1 A Culture of Order

In January 1995, the river Meuse in the province of Limburg and the Waal in the province of Gelderland broke their banks and the smaller Dommel river flooded the A2 motorway between Den Bosch and Eindhoven. At some places along the Waal, the dikes were so weak that it was decided to evacuate 250,000 people. The local and regional authorities quickly and efficiently organized the large-scale evacuation, demonstrating their ability to respond swiftly in an emergency, and most of those evacuated were able to return home after two weeks. The Meuse had previously burst its banks in 1993, and 12,000 people had had to be evacuated.

Alarmed by these two near-disasters in quick succession, the national government responded promptly with plans to prevent future flooding disasters in the areas around the rivers. In September 1995, it published the *Deltaplan Grote Rivieren* (Large Rivers Delta Plan), which, in keeping with water-management tradition, proposed to increase the height of the river dikes. However, within five years a new vision emerged to contain the rivers: merely raising the height of the dikes would not be enough and, moreover, at several places the bearing capacity of the subsoil was simply insufficient for dike reinforcement.

In 2007, the government therefore published the comprehensive plan *Ruimte voor de Rivier* (Room for the River) with a twofold aim: to increase safety and improve river landscapes. The plan, which was fully implemented in 2019 and cost 2.3 billion Euros, comprised some forty projects and measures to create – quite literally – more space for the rivers. The rivers' discharge and storage capacity were increased through a variety of techniques, including deepening channels and floodplains, constructing new spillways (see photo) and, perhaps most strikingly, depoldering thousands of hectares of farmland for landscape and river improvement and for recreation.

In accordance with the national plan *Ruimte voor de rivier* (2007), the dimensions of the IJssel's riverbed at Deventer have been adapted to climate change.

1.1 A Land of Order and Planning

Controlling, shaping and protecting land from the forces of nature have dominated Dutch history since the Middle Ages. Vast parts of the Netherlands have been reclaimed from the sea and from marshes and peatlands. Travelling through the Netherlands in the 1850s, French writer Alphonse Esquiros (1812–1876) was impressed by how the Dutch had transformed their swampy delta into a habitable country. 'This land is their creation', he wrote in *Holland and Dutch Life* (1859). According to historians Jan Bank and Maarten van Buuren (2000, 115):

> 'Order is not a characteristic of a specific era of Dutch history; order is the main characteristic, the existential condition of a civilization which had nestled and had to survive in the delta of three great rivers, the Rhine, the Meuse and the Scheldt. Since the Middle Ages man has taken the initiative to organize water management and become a creator of land and the landscape.'

This chapter focuses on the main features and principles of the culture of spatial planning in the Netherlands. The immense investment needed to accomplish this mastery of nature always required collective efforts, driven by collective gains. Such gains compelled public authorities to participate actively in making new land. The tradition of centuries, the need to keep the land safe and dry and the sense of efficient land use made spatial planning a respected institution. The roots of this institution can be traced back to the Middle Ages when urban authorities and agricultural communities became aware of urban development as a means to promote and accommodate prosperity and started to coordinate activities to expand cities by rational land-use schemes. In the countryside, landlords and development associations acquired concessions to reclaim the next peat land or embank the next area of the sea. Urban administrations and water boards were the first manifestations of public authorities, which represented greater parts of the population and stakeholders.

Over the centuries, making the land safe, habitable and fertile has resulted in an orderly and efficient country; a network of rational agrarian landscapes, villages and cities in which every square meter appears to be put to use. After AD 1000, the southwestern coastal areas were gradually diked to gain agricultural land. The isle of Overflakkee in the province of South Holland is an example of a compartmentalized landscape, consisting of seven polders created between 1415 and 1527. The draining of lakes, which developed from peat extraction, began around 1100. Between 1500 and 1815, a total of 2,700 polders were created in the Netherlands adding 250,000 hectares of land, mostly between 1560 and 1660 (De Vries 1995). The higher sandy terrain of the eastern and southern provinces has been

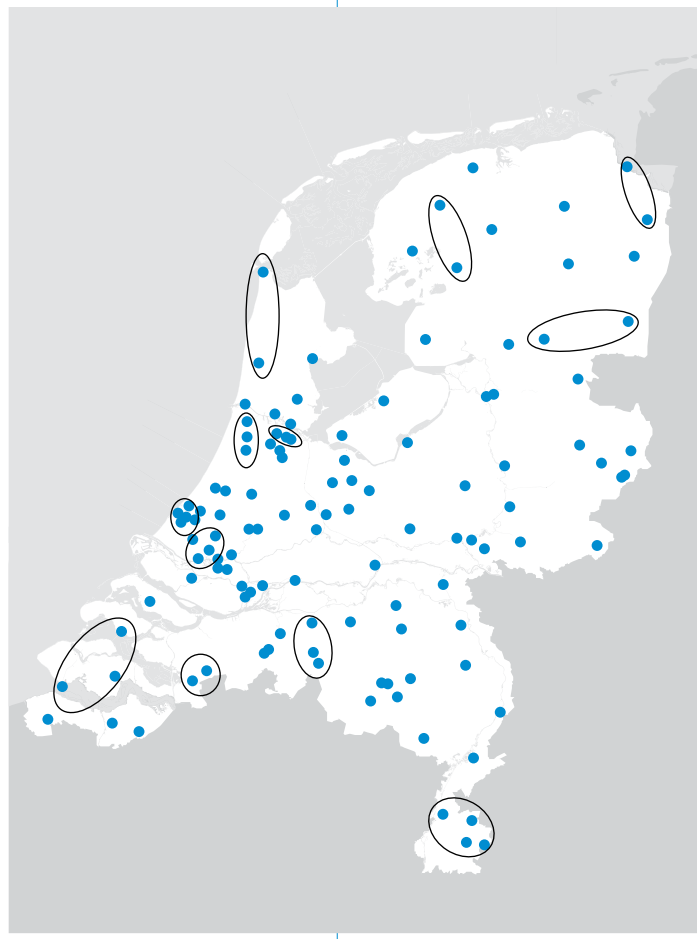
1.4 Spatial Planning is an Institution

An institution is a unique entity, subculture or sector with a recognizable set of values, norms, traditions, beliefs, unwritten and written rules, and practices. At the beginning of the twentieth century, the American economist and sociologist Thorstein Veblen (1857–1929) succinctly defined an institution as 'an outgrowth of habit' (Veblen 1904). Institutions are divided into organizations, foundations, companies and private households, elements that are constantly changing in response to internal and external stimuli. These changes affect their spatial needs and location policy. As the economist and Nobel Prize laureate Douglass North (1920-2015) noted, 'It is the interaction between institutions and organizations that shapes the institutional evolution of an economy. If institutions are the rules of the game, organizations and their entrepreneurs are the players' (North 1993, 3).

Education and healthcare are powerful examples of institutions that underwent major changes and reorganizations in the Netherlands after 1980. The introduction of the *Wet op het hoger beroepsonderwijs* (Higher Professional Education Act) in 1986 resulted in the reorganization and relocation of almost 350 higher professional education programmes within fifty institutions concentrated in cities. A similar process of spatial concentration took place in healthcare (see page 35). This is a striking example of how changes in values and norms (medical standards) and the reorganization of activities (efficiency, cost reduction) affect spatial planning in the form of concentration, relocation and scaling up, resulting in a reshuffling of the nation's pattern of care. The industrial sector has undergone similar relocation processes.

Because institutions usually change slowly, there is often resistance to new spatial policies and the renewal of elements such as municipal or provincial services, departments or private consulting firms. As early as 1904, Veblen pointed to the uncertainty that changes to prevailing opinions, rules, routines and positions cause among some employees, resulting in resistance that he referred to as 'cultural lag': within any organization, there are always departments that benefit from innovation, and others that suffer and therefore prefer to maintain the status quo. Cultural lag can escalate when change results in conflict, frustration, delays and cost increases. Friction makes organizations less efficient and effective, resulting in lower production and increased cost. Overcoming resistance takes time; sometimes, too much time. Untimely, adjustment can lead to drastic reorganization, including the replacement of leadership, divesting of components, mergers, splits, or bankruptcy.

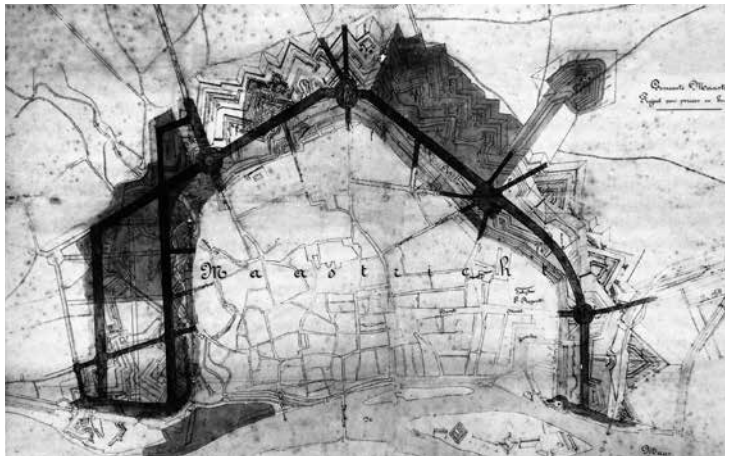
In a democracy, new ideas can be openly discussed and decided upon democratically. Around 1870, a prolonged societal debate began about the desirability of improving housing for the working classes.



The spatial distribution of hospitals in 2020 is a result of Dutch government policy in the 1980s, which aimed to increase efficiency and cost-effectiveness of the public health sector. Of 261 hospitals operating in 1972, no fewer than 160 had been closed down by 2020.

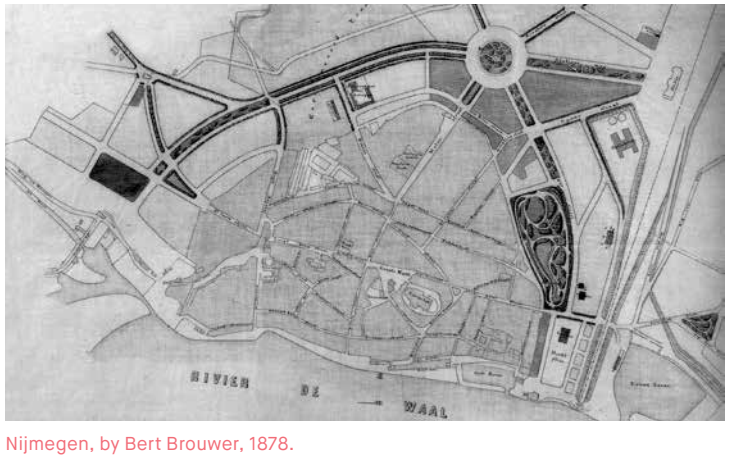
The Industrial Town 3

19th Century Boulevardplans



Maastricht, by the City Council Commission, 1867.

Nijmegen, by Frits van Gendt, 1876.



Nijmegen, by Bert Brouwer, 1878.

Nijmegen enlisted the advice of Maastricht city architect Willem J. Brender à Brandis (1845–1929) and engaged Bert Brouwer, who by now had earned national renown for his Groningen plan.

For Nijmegen too, Brouwer designed a boulevard plan with the broad Oranjesingel – and its extension, the Van Schaeck Mathonsingel – as its central axis, linked to large roundabouts and the railway station. Without the constraints of surrounding urban canals, Brouwer was able to design a more sweeping, freer embellishment than was possible in Groningen. The city council's committee embraced this third extension plan, but negotiated a 17 percent discount on the original asking price. Thirteen years later, it had made a 15 percent profit on the sale of building plots, with another twenty hectares of building land in reserve (De Klerk 2008).

Nijmegen, the Oranjesingel in 1920 shows what a green urban boulevard should look like.

Brouwer's plan for Nijmegen was implemented almost in its entirety. Together with the Arnhem-based banker François H. Fockema (1845–1901), Brouwer purchased more than fourteen hectares of land in the planning area, where the two men committed to establishing 'an outdoor club with grounds for entertaining, a cycling track and a racecourse', known as the Wedren. Councillor Johan H. Graadt van Roggen (1831-1902) kept a diary that shows that the city council promoted the implementation of the plan through an astute policy of land purchase, sale and exchange. Buyers of larger plots were contractually obliged to follow strict building regulations: start date of construction, type of dwelling, and minimum rental value. The planting of the boulevards and city parks was designed by Belgian landscape architects. The municipality took an active role in pre-financing the preparation of building plots and street layout, recouping the cost in two ways: by passing this on to the adjoining residential plots, and through higher taxation. This strategy had first been implemented by Maastricht's former mayor Hubert Pyls (1819–1903); cities not only competed with each other, but also learned from one another.

Regime Change

7

7.3 Population and Housing Market

At the beginning of 2024, the Netherlands had 17.9 million inhabitants, divided across 8.4 million households. The year 2022 was remarkable in two respects: for the first time since 1900, the number of deaths exceeded the number of births; and due to the unexpected arrival of a larger number of foreign labour migrants and asylum seekers – along with 95,000 war refugees from Ukraine – the population increased by 200,000 people; twice as fast as in previous years. During the decade 2010–2020, immigration was regularly underestimated, resulting in an asylum reception crisis. Because there were too few homes available for 'status holders' (asylum seekers who have been granted a residence permit), asylum reception centres became overcrowded.

Population Trends 2070

According to the 2024 population forecast by Statistics Netherlands (CBS), the Dutch population is expected to grow to 20.6 million inhabitants by 2070, with 9.9 million households. The greatest uncertainty in this forecast – as usual – concerns the impact of foreign migration. The projected increase in the number of households, from 8.1 million to 9.8 million, is unevenly distributed across the country. Growth is expected to be greatest in the densely populated regions of the Western Netherlands, while in some peripheral regions the number of households is projected to decline by 2050.

Due to unpredictable factors such as famine, war, and changes in asylum policy, immigration forecasts remain highly uncertain. For the coming decades, annual population growth is estimated at around 100,000 people, of which approximately 80% is attributed to a migration surplus and 20% to a birth surplus. As in the past, most

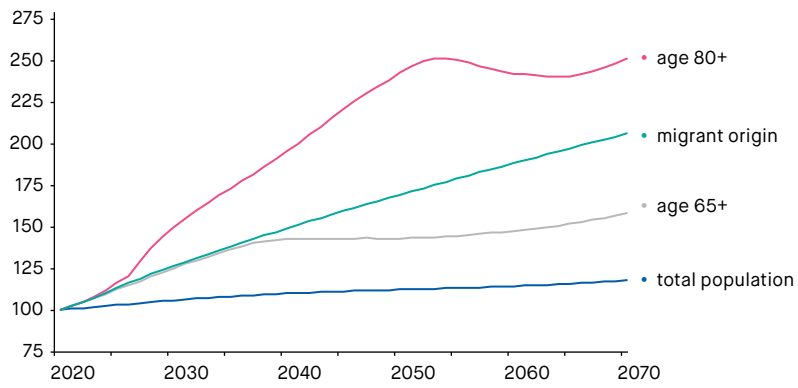
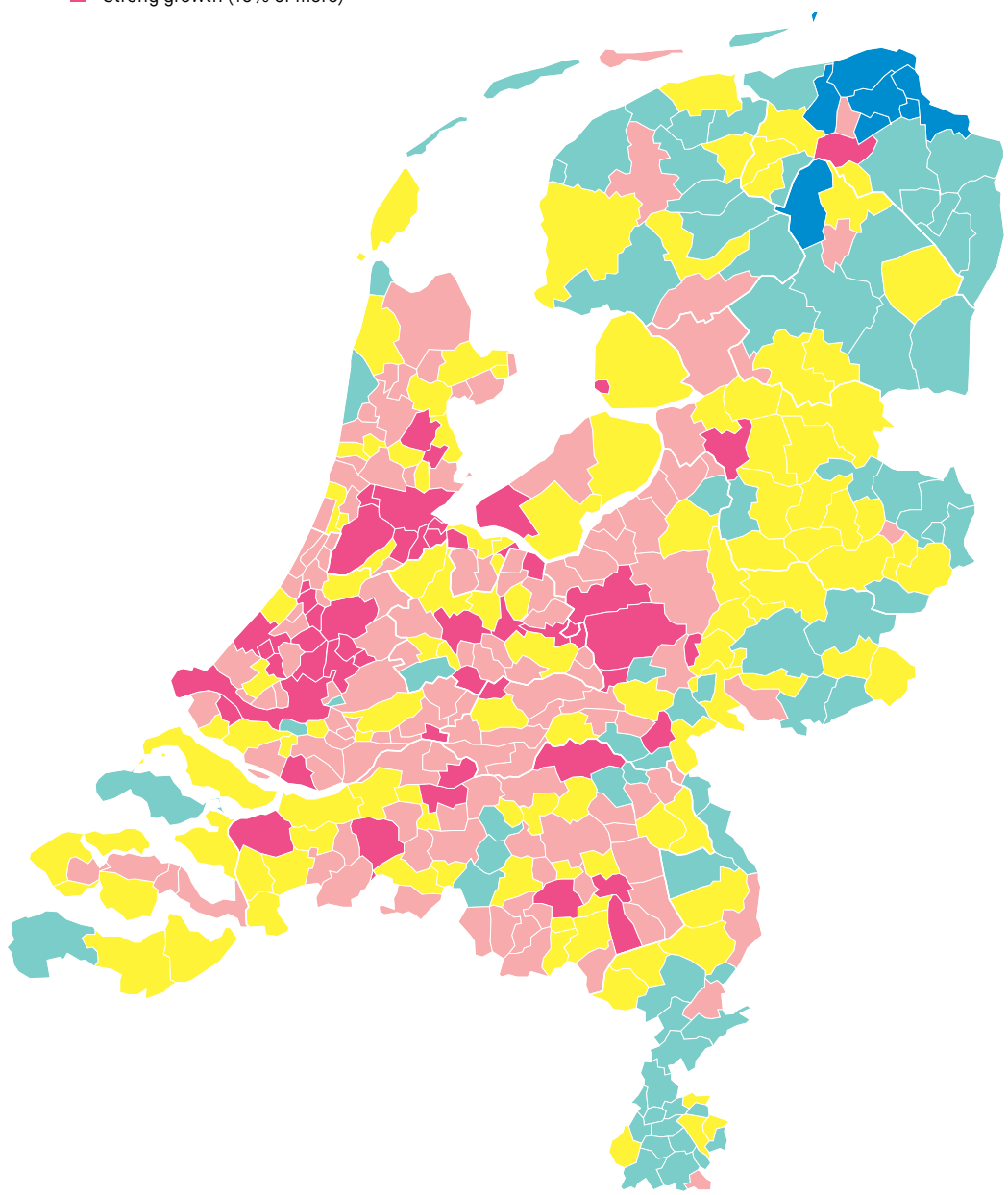


Diagram 7.1 Population forecast 2020-2070.

Population changes by municipality, 2018-2035

- Strong decline (-10% or more)
- Decline (between -2.5% and -10%)
- Stable (between -2.5% and 2.5%)
- Growth (between 2.5% and 10%)
- Strong growth (10% or more)



Regional differences in population growth and decline, 2018-2035.

The Future of Yesterday

8

The previous chapters are dedicated to the evolution of Dutch spatial planning culture from the late Middle Ages to the present day. Each planning era had its own unique context, challenges, innovations, planning concepts and planners. Spatial planning evolved from land reclamation and techniques to make the land safer into a method for systematically changing the existing spatial order. It has become a complex of deliberation, procedures, decision-making, allocation of resources, design, balancing of interests and implementation, embedded in a legal system of checks and balances as part of the democratic constitutional state.

The development of spatial planning has not been a linear process in which each subsequent event follows logically from the previous one. Spatial planning followed societal developments and fluctuations, often through trial and error. Sometimes previously abandoned solutions returned in a new form; at other times, action in one era was followed by a reaction in the next. 'Similar, yet different', is how Dutch historian Jan Romein (1893–1962) described this cyclical character which is our guideline for a retrospective look at the future of yesterday: through long-term lines, scale leaps, inventions, action-reaction patterns and institutional embedding.

Long-term Development and Scale Leaps

'We no longer live in the Holocene, but in the Anthropocene', said atmospheric chemist and Nobel Prize laureate (2000) Paul Crutzen (1933–2021). He thus heralded a new era in which human influence has become decisive for changes in our physical environment, particularly through climate change. The term Anthropocene may be recent, but in spatial terms, the Netherlands has been living in this era for centuries. The human hand is visible everywhere: from cities to (restored) nature areas, land reclamation, polders, dikes, canalized rivers, deforestation, reforestation, urbanization, and transport connections. Over the course of the twentieth century, spatial planning in the Netherlands almost by definition became the redevelopment of existing land use. Peatland became water, water became polder and farmland, and farmland was converted to nature, village, or city. The recurring question for all these activities was: given the societal conditions, what is the most desirable design of the country, the city, the region, or parcel of land? The answer shifted with the historical seasons of demographic development, economic growth and recession, and changing values and ideas about what was desirable and how much it could cost.

Drainage, land reclamation, and land acquisition for agriculture and safety have always been part of life in the water-rich Delta. This long history reveals two major leaps in scale, made possible by technological innovation as well as economic and demographic growth. The first occurred in the first half of the seventeenth century.

New drainage technology, urban capital, and organizational capacity facilitated upscaling to large reclamation projects that produced food for rapidly growing cities. Here lie the earliest roots of Dutch export-oriented agriculture. Preceded by the drainage of the Haarlemmermeer in the nineteenth century, the second leap in scale came in the twentieth: the enclosure and reclamation of the Zuiderzee and the Delta Works. Though primarily implemented for safety reasons, the reclamation resulted in substantial land gains. The Delta Works opened up the peripheral province of Zeeland through improved transport links and recreational areas. Traditionally, the sale of fertile new polder land contributed to financing costly safety measures. The construction of the North Sea Canal in 1870 was also partly funded by selling fertile reclaimed land. These leaps in scale in land reclamation, water management, and agriculture coincided with those in urbanization and infrastructure. There would have been no efficient food supply for Amsterdam in 1650 without productive reclaimed land nearby, and canal connections.

Balgstuw (inflatable barrier) Ramspol, an innovative and flexible way to protect the IJsseldelta against floods.

These leaps in scale in transport infrastructure construction were generally the result of new inventions: the tow barge, stagecoach, railway, car, bus and lorry, airplane, computer, and internet. These had two main characteristics: dramatically increasing speed and reducing cost through upscaling and massification. Larger scale and lower costs made the world smaller. Whereas ancient cities were mainly connected by the natural infrastructure of rivers, the sea, and sandy country roads, in our time cities have become hubs in multimodal networks of