary team of experts offered advice unconstrained by formal governmental or institutional opinions. Frequent reviews were important to achieve designs that would enhance spatial quality, therefore, the team members visited each project at least five times along the whole process.²⁶ The Q-Team created a design quality assessment framework with soft guidelines instead of hard rules, arguing that “each situation is different and requires another approach and solution”.²⁷ The team had a large influence on decision making and on how project teams and their designers developed spatial quality.

Landscape architects were the “guardian[s] of spatial quality - especially to prevent the tendency to see spatial quality as a “costly luxury” in the face of limited budget and time”²⁸; they communicated complex planning policies to civil society actors,²⁹ while at the same time visualising possible outcomes; and gave a voice to the river by integrating it as an actor in the negotiation. The landscape architects were boundary spanners between the different interests and policy sectors involved in flood risk strategies³⁰, and played important roles in the processes by managing “a wider creative process of arriving at decisions and action”.³¹

Hands-on tools

Workshops and design ateliers allowed the mediation between top-down planning and bottom-up demands. They were organised in local projects with both societal stakeholders and citizens, where local ideas were taken into consideration during the development of the projects.³²

During these workshops, the use of a digital design table allowed professionals and citizens to draw their plans and ideas on the map and immediately calculate what the consequences would be. Initial scepticism from municipalities, provinces and the state was followed soon by enthusiasm and co-developing project plans.³³

A comparison of the tools used in the RftR programme with the tools from the European Typology of Tools shows that the examples of tools are directed at quality delivery and incorporate both informal as well as formal components. However, the SQC, the Q-team and the landscape architects additionally function as boundary spanners, which enable the cross-fertilisation of ideas, knowledge and interests, across boundaries of organisations.³⁴ Therefore, they influence the quality culture and promote a positive decision-making environment.

The Use of Tools in Lent, Nijmegen

One of the 34 projects selected was implemented in Lent / Nijmegen. The citizens of Lent were confronted with top-down strategies to create more room for the River Waal. These top-down decisions, resulting in the demolition of 40 houses, were met with a great deal of protest in Lent as there had been no preliminary consultation with the residents. The inhabitants opposed the plans, joined forces and developed an alternative plan, which gained attention from decision-makers. Although this plan wasn't considered an optimal solution by the PDR, it nonetheless gave voice to the citizens.³⁵

Design workshops were then organised with local working groups and citizens from Lent, through which the citizens gained influence. According to the landscape architect of the municipality of Nijmegen, the design workshops resulted in shared ideas and a vision.³⁶ As a result, a river park with a 4.5 km channel was developed, with opportunities for nature, recreation and living, in addition to the guarantee of better water safety. According to local newspapers in 2017 and 2020 the development became “a much more attractive area than initially planned”³⁷ and “the cross of Lent eventually became the strength of the new Nijmegen on the river”³⁸, demonstrating the potential of incorporating different opinions in a design process.

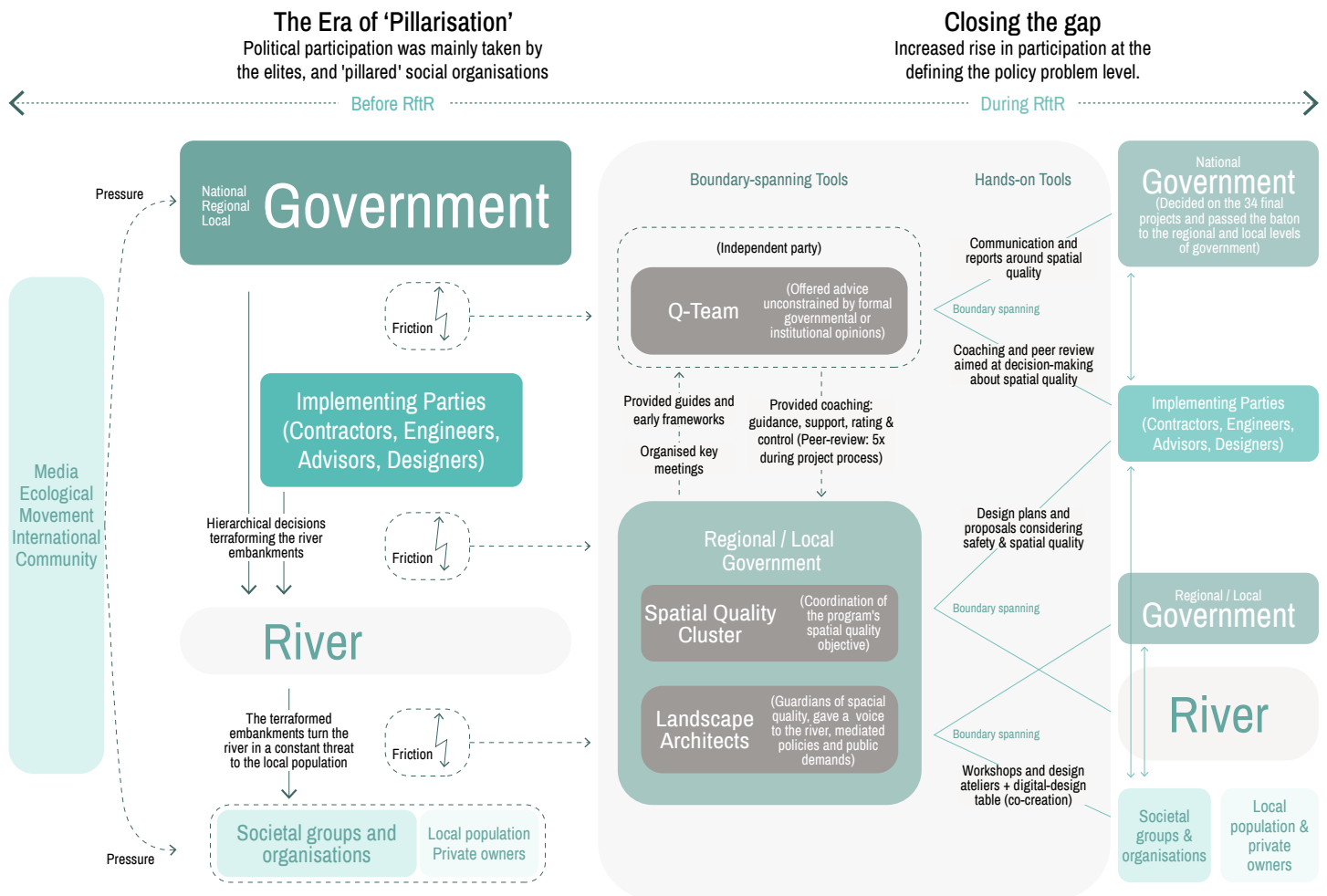


Fig.4: Governance and tools before and during RfTR

Conclusions

Given the complexity of handling pressing transformation challenges involving actors with opposing interests, the necessity for new governance tools is evident. This study has examined the role of design governance tools in addressing friction and enabling negotiation and co-creation. We found that RfTR has tried to institutionalise negotiation processes with the help of boundary spanners and hands-on tools. The study shows that it is the combination of tools that helps to address the friction on different scales. Additionally, in all tools, the role of designers appeared essential in the operationalisation of spatial quality.

Looking at the example of Lent, we notice room for negotiation and adaptation in the governmental proposal. While ensuring safety from high water has been a non-negotiable aspect throughout the project, spatial quality, the second goal, gave important means of negotiation and leeway in local projects and implementation processes. The awareness of the existence of opposing interests and addressing them has in many ways changed the project for the better.

We believe the future will bring greater challenges, such as water- and climate change-related issues, and other urgent matters. These will bring not only friction, but also severe conflicts that need to be addressed. The process of negotiation, mediation and finding consensus will become ever more critical. We therefore see an essential role in integrative design

governance tools that address friction productively. This study acknowledges their power to integrate top-down and bottom-up approaches. Boundary-spanning capacities are especially promising for tools in governance networks that aim at building sustainable inter-organisational relationships and facilitating participation.

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