

# Planning in uncertainty

W.J. van den Bremen Lecture by Emiel Reiding

Groningen, September 11th 2020

<https://open.spotify.com/track/52vA3CYKZqZVdQnzRrdZt6?si=-EiMdLsoQX6BULwWfVqJ1Q>  
(fragment Bob Dylan – *The times they are a-changin'*)

Once you hit 50... sometimes people take you for an old man. I don't even feel close to being old, though playing Bob Dylan certainly doesn't help... Fortunately this particular track is well before my time. In actual fact I'm just borrowing the title, which, if I understand it correctly, cuts to the heart of the matter, with Dylan intending to draw attention to the changes that were afoot in the 1960s. A period of great upheaval and desire for freedom. Some of that freedom we'd really like now too...



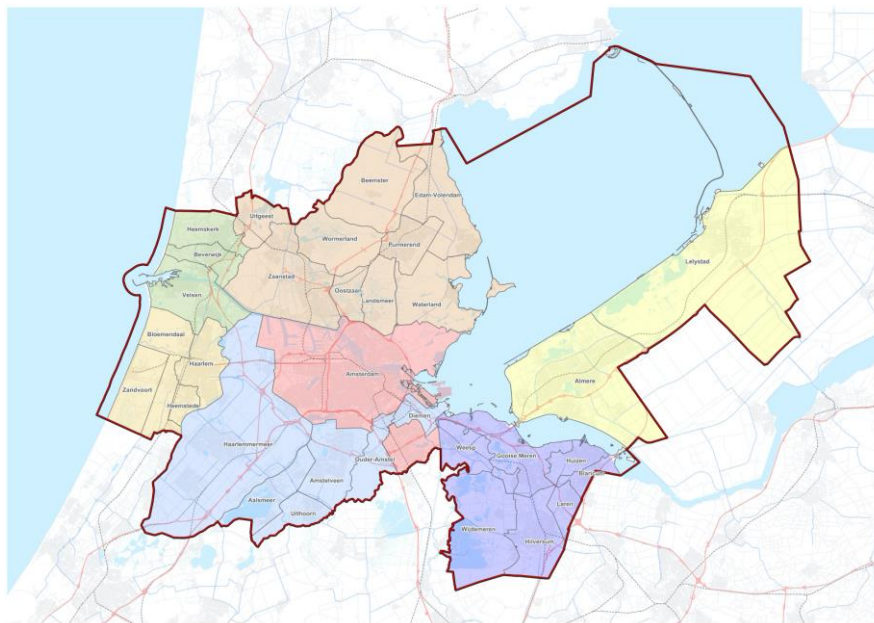
But before I go into detail on that, I'd like to say how great it is to be here in this wonderful city. It's an honour to have been invited to speak to you by (let me get the pronunciation right) Ibn Battuta. Here in this church turned into a conference centre. Which in itself is also a sign that times are a-changin'.

Churches are losing their previous function and in many places being given new purposes. But I digress. I'd like to welcome everybody in the room as well as everyone who has taken the time to 'tune in' on the Internet to hear what I have to say. I'm hoping to get you involved into my vision of and experiences with spatial development in the Netherlands. And the tremendous importance of studying spatial sciences nowadays.

We were meant to be doing this way back in April. I had enthusiastically accepted your invitation long before that. It's now September. A lot has happened in the meantime.

First up a bit of trivia for you: I started a new job last month. You invited me in the capacity of Director for the National Strategy on Spatial Planning (or NOVI, short for Nationale Omgevingsvisie in Dutch).

I was working on this with a fantastic team at the Ministry of Internal Affairs. I was keen to talk about the topic, which was pretty tricky in view of the fact that the finalised version of the NOVI hasn't yet been released. That will come in the very near future. In fact, rather a coincidence, this afternoon! I'm not going to steal my former colleagues' thunder. The benefit of no longer being in that role is that I can air my own ideas. And I'll be doing so from the perspective of my new role as Secretary-Director of the Amsterdam Metropolitan Area.



I've not been in that role for long, only since august, but I'll try and consider the demand for and necessity of planning from both angles. National and Regional.

It will be obvious that my story is about *what* it is we need to do, but I also deem it extremely important to think about *how* we need to go about doing so. Times are a-changin' and we need to change along with them.

There are big developments to consider. Rendering uncertainty comprehensible has always been a major issue for planners—their *raison d'être*. Yet look where we are now... sat in a church that's far from full, several months beyond April, with a virus turning our lives upside down. These are uncertain times, all over the world. Covid-19 is forcing us to acknowledge the vulnerability of humankind and the vulnerability of globalisation. None of us is immune to the consequences right now. But which of these will be structural when normal times return? Will this crisis change our behaviour, in the long term too?

Now and then, hasty, sometimes simplistic conclusions are being drawn. Nobody has a crystal ball, and yet we've got to act. How do we go about doing so? Knowing that this is not the only issue with which we're facing. Climate change might be a less acute problem, but it's still a drastic one and therefore calls for equally drastic decisions to be made.

'Less acute?', I hear you ask. Let me clarify: I don't mean to minimise the problem. It's more insidious, less perceptible on a day-to-day basis. Which is dangerous, the cost of sweeping the problem under the carpet won't be immediate. Indeed, some people even like the fact that it's getting warmer. Dutch wine is getting better, for instance. It won't be long before we have the Bordeaux region's climate. Let that be a sign that there's something seriously wrong. Drought records follow hot on the heels of temperature records.

We need to act, at an international level, and in the Netherlands too. In spatial terms, adaptation is the key word, though it comes at a price, in terms of both money and space. That's something we have to confront. Whilst remaining alert to the fact that we need that space for other developments too.

Times are a-changin' and each era requires its own responses. Although the agenda will largely be set by sustainability and the path of the post-Covid recovery, we can't afford to lose sight of the wider context. Geopolitical and economic relationships... What's their significance for the direction in which we can and would like to take the Netherlands? What kind of country do we wish to be? What's possible? What will be the drivers in our future economy? An economy that we're keen to make circular. In a country in which, even before the coronavirus, we know that spatial pressure has reached unprecedented levels. Just look at the housing crisis.

A small private part. We recently relocated to Amsterdam. That's when it hits you just how high the price per square metre is... For people starting out on the job market—as many of you will be after completing your studies—it's impossible to find a normal home in some places. It's not like anyone will be forced to sleep under a bridge, but there's a real shortage of residential property in a qualitative way. Supply does not match the demand. Simple economics for higher prices. Which is why we call it a crisis.

One that isn't being helped by another crisis: the nitrogen crisis. Two crises, closely interrelated. Be honest: how many of you had heard of the programmatic approach to nitrogen (PAS, Programmatische Aanpak Stikstof in Dutch) a couple of years ago? And yet we could have predicted it... I'll come back to that.

We've got to build another million homes (which in some places will mean adding 1 property for every 5 existing homes). Think about the knock-on effects this will have on the mobility system. We can't and don't want to solve this with more roads. Instead, we need to scale things up, particularly in terms of public transport. And we'll have to reinvent ourselves as a nation of cyclists. Electric bicycles will double opportunities to travel by bike.

I've barely got started on the major developments and tasks. But by way of an interim conclusion: big challenges lie ahead, with significant levels of uncertainty. Forcing us to make decisions—major decisions that will prove decisive when it comes to the future design of our country. And, thus, for our economy and prosperity.

Past, present, future: let's start with some historical logic. Times are a-changin' and our country needs to adapt. But the future isn't only a mystery.

After all, our journey so far has a marked influence on where we'll end up. What is the Netherlands' journey so far? That has everything to do with our geographical location, which we've managed to capitalise on. Indeed, we've exploited it. A country created by planning.

Two salient points in this regard. To a large extent, we live somewhere that isn't optimally conducive to a decent life. Our unrelenting fight against the water has resulted in us creating a habitable,

profitable niche for ourselves. I'd like to emphasise the verb 'create'. We managed to overcome nature. That makes us, of course, vulnerable, particularly in view of current climate developments.

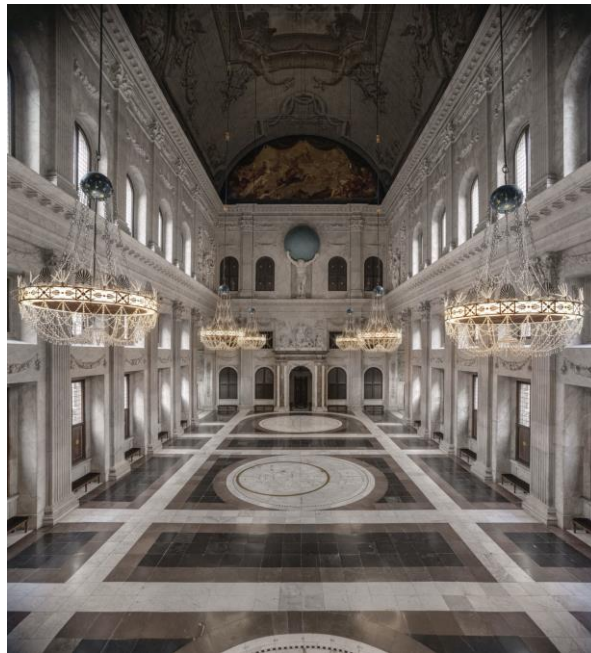


You only need to turn the map of the Netherlands 90 degrees and you'll feel our vulnerability looking at this image.

The second point is our outward-looking nature. It's due to our location on the water. Navigable rivers and the sea. We managed to overcome the water-as-enemy and made smart use of the water-as-friend. This made it possible for us to look beyond our own shores and borders, opening up the rest of the world to us, and not purely for the sake of getting to know other cultures. No, we were driven on by a strong entrepreneurial spirit: making a profit was a virtue, albeit one accompanied by losses as well, as we now know. It's this outward-looking mindset that has enabled the Netherlands



to always punch above its weight. In my opinion, we're still doing so today.



Go to the Burgerzaal in the Royal Palace of Amsterdam—which was once Amsterdam's city hall, as you may know—and you'll get a sense of the position that the Netherlands enjoyed on the world stage in the 17<sup>th</sup> century. There are maps made in the marble floor with Amsterdam positioned as the centre of the world.

An illustrious history, yet relevant today too. That open, entrepreneurial spirit and boldness can be revived in current times.

We're a unique nation. We hear plenty of gripes, fuelled by the fact that nowadays people have endless opportunities to express forthright opinions, and won't shy away from doing so. But time and again objective studies corroborate the same point: we're one of the happiest, most prosperous countries in the world.

I firmly believe that the careful planning of our nation is a contributing factor in that regard. We've reached a high standard, and there's a lot that needs to be done if we're to at least maintain that standard.

Until now we've excelled at optimising sectors. First, our national Airport Schiphol and our ports. We used to sail across the globe, and we still do. But now we fly too. A lot. There's been a drop in flights recently, but that will pick up in due course. The question is when and to what extent. Separately, we're in the vanguard, and our airport and ports are many times bigger than our nation requires.

We're the gateway to Europe and an extremely important hub in the global network. Which is crucial for our position and economic significance.

Which is logical, if we look to history. Trade requires a network, as they knew in the 17<sup>th</sup> century and as we know now.

There's a cost attached, though. More than ever before we're pushing things to their limits. The capacity of the land to support life is under threat.

Our economic performance is, of course, great. Take agriculture. No country is as efficient as we are. But for all that efficiency, do we really need to be the second largest exporter in the world? Does that standing befit the size of our country? To ask the question is to answer it. The world's number 1 is the USA... and positions 3, 4 and 5 go to Germany, Brazil and France. Again, we're punching above our weight. Farmers might not agree with that assessment, but why would they? Their livelihoods depend on farming. But is that something to which we should aspire as a country? All those developments, space is scarce (and I haven't even mentioned renewable energy yet)... could we not give other functions more space by scaling down agriculture? I'll happily concede that that won't be a popular stance (hopefully we won't find ourselves barricaded in by tractors afterwards). But we need to be bold enough to ask the question and discuss it. We've pushed the natural system to its limits, or may well have already exceeded them.

Take the nitrogen problem. With a bit of mental gymnastics, we've kept our eyes closed for the real problem. That's something we've known for a long time, but we've kept optimising within the sector.

Times are a-changin' and our approach needs to change too. Another problem is the fact that circular agriculture (we want to achieve that) will quite simply need more space if we're to maintain the same production capacity. Hence the inevitable conclusion in my view is that agriculture in the Netherlands needs to be scaled down.

That will cost society, as each farmer that stops farming or is forced to stop farming will have to be compensated fully and fairly. This is particularly pressing in areas with subsidence. In many peatland areas, especially here in Groningen, we keep the water level low for agriculture, which reinforces the soil. Continuing to do so unabated will cost us tens of billions of euros. We need to invest now to prevent worse.

Let me be clear: we're punching above our weight in agriculture too. There are other spheres in which that's the case: international headquarters, logistics, data centres. We're doing exceptionally well. Economically. We're in the international vanguard. Again, our location is a crucial factor in this respect. Our infrastructure is entirely geared towards facilitating this, with excellent hinterland connections and the benefit of some superb rivers (where low water levels are increasingly becoming a point of concern).

I don't know how we've managed it, but even two of the most important overseas Internet cables come ashore in the Netherlands. One near Amsterdam and one here to the north of Groningen. It's for good reason that Google has a major data centre here. But there's a downside to all these headquarters, logistics centres and data centres. Big boxes, which are hard to insert into the landscape. Where's the limit? What can we accommodate? What are we willing to accommodate?

And I haven't even touched on the most significant new development yet. The new kid on the block: renewable energy. Fossil energy generation takes up relatively little space. Obviously the high-voltage cables do, but the production sites themselves take up relatively little space. Time for a bit more history.



The old windmills, for which the Netherlands is now so famous, were once regarded as ugly and dangerous. There was considerable opposition to them.

Times change, but some things stay the same... There's some stiff resistance to wind turbines today too, including in this region. That even made it into the reports by our national coordinator for counterterrorism. Which serves to demonstrate how tricky the opposition can get... and how complex implementing a new function can be, even in places where space is ostensibly available.

All those developments are putting pressure on nature, on our landscape and on our open space. I've got two points of view in that respect. There's something strange going on. You see, much of nature in the Netherlands is the product of our own activity. Times have changed and the landscape has changed too.

Peatland lakes, lakes that were excavated for sand extraction, ditches, the oft-praised bocage-landscape (in Dutch also *coulissenlandschap*)—all created by us. Products of change. And now plenty of people are opposed to further change.

Riding a wave of conservatism, vast parts of the population are averse to changes. For some people, the pace at which our country and our living environment are changing, globalisation, growing uncertainty, are threatening to change the Netherlands beyond recognition. Symbols are disappearing rapidly or are under pressure. Within the compass of these developments, preserving the typically Dutch landscape is an aspect that unites conservatives and progressives.

Admittedly for different reasons, but the goal is the same. Now that Covid-19 is dominating everything, things have settled a little, but the discussion will return. Is the Netherlands up to the job of accommodating all these developments in a landscape that will remain recognisable to conservatives without too much of an adverse impact on nature (for the progressives)?

It's not only the quality of our landscape that's in jeopardy. Economic growth has some severe effects on nature. We really need to reverse the decline in biodiversity. And not just for nature lovers; that decline will eventually be tangible in the economic sphere too. Ecological balance is also a production factor, after all. We use nature for economic gain. But we've reached a point at which

we're putting strain on nature's capacity to recover. It's a form of abuse. The effects won't be felt sufficiently by humanity in the short term, but they'll overwhelm us in the long run.

As my interim conclusion made clear, we're faced with some huge tasks: housing, mobility, agriculture, sustainability, nature, landscape... And we're also faced with considerable uncertainty, pertaining to Covid-19, the climate change and its consequences.

What approach can we take while times are a-changin' all around us? The cycles of change are getting shorter and shorter... How should we respond? To start answering that question, I can't get bogged down in pure analysis. What can we do? What do I think we *must* do? Actually, it's about cultural change, a paradigm shift. What will that entail? And who will be responsible for bringing it about?

The Netherlands has a rich history when it comes to spatial planning. Lots of competences are local, such as those responsible for drawing up a zoning plan. At regional level the provincial authorities have a good position.

Nevertheless, planning in the Netherlands often used to be characterised by a unicentric, top-down approach. I know that there are plenty of specialists who don't agree with me, but I believe that the major transitions in the past were predominantly centrally driven. Examples include the Delta Works, land consolidation, the organisation of the Flevopolders, growth poles policy, and major infrastructural works such as the Betuweroute. Significant transitions are called for right now. We can no longer tackle these top-down.

As I said, the tasks with which we're faced are intertwined. What this implies to me is that the solutions also need to be formulated in a much more markedly cross-sectoral or integrated fashion. The same goes for the way of working and the budgeting/financing. I started out by talking about control, so for the paradigm shift I have in mind I'll start on the way of working.

And given that we're in a church, I won't shy away from preaching to the converted. Amsterdam Metropolitan Area—what actually is that? This merits some scrutiny, as I believe fleshing out the solutions at regional level will be key.

Amsterdam Metropolitan Area encompasses 32 local authorities, 2 provincial authorities and the Amsterdam Transport Authority, all working together. 2,5 million residents (14,5 % of the Netherlands), on 6,2 % of the land we produce 20 % of the GDP.

It's an informal alliance, in which agreements are made on topics in the spatial planning sphere which go beyond the boundaries of individual municipalities. And that goes for all the topics I'm broaching here. As far as I'm concerned—and, genuinely, this was already the case before I started my new role—this region is the scale on which we need to be identifying solutions.

Drawing up regional plans, crossing sectoral boundaries. We're in the middle of drawing up such plans. In this regard, fleshing things out at regional level doesn't mean having to do everything on your own. On the contrary.

Central government is directly involved, and rightly so. We've recently been hearing that the government needs to take more control again, steer the spatial planning debate more. I agree, but not within the confines of the old top-down model.

What we need instead is horizontal collaboration. As I see it, integration won't require new structure. Discussing that means diverting our attention from what's really necessary. Intertwined



tasks, intertwined solutions, a Gordian knot, which we won't untie with what are often excessively simplistic structural solutions. They fail to do justice to the complexity. We need to accept that complexity, embrace it even.

The international students here and online probably won't be familiar with the term 'Huis van Thorbecke' ('Thorbecke's House'). Johan Thorbecke wrote our Constitution (of 1848) and designed or established the administrative model in its current form, which features three layers of general administration (local authority, provincial authority, central government) as well as a side room for functional management of the district water boards. Hence the house metaphor.

My plea is to make Thorbecke's House into a bungalow, all on the ground floor, with mobile partition walls that can be repositioned as required. A house that will endure the test of time, with it being easy to move from one room to the next, and featuring a communal kitchen with a big table in the middle at which everyone can sit and have a proper discussion.

Genuine cooperation. With central government fully engaged in that discussion and delivering as and when required. Making decisions on topics that they are responsible for and making funding available too. And cutting through knots if things get stuck. That's what taking central control is all about. A better model than overly zealous efforts at decentralisation. No separation of work, but integration. And with trust amongst the parties involved being fundamental.

We're faced with a tricky issue, which we won't be able to resolve within the current frameworks. That's the issue of democratic legitimacy. Those frameworks stem from 1848 and the current era calls for new modes of thinking. Times they are a-changin'. As I said, I'm not arguing for structural changes. But what do we do to make this workable? The point of departure is that each and every governor at the table has been democratically elected and is being monitored by a parliament. Yet we also want to be able to make agreements at that table, and that's a question of give and take. Besides trust, it will also call for collectivity. Which can sometimes entail decisiveness being at odds with support. The answer there is transparency, boldness and honesty. And an understanding of the fact that what's good for the whole (for the Amsterdam Metropolitan Area: the daily urban system around Amsterdam) is also good for the constituent parts.

Hence the role of the governors at the table is to involve their municipal councils, provincial councils and the House of Representatives in the decisions being made in the context of that collective. Not just after the fact—as by then it's too late to adjust course—but also beforehand (for the frameworks) and during the process.

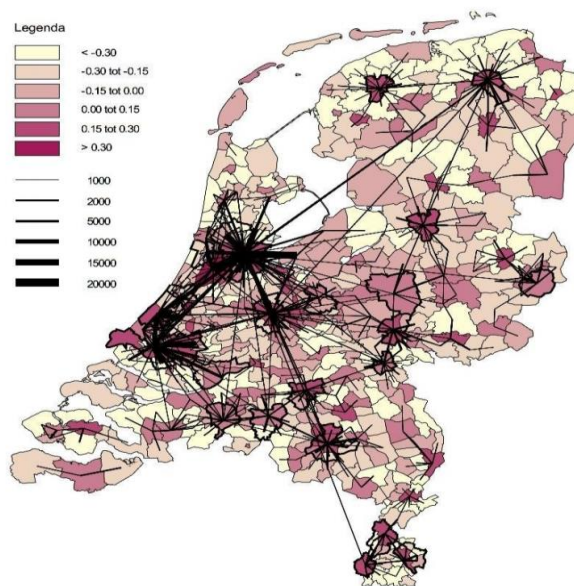
It's often the case that processes take long enough to allow room for proper involvement on the part of democratic bodies.

The paradigm shift will also call for tough decisions to be made in terms of substance. However—and here it's a delicate balancing act because I'm allowing myself to offer some criticism of the NOVI—making tough decisions at national level remains difficult. So... as I said, these will need to be made collectively at regional level. As I'm sure you'll have gathered, it's for good reason that I've joined the Amsterdam Metropolitan Area...

Making decisions is necessary for such things as bolstering our metropolises, including around the other cities in the G5 (Utrecht, The Hague, Rotterdam and Eindhoven), which is good for the Netherlands as a whole. Seriously. Of course, metropolises in the Netherlands aren't on the same scale as metropolises in some parts of the world.

And as I see it, turning Amsterdam into a city of 2 million inhabitants would be ridiculous. And pointless. What wouldn't be pointless would be to organise regions at the scale of the daily urban

system. The cities on the periphery of Amsterdam Metropolitan Area are all connected to Amsterdam within 30-40 minutes.



That's something they can only dream of in London or Paris.

I'll outline a number of aspects that I think ought to play a role when it comes to making tough decisions.

Firstly, another dose of history. We've long carved up our pliant country into small plots. Separated functions, sometimes right next to each other. Functions we thought were incompatible. To that way of thinking, a plot of land is either for nature or is assigned the function agriculture. But that's not a distinction that a bird is capable of making. Separation of functions is a phenomenon that is also firmly entrenched in many of our urban environments. A plot of land is either residential or working space. Despite the fact that these days our economy and lifestyles require a greater degree of functional mix.

We can be much more inventive. We're leaving space unused. There are far more possibilities in terms of creating combinations of functions. Adaptation is key, more integrated plans, long term visions cut into smaller steps. With times changing fast and a lot of uncertainty big steps are not preferable.

The NOVI is rightly focusing on making combinations.

- There's plenty of scope for increased integration of nature and agriculture, particularly if the latter is to become circular.
- Solar panels on roofs should be standard.



- Residential and commercial functions don't have to be mutually exclusive.
- District water boards were often against the combination of dykes and wind energy, but it turns out that there's no technical obstacle .
- We can build above railway tracks and stations too.
- Water can also be used for heating purposes.
- Et cetera...

There are so many possibilities in terms of creating more combinations. It'll be down to you, the new generation of planners, to get creative in that regard.

Obviously not everything can be combined. We can't site a military firing range in a residential area. That probably wouldn't be the most sensible idea.

And it wouldn't go down well if we were to install wind turbines in residential areas.

Nonetheless, it does make sense to concentrate certain functions: it would be better to have wind farms or distribution centres alongside one another in places where the scale of the landscape makes it possible, rather than to scatter these over the land like confetti. Wind farms need to be profitable for the regional community. Not only the costs, but also the benefits must be in balance. That's something this region knows all about, with earthquakes as a result of the extraction of gas. As a country, we can't afford to make the same mistake.

There are countless substantive decisions to make. What's required? Nobody can oversee everything, be fully familiar with all the interrelations and make the decisions that ultimately prove to be right. There's way too much difference of opinion and feeling on what's good and what's aesthetically appealing. That's why we need to take small steps, but not be slow. It goes without saying that my ideas are just my opinions. Though I'm happy to share them with you. I'm just touching on a few topics. On the major transitions that cropped up earlier in the analysis.

To start with a thorny issue: densification or expansion? Feelings can run high on that question, particularly among specialists. Read a few columns by Friso de Zeeuw, for instance. Experts (who



are also driven by opinions and interests as well as knowledge) can really lay into each other on this topic. Nuance in this debate isn't brave but still sensible.

It's crystal clear: we obviously need both. Not a bold statement... it is, of course, about the figures and the percentages. What's feasible in inner cities? A nice academic discussion, but I'm not going to specify a number for the Netherlands. Other people do, but the differences between regions, in terms of both supply and demand, are simply too big for that. So here too: decisions at a regional level are required, based on a well-integrated plan on wishes, possibilities and impossibilities. Some trends can be cited, of course. There is an acute shortage of apartments in university cities in particular. For students, starters, and, in the Amsterdam Metropolitan Area, for lots of expats too (they'll be back once the coronavirus crisis subsides) and other people keen to live in or near the city for a short spell or for several years.

Furthermore, we need to make sure we've got enough space left over for families. They're leaving the city in numbers that are too high, quite simply because they can't find an affordable home there. Hence there's an urgent need to build properties for that segment too. Which is why many of the new-builds need to be in the mid segment. These are thin on the ground in many places in the Netherlands.

Let's remain alert to the fact that densification will only be possible if we make the city simultaneously more habitable and more future-proof. Two things will be required to this end: more green and more blue in the city. Parks and water. You might be tempted to think that this isn't possible, that space for densification is already scarce, and yet I'm talking about increasing the amount of plants and water. And yet I'm confident that it is possible. If we come up with much more intelligent planning, are much more inventive when it comes to creating combinations. Look at this image and see what kind of beautiful things this can produce.



Good-quality properties that will last a lifetime for that growing group of elderly is another important task. But that's less the case in the densified cities or around nodes.

Nodes, they bring me to an important point: our cities do have the capacity to be densified further. We're a densely populated country, with cities that are sparsely populated relative to some cities in the world. Smart public transport connections would open up some more possibilities around nodes. That would require investment in public transport. We'd need to scale things up to keep pace with the growth in the most densely populated urban areas in the Netherlands.

As a region, we're going to be drawing up a fantastic proposal to get us a grant from the National Growth Fund announced by central government this Monday. In terms of physical investments in Amsterdam Metropolitan Area, besides innovation, education and knowledge, there will initially be a package to extend the metrosystem to Airport Schiphol and Hoofddorp. In conjunction with closing the ring in the metro to the north of Amsterdam city centre, this will relieve the current bottleneck in the Schiphol tunnel. Thereby giving rise to opportunities to create more space for longer distance through train traffic—to the wonderful city of Groningen, for instance.

Moreover, this package will be extremely important for the purposes of incorporating Havenstad, a district the size of the city of Haarlem which can be built in the port area of Amsterdam and Zaanstad. In this regard, we'll have to ensure that we leave enough space for the traditional port. After all, we don't yet know how much space the ports will require in a more circular economy. And before we get to that point, the ports will need to accommodate two systems alongside one another. We can't get rid of the fossil economy overnight, you see.

Furthermore, the intention within the Amsterdam Metropolitan Area is for Amsterdam and Almere to grow more towards one another. In order to be able to build more properties in Almere, a connection over the IJ-lake is advisable. Maybe even as a part of the Lely-line, which Groningen wants so badly.



Within the compass of Amsterdam Metropolitan Area, we will be working together on producing a well-substantiated story in which this connection is linked to a robust urbanisation concept. That will be necessary because Almere's contribution will be crucial if we are to reach the target of a total of 250,000 new-build properties in this region by 2040. This reinforcement of the link between residential, commercial or industrial, and mobility is something we'll also be elaborating on for other local authorities in the Amsterdam Metropolitan Area.



Public transport is the means by which we should be making and keeping our urban regions more accessible. In conjunction with investments in cycling infrastructure. Obviously our cycling infrastructure is already of a high standard, but we need more, wider cycle paths, suitable for higher speeds. Times are a-changin', and so is bicycle usage. Spurred on by electrification, of course. Good links between cycling and public transport are very important for door-to-door journey time. These transfer points must be selected more strategically, and at some gateways to the hub cities they'll need to be made suitable for transfer from car to public transport. An old-fashioned concept, you might think, but here it holds that times *will* change.

At some point we'll see the proper advent of autonomous vehicles. It can take quite a while. A line of Toyotas once drove over the at that point incomplete N11. 20 years ago! And now we've got such things as the Tesla, with extensive self-driving functionality. The wholesale introduction and use of AVs aren't here yet, though.

But one thing is certain: they're in the pipeline. Could AVs provide a solution to traffic jams? It's not as straightforward as one might imagine. The mass adoption of AVs will make it possible for more cars to be on the same stretch of motorway, thus boosting motorway capacity. But not on Strawinskylaan in Amsterdam, Zuidplein in Rotterdam or Julianaplein here in Groningen. And there's the rub, in my view. AVs are a potential boon when it comes to intercity journeys and a major competitor to public transport. But without regulation, it will make inner-city journeys a nightmare.

Quite simply, there isn't enough space for everyone to travel around by individual means of transport, so collective systems will continue to be badly needed there. As well as individual means of transport that take up less space. Electric forms of transport: bicycles, e-scooters and whatever else might come along.

Now, that's enough about the urban environment. Rural areas deserve at least as much attention. There's so much to say. I outlined the biggest tasks earlier on in my talk: new agriculture, the huge challenge presented by water, nature development, renewable energy, etc. There may well be more open space to accommodate these tasks, but appearances can be deceptive. I believe we need a complete overhaul of the way in which our rural areas are organised.

This is necessary to incorporate all functions without any detrimental effect on quality, and to render agriculture future-proof (from an economic perspective as well). And above all, to bolster nature and implement new energy carefully. This nature development is badly needed to preserve biodiversity as well as to solve the nitrogen problem along the way. In my eyes, the Remkes committee's final report should be essential reading for you.

Not so much the technical details, but the call for a different approach to spatial planning. This committee's plans come close to the paradigm shift that I'm proposing here.

As I said, this afternoon we will see the publication of the NOVI. I'm looking forward to that. There will be some critical responses to the NOVI too. I myself have already said a few words on how difficult it is to make central decisions. But let's be compassionate in our response. It's really good to see central government engaging in spatial planning debate again. The thing to do now is flesh things out at regional level, closely involve central government in this, and subsequently make the best possible decisions for the nation.

What does all this mean for you? Well, that I'm envious of what you're studying. I'm just a public administrator... But above all: it's unbelievable how relevant what you're doing is today! Dare to be generalists, to acquire wide-ranging knowledge, to identify and explore interrelations. Don't get caught up in just one sector, and if you do: don't be parochial in your outlook or lose sight of the

bigger picture and the interdependencies that exist. And dare to engage your imagination. Innovation comes from thinking outside the box.

Look for unconventional thinkers and those who are capable of expressing their unconventional thoughts. I envy people who can visualise new concepts. We need people like that to tackle the challenges of today and the future. And we need new planners. Creative planners who will collaborate in the new network society. I hope you're enthusiastic about rising to these challenges.

I wish you a great time here in Groningen and hope that you'll soon be able to enjoy the freedoms that make student life so enjoyable once more. And I wish you a fantastic career making the Netherlands a better, glorious country.

Thank you for listening.