

National Pact for Strategic Investments

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Report of the Strategic Committee
September 2018

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PREFACE

This report was drawn up by the Strategic Committee. The aim is to provide concrete recommendations for urgent investments in Belgium. These recommendations concern clear investment projects as well as environmental factors to make investments possible. The intended impact of these investments is to *“strengthen the foundations of our economy. The economy will grow more as a result and new jobs will be created. In this way, we can maintain our Belgian social model.”*

The concrete recommendations are widely supported. Many important economic players have contributed to writing down the recommendations. They are political leaders from all over the country, elected representatives, social players and civil society organisations.

Belgium urgently needs investments. That is why we hope that this report will lead to a clear Pact. We want to be able to implement that Pact between now and 2030.

Of course, that Pact is merely the starting point for the urgent investments that need to be made. The Strategic Committee aims to prepare the Belgian economy and social model for the coming decades. It is for this reason that the Committee is confident that the recommendations will quickly be converted into concrete actions. This requires the cooperation of businesses, citizens and governments alike.

We have a unique opportunity today to prepare this country for the coming decades. To achieve this, we will have to make a number of urgent investments in the coming years. These investments will lead to a stronger economy, more innovation and additional jobs. We need this additional prosperity so that we can continue to pay for education, healthcare and social protection. Let us all join together in working to make this possible. Let us build our future together. Because *the future is ours!*

STRATEGIC COMMITTEE AND WORKING GROUPS

Composition of the Strategic Committee

Michel Delbaere	<i>Chairperson</i>
Dominique Leroy	
Marc Raisière	
Michèle Sioen	
Jean Stéphane	
Pieter Timmermans	

The analyses and recommendations of the Strategic Committee are largely based on the work of the various thematic working groups. The list of participants in these groups is given below.

More generally, the Strategic Committee and the working groups have communicated and had meetings with a large number of institutions and experts from administrations, social partners, civil society, industry, academia, etc. These discussions were essential to nurture the reflections from different angles.

With regard to research and methodology, the work of the Strategic Committee and the working groups was strongly supported by McKinsey & Company, in particular by Ruben Verhoeven, Yves Slachmuylders, Maurits Waardenburg, Alexander van de Voorde, Louise Hannecart and Henri Casteleyn.

The analysis of the general economic context and the importance of government investments was supported by input from Niko Demeester (Voka), Luc Dresse (National Bank of Belgium), Chantal Kegels (Federal Planning Bureau) and Edward Roosens (FEB).

The composition of the working groups

“Digital” Working Group

Dominique Leroy	<i>Chairperson</i>
Nele Van Malderen	<i>Rapporteur - Proximus</i>
Thierry Geerts	Google Belgium
Peter Hinssen	Nexxworks
Laurent Hublet	Be Central

Rudy Lauwereins	imec
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“Cybersecurity and Digital Confidence” Working Group

Miguel De Bruycker	<i>Chairperson</i> - Centre for Cybersecurity Belgium
Phédra Clouner	<i>Rapporteur</i> - Centre for Cybersecurity Belgium
Wincy De Boeck	Deloitte
Jean-Luc Peeters	Centre for Cybersecurity Belgium
Bart Preneel	imec-COSIC KU Leuven
Jan Vanhaecht	Deloitte
Chris Verdonck	Deloitte

“Education” Working Group

Michel Delbaere	<i>Chairperson</i>
Jonas De Raeve	<i>Rapporteur</i> - Voka
Rector Vincent Blondel	UCLouvain
Etienne Denoel	McKinsey & Company*
Rector Luc Sels	KU Leuven
Dirk Van Damme	OECD
Saskia Van Uffelen	Ericsson Belgium

“Healthcare” Working Group

Jean Stéphenne	<i>Chairperson</i>
Brieuc Van Damme	<i>Rapporteur</i> - Baere Craft Consulting
Kenneth Bonheure	McKinsey & Company
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Jo De Cock	National Institute for Health and Disability Insurance
Xavier De Cuyper	Federal Agency for Medicines and Health Products
Wouter De Ploey	Hospital Network Antwerp
Olivier Ethgen	SERFAN Innovation
Pedro Facon	FPS Public Health
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Stef Heylen	Janssen Pharmaceutica
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Olivier Legrain	IBA
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Chris Van Hoof	imec
Herman Van Oyen	Sciensano
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“Energy” Working Group

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Pieterjan Debergh	<i>Rapporteur - VBO</i>
Olivier Van der Maren	<i>Rapporteur - VBO</i>
Prof. Johan Albrecht	UGent
Prof. Tine Baelmans	KU Leuven

“Mobility” Working Group

Pieter Timmermans	<i>Chairperson</i>
Nicolas Coomans	<i>Rapporteur - FEB*</i>
Jan Dumez	Tractebel-Engie
Louis Duvigneaud	Stratec
Prof. Bart Jourquin	UCLouvain
François-Joseph Vanaudenhove	Arthur D. Little Benelux
Prof. Frank Witlox	UGent

“Authorisations and Regulations” Working Group

Prof. Philippe Lambrecht	<i>Chairperson - UCLouvain and FEB</i>
Erik Peetermans	<i>Rapporteur - VBO</i>
Prof. Dr David D’Hooghe	KU Leuven and Stibbe
Prof. Bruno Lombaert	UCLouvain Saint-Louis Brussels and Stibbe
Dr Yseult Marique	ULB and University of Essex
Prof. Steven Van Garsse	UHasselt and the University of Antwerp

“Mobilisation of Capital and Public-private Partnerships” Working Groups

Marc Raisière	<i>Chairperson</i>
Arnaud Dessoay	Belfius
Luc Dresse	National Bank of Belgium

* At the time of the activities.

Note: The “Digital”, “Healthcare”, “Energy”, “Mobility”, “Authorisations and Regulations” and “Mobilisation of Capital and Public-private Partnerships” working groups have prepared detailed papers in support of this report. These papers are currently available on the website of the Prime Minister and will soon be published on a website dedicated to the Pact.

1. SUMMARY

Belgium has many advantages. We are located at the heart of Europe and we have highly educated citizens with high productivity. Belgium also has important companies and research institutes. The country is also a pioneer in the field of digital infrastructure. All these elements make Belgium a dynamic and future-oriented economy. The economy should be able to achieve an annual growth rate of 1.5% to 2% until 2020.

However, the growth of the economy is fragile. There are many uncertainties at the international level. There are also important domestic economic challenges. These threaten our country's socio-economic model. The ageing of the population, for example, is generating ever-increasing social expenditure. Combined with a high public debt of more than 100% of GDP, this is a major challenge. We also urgently need to make the economy more sustainable. One way of doing this is to reduce dependence on fossil fuels. This will require major efforts from citizens, businesses and the government. We can meet these challenges if enough people are employed and thus contributing to the system. Yet there are still many challenges in the labour market. Productivity is stagnating, and we are not attracting enough foreign talent. Moreover, the skills that companies are looking for appear to be difficult to find among the unemployed. We also have too few large companies that could increase productivity.

We can tackle these challenges one by one. To this end, we urgently need to invest in infrastructure, training and innovation. This is how we can future-proof the economy. Even in the short term, these investments will have a positive impact on growth. In the longer term, the effect will be even greater. Innovation will be distributed more evenly, there will be more investment, the number of entrepreneurs will increase and productivity will rise. Finally, the government also has to invest more in Belgium. Companies in Belgium invest more than their colleagues in other European countries. The Belgian government, in contrast, invests far too little. Government investments in Belgium amount to only 2.2% of GDP. That is far less than exemplary countries in Scandinavia. These invest up to 4% of their GDP. More investments by the government and also by companies will further strengthen the economy.

The origin of the Pact

Belgium urgently needs investments. That is why Prime Minister Charles Michel announced the development of a National Pact for Strategic Investments in March 2017. This pact is intended to lead to more growth and jobs. That growth and those jobs are necessary to protect and strengthen the Belgian social model. The aim of the Pact is therefore to increase investment in important sectors of our economy. Companies and the government alike will play an important role in this¹.

A Strategic Committee was set up to provide concrete advice. The Committee advises the government but also makes concrete proposals on strategic investments. It has set up a number of working groups composed of a broad group of experts from government, education, industry and civil society. The Strategic Committee was able to give concrete advice thanks to consultations with key experts in the matter. The aim of the proposed measures is to ensure a healthy investment climate. This is needed for increased economic growth between now and 2030 that is at the same time sustainable and inclusive.

¹ Prime Minister Charles Michel, *National Pact for Strategic Investments*, 2017.

Concrete recommendations

In the Pact, EUR 144-155 billion in investments and support measures were identified by the Strategic Committee. Approximately 45% of this amount comes from the government. These are investments that will ensure sustainable economic growth and increasing productivity. As a result, the rise in social costs remains under control and businesses can continue to grow.

Investments will have major effects on the economy. Investing in the transition to digitisation will boost productivity and ensure more economic growth. Thanks to these investments, the economy will grow by 1.5-2% per year to 2030. Without these investments, some EUR 50 billion less prosperity would be achieved by 2030. Investments in the transition to digitisation and training are particularly important in this regard. They will make it easier for employees to take on new jobs, which often require different digital skills. The development of broad ecosystems and targeted *centres of excellence* will lead to more growth and more jobs. Moreover, we will attract even more capital and talent in this way. A better flow of traffic will also ensure more economic activity, and costs due to long traffic jams will be considerably lower. Finally, we expect that the proposed investments will yield major savings. A digital government is a government that is more frugal while also being able to perform its tasks better. Improved building management and better healthcare management can generate billions in annual savings. That money is also money that can be reinvested.

We can divide recommendations for investments into six domains. Each of these six domains offers great opportunities for productivity gains, has positive effects on other sectors and a significant positive impact on economic growth:

- We must ensure that the **transition to digitisation** in Belgium runs as smoothly as possible. In this way, we will build an inclusive and prosperous society and make Belgium a digital leader in Europe. To achieve this, we urgently need to do a number of things. Training and retraining employees and students in digital skills. Developing the digital ecosystems of companies and research institutions. Investing in future-proof digital infrastructure, e-government and confidence in digital technology.
- If we want to lead the way in the digital field, we need **cybersecurity**. This means safe infrastructure, understandable standards and clear regulations. In this way, companies, citizens and the government can make safe use of the digital infrastructure. That is good for confidence in technology and protects our country from cyber attacks.
- **Education in Belgium** is essential to prepare us for the transition to digitisation. Education will provide digital skills for young people and academic research alike, and must therefore continue to contribute to the modernisation of our economy.
- **Digitising the healthcare system and strengthening centres of excellence** are essential steps to keep healthcare affordable and further develop top-level activities. To achieve this, we use e-Health technologies. Moreover, we must continue to invest in research and development within our biopharmaceutical research institutions.
- We must significantly reduce our dependence on fossil fuels. For this reason, we must invest in **energy projects** to make this change possible for our country. This concerns virtually everything that involves energy, with a special focus on making buildings more energy-efficient, investments in transmission and distribution networks to ensure the necessary capacity and flexibility, and solutions to make transport greener.
- Rolling out of **Transport as a Service** in Belgium. It is imperative that we improve **mobility** in Belgium. Traffic that flows more freely will reduce costs considerably, is better for the environment and can also provide us with a great deal of additional prosperity. At the same time, we must ensure the maintenance of the infrastructure in terms of quality (e.g. bridges and tunnels) and that there is more investment in infrastructure (e.g. the finalisation of the RER/GEN (Regional ExpresNet), P+R car parks, 600 km of bicycle highways, etc.), as well as the roll-out of intelligent transport

systems and multimodal networks. It is also essential that the demand for transport is tempered and modulated in terms of time and space (through e.g. smart pricing of mobility services and the setting up of satellite offices and co-working spaces). Finally, a National Mobility Observatory needs to be set up, based on the model of the High Council for Employment, which collects the necessary data and can map out the bottlenecks in mobility issues.

In addition, the Strategic Committee recommends improving a number of general environmental factors as a matter of urgency:

- We must be able to invest more easily and more quickly. The Committee thus recommends **adjustments to the permits system and the regulatory framework**. Active support for investors in following the procedures is particularly important. A number of blocking factors in the regulations also need to be adjusted. For example, the regulations often differ between the regions, or their processing times are too long. As a result, investments are often subject to many delays or are not carried out at all. **Legal certainty** is also particularly important to encourage investments. This means that investors can count on the rules, subsidies or charges remaining clear and stable over a longer period.
- Belgium has considerable capital. The key is to **mobilise that capital**. This involves an important task for the government. It can look for investors for profitable projects. For large investments, the government should have a single point of contact that can organise large projects and financing. It would then be possible to have an inventory made of the existing public assets, for example. Existing European funds and budgets can also be used more effectively.
- We need to make more use of **PPP structures**. This requires political will and also a competitive market for PPP structures. Investors must also have access to the right expertise and “best practices”.
- **A reorientation of public expenditure and a revision of European regulations to stimulate public investment**. While public investments are profitable over a more extended period, they are treated in budgetary terms as one-off expenditures. Belgium should negotiate this with Europe. The Belgian government should invest more and consume less.

The Strategic Committee is convinced that the proposed investments are feasible. More than that, they will be recovered quickly. A large portion of the private investments is already provided for in the plans of the companies involved. This concerns investments in telecommunications or electricity networks. Government investments and supporting measures are also quite feasible. One part by redistributing existing budgets within the frameworks for which they were intended. The other part can be found using various instruments. These instruments include better use of the existing public assets, the setting up of a large investment fund, PPP structures, the governments’ annual investment budget, etc. These public investments will also soon be recovered. On the one hand, the government will save on its operating costs, namely on energy costs, or on unemployment benefits. On the other hand, because the economy will start to grow at a faster pace. That will increase government revenue.

Implementation

This report is just the beginning of the story. In order to implement the Pact, there is a need for strong political commitment, strong support from private investors and more broadly in society, as well as daily efforts to coordinate and implement the concrete measures. Social movements such as the Flanders Third Industrial Revolution and BioWin in Wallonia are points of reference in this respect.

To ensure the implementation of the Pact, the Strategic Committee therefore proposes the following measures:

- *Mobilising all stakeholders.* The various governments in our country will have to commit themselves and actively cooperate to implement the Pact. The dialogue that the various governments have entered into in this regard must be continued in the Consultation Committee, at the initiative of the Prime Minister. In the same spirit of exchange and synergy, dialogue must continue at the level of the administrations responsible for investment projects as well as by the private partners.
- *Create broad support among the actors involved and the population.* The input of the people who have contributed to the chapters of the draft Pact must bear fruit during the implementation phase. In that phase, the cooperation of a larger group of experts is needed. It is also important to involve society as a whole in the Pact through awareness-raising campaigns or participation forums. For this reason, the Committee proposes a *roadshow* for citizens and interested organisations throughout society. The Pact must make a strong impression and there must be an opportunity to participate if it is to be accepted by the public. This can be done through *town halls*, online and through personal interaction.
- *Put together a team that supports the launch of the Pact.* During the coming months, this team will have to take the action needed to increase support for the Pact among the actors involved. It will organise the participation of citizens. On this basis, the team will refine the Pact and prepare its implementation. When the Pact reaches its operational phase, a Delivery Unit will convert the recommendations into operational projects, encourage the various actors to undertake the action required and facilitate their implementation.

The Strategic Committee presents its report to the Prime Minister and the Minister-Presidents today. It presents its recommendations to society at the same time. It invites everyone to read the report and to support the ambition of the National Pact for Strategic Investments.

The Strategic Committee continues to support the concrete implementation of the Pact. All members of the Strategic Committee are available to continue the dialogue on the recommendations with the key players in order to refine the plans on the basis of their feedback. The members of the Strategic Committee are also prepared to assume their role in setting up and guiding a team to support the launch of the Pact.

2. WHY WE URGENTLY NEED MORE INVESTMENTS

2.1 Belgium, a strong midfielder in Europe

Belgium has many economic assets. Thanks to these assets, we are a hub of economic activity and growth in Europe. Belgium lies at the heart of Europe, has a highly educated population and is home to a number of important sectors as well as dynamic enterprises.

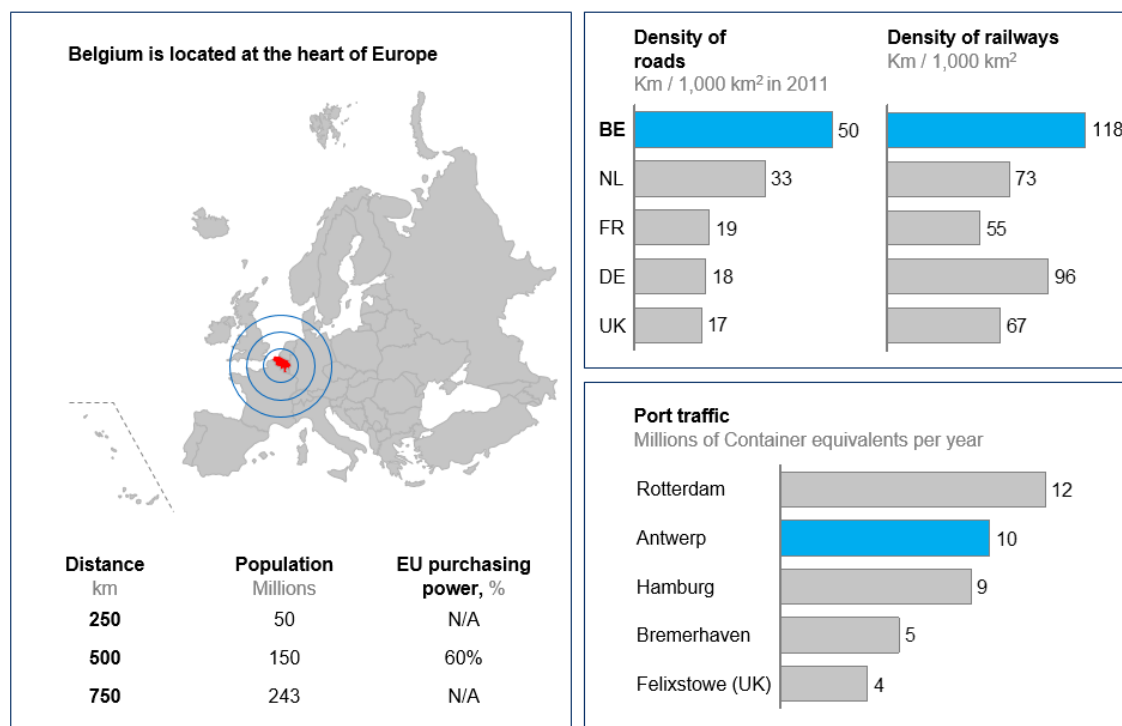
- **Location:** Belgium lies at the crossroads of Europe. More than 150 million people live within a 500 km radius of Brussels. Together, they possess approximately 60% of European purchasing power (see Figure 1).
- **Network:** Belgian cities have very good connections with other major cities such as Paris, London, Berlin, Rotterdam and Frankfurt. Indeed, Belgium has a dense and much-used train, motorway and air network².
- **People:** Belgium has a population with a great wealth of skills. The population is also very diverse and international. This is due among other things to the strong presence of European and other international institutions. The influx of foreign workers from various different parts of the world also plays a role. Belgium also has a highly educated population. Its higher education can compete with the world's best.
- **Industry:** Many major industries and service activities have developed in Belgium. The pharmaceutical and chemical industries come immediately to mind, as do for example aviation, the food industry, logistics and the construction of large infrastructure projects. We also have other global players in specific niches. Examples include 3D printing, dredging activities, textile technology, recycling of rare metals, etc. Belgium also has a large number of small and medium-sized enterprises. They form a dynamic entrepreneurial midfield.
- **Investments:** Companies invest a substantial amount in Belgium. In 2017, this amount even exceeded that of many neighbouring countries. This is partly due to attractive regulations for clinical research among other things. In addition, the government supports innovation fiscally.
- **Digitally:** In a recent study by the McKinsey Global Institute³, Belgium was named as one of Europe's digital front-runners. Thanks to its modern and extensive telecom infrastructure (8th place in Europe in the Digital Economy & Society Index), Belgium is well placed for digital innovation. Belgian companies and citizens also use new technologies more often than in the rest of Europe.

² Flanders Investment and Trade, World Shipping Council, World Bank.

³ McKinsey, *Shaping the future of work in Europe's digital front-runners*, 2017.

FIGURE 1

Belgium, the strong European midfielder



SOURCE: Flanders Investment and Trade, Knoema, World Shipping Council, World Bank.

Belgium clearly has many advantages. This makes us attractive as a location for investments. Moreover, we are multilingual, have excellent healthcare and an extensive network of research institutions.

Despite all these strengths, Belgium faces a number of major macroeconomic challenges. These require attention - both today and in the future.

2.2 Macroeconomic situation: A positive trend but major challenges⁴

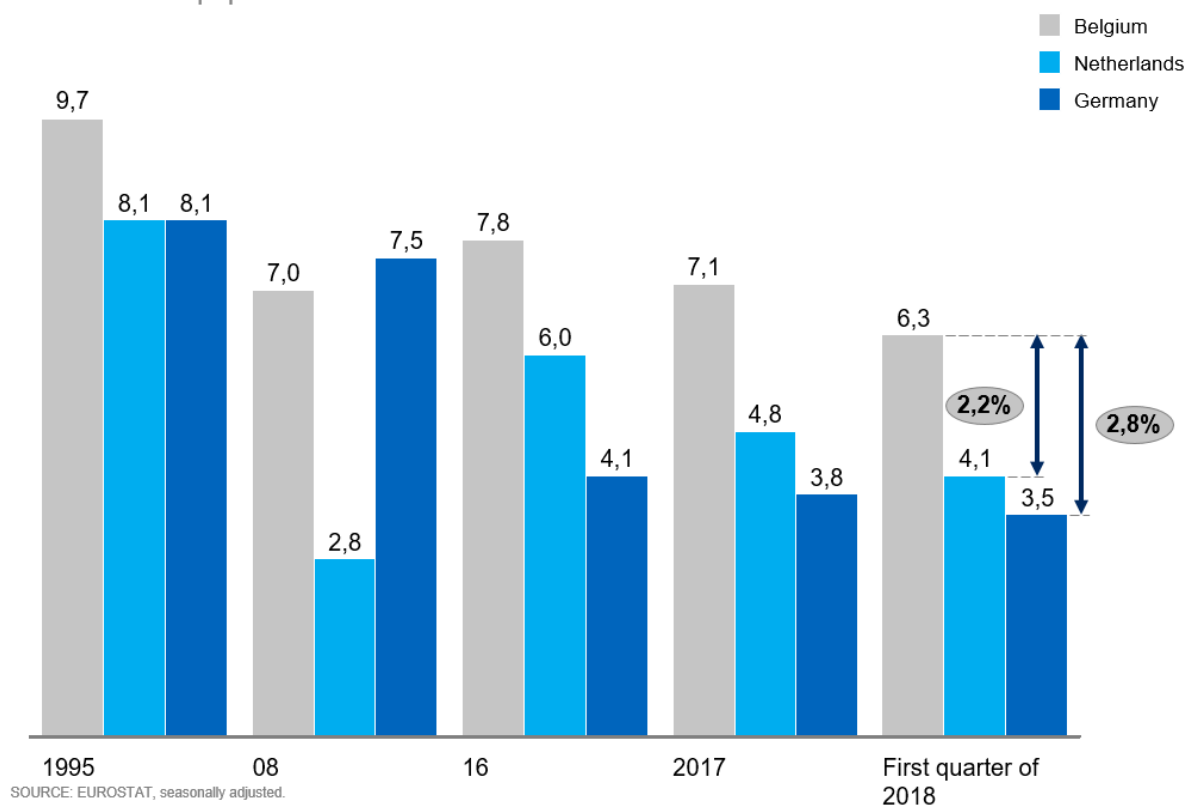
Belgian economic activity has increased over the past five years. More specifically, GDP grew by 1.7% in 2017 (see Figure 3). For the coming years, growth in Belgium is estimated by the European Commission and the IMF at just over 1.5%. In 2017, total hours worked also increased significantly (by 1.7%) as a result of the 65,000 new jobs created. This led to a reduction in unemployment, as shown in Figure 2. These positive developments are partly the result of a number of structural measures, such as wage moderation, the index jump, the reduction of the burden on labour, the reintegration of the unemployed into the labour market, specific measures to make the labour market more flexible, etc. This positive climate of measures was partly responsible for strong job creation, higher growth in exports and the further increase in business investments in 2016 and 2017.

⁴ National Bank of Belgium.

FIGURE 2

Unemployment rate in Belgium from 1995 to 2018 compared to neighbouring countries

% of the active population

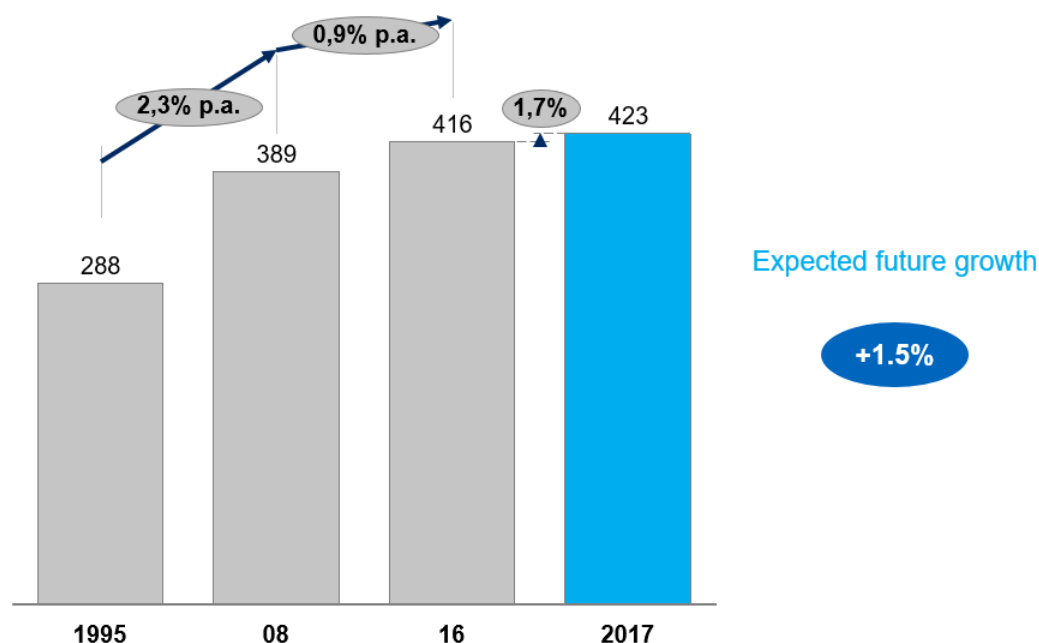


The economic situation has clearly improved in recent years. Belgium is nevertheless facing a number of challenges. For example, although the unemployment rate has fallen over the past four years, it remains higher (6.3% in the first quarter of 2018) than in Germany or the Netherlands. Also, the GDP per capita did not return to the level it had reached before the 2008 global financial crisis until 2015 and it was only 2.9% higher in 2017. Inflation has also been higher in Belgium in recent years than in neighbouring countries. This must in no way be allowed to lead to greater increases in labour costs. That would once again undermine the recent improvement in competitiveness.

FIGURE 3

Belgian GDP from 1995 to 2017

EUR Billion, in 2015 prices



SOURCE: INR

We must do everything we can to continue economic growth, especially if interest rates were to rise soon or if the international economy were to weaken. Brexit and increasing protectionism are just some of the global threats to our economic growth.

In the longer term, Belgium - just like other European countries - is facing a number of major challenges. The ageing of the population, technological changes, including the digital revolution, to name but a few. The ecological sustainability of the economy is also a major challenge. We have signed international agreements in that regard. Moreover, between 2016 and 2060, the proportion of the population aged 65 and over will increase by 6.2%. This will be a particularly serious challenge. On the one hand, public expenditure on pensions and healthcare is rising. At the same time, the number of people in work will no longer increase. This combination forms a huge negative impact on our social security system.

That is why we need to intervene urgently to safeguard the prosperity of future generations. We can do this by strengthening the foundations of the economy, increasing productivity gains and increasing the proportion of people in work. In Belgium in particular, we need to intervene without delay. Public debt may be decreasing slowly, but it is still very high (103.4% of GDP in 2017). Furthermore, productivity has stagnated in recent years. With a few exceptions, there are also too few large companies in Belgium. According to Forbes, of the 2,000 largest companies in the world in 2017, only nine originated in Belgium. The Netherlands had 23 companies on the list and Switzerland an impressive 46. We need more large companies. After all, they provide an important boost for the economy. Finally, the disparities (mismatches) between employees' skills and the skills sought by companies are snowballing. In 2016, 36% of job-seekers were low-skilled. At the same time, only 11% of jobs met this profile. The digitisation of the economy could make this problem more pressing.

2.3 Macroeconomic need for investment

We need more sustainable growth in Belgium and also a further increase in productivity. This requires targeted investment. These may be either public or private, or a combination of both (Public-Private Partnership, or PPP). Achieving all these investments is the ultimate goal of this Pact.

In the long term, these investments have an important effect on the growth potential of our economy. Better infrastructure will lead to faster growth in productivity. This, in turn, will allow the economy to grow faster. Better infrastructure will allow companies to produce more and also to invest more. Both in additional investments and in the modernisation of their production equipment. This will then lead to technological progress and innovation in general. The productivity gains generated by these investments generally lead to a significant return on investments.

Even in the short term, these investments will bring greater prosperity and economic growth. Investments require the purchase of equipment and the deployment of labour. This leads to additional economic activity. A second effect that further strengthens demand is the growth in exports and consumption. The total economic activity will thus exceed the amount of the initial investment. This additional economic development is often referred to by the term “multiplier effect”. This creates a positive spiral between growth on the one hand and investment on the other. The investment leads to more economic activity: companies will produce more and recruit more people. This additional production will again lead to more investment and recruitment.

2.4 The current state of investment⁵

In this context, it is important to look at current investments. We are once again investing as much today as we did before the crisis. Investments in Belgium accounted for approximately 23.3% of GDP in 2017 (see Figure 4). Between 1995 and 2007, the average was 21.8%. However, this figure cannot be seen as reassuring. First and foremost, the government invests far too little, literally and figuratively. Secondly, the large investments are mainly due to a number of major multinational companies in the private sector. Finally, there are several significant obstacles in the investment climate.

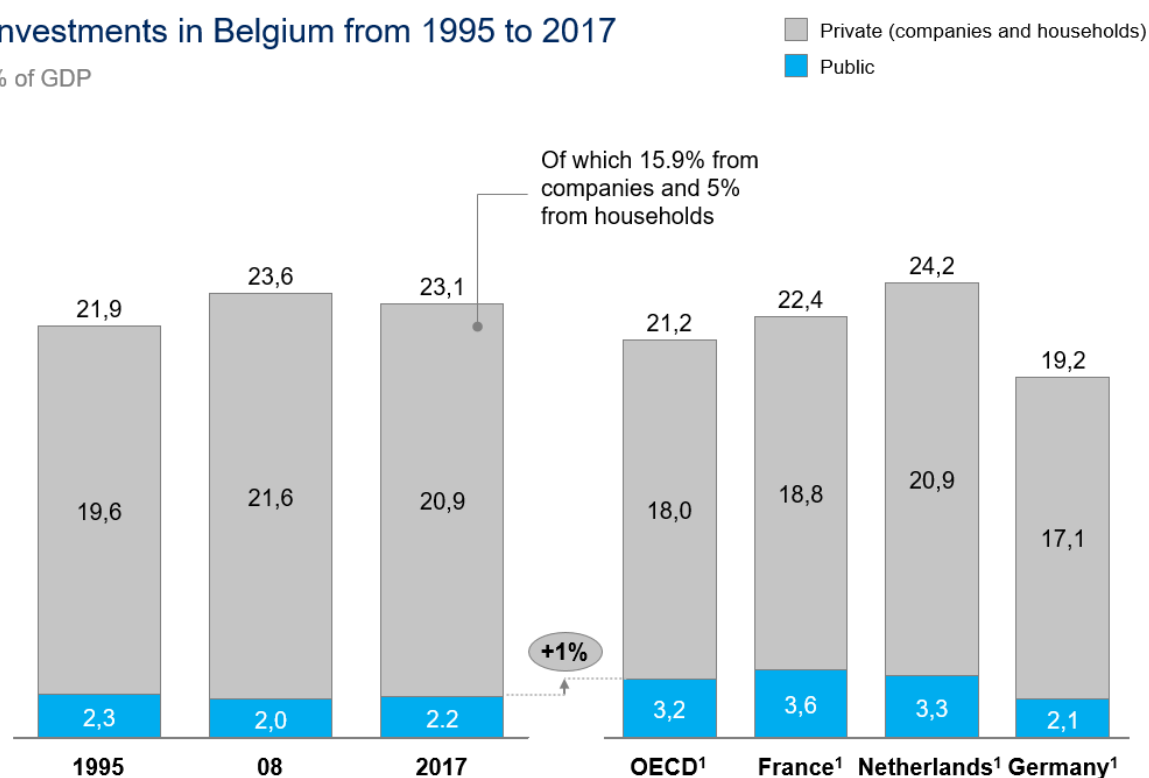
- The current state of public investment: Government investment is unusually low today. The Belgian infrastructure is crumbling. Figuratively, but certainly also literally. This applies both in comparison with the past and relative to other European countries. In 2017, public investment amounted to only 2.2% of GDP (see Figure 4) compared to 5.5% at its peak in the early 1970s. Compared to the other European countries, Belgium and Germany are at the bottom of the scale when it comes to public investment. In Scandinavia, the government invests approximately 4% of GDP annually. The governments of the Netherlands and France also invest more than 3% of GDP annually. The Scandinavian countries, France and the Netherlands are all countries with which Belgium should measure itself. However, Belgium is lagging considerably behind these countries. Over the past 20 years, Belgium has cut back far too much on government investments. The consequences are visible: the public infrastructure is outdated and crumbling.

⁵ National Bank of Belgium, Organisation for Economic Cooperation and Development (OECD)

FIGURE 4

Investments in Belgium from 1995 to 2017

% of GDP

¹ OECD data for 2015

SOURCE: NBB, OECD.

- The current state of private investment: Today, investments by private companies account for 15.9% of GDP (households account for the remaining private investments). That is more than 2 percentage points above the figure for our neighbouring countries. This figure is in line with the figure before the recent financial crisis.
- Obstacles in the investment climate: To stimulate further investment, the prevailing investment climate must be favourable. Today, there are a number of obstacles that stand in the way of more investment. Firstly, public finances are not optimally geared towards investment. Government expenditure is mainly focused on current expenses. Moreover, the debt is particularly high, which limits the scope for future investments. There is also European legislation. This forces us to reduce debt further and to limit the public deficit. This makes it difficult to invest much more in the short term. Secondly, alternative financing instruments such as PPP structures are underused in Belgium. This is because our knowledge and experience of this type of financing are generally inadequate. Thirdly, we are in urgent need of a better investment process. This means standardisation of project management, better coordination between the entities involved, a more flexible licensing policy and regulations, etc. Equally crucial is the guarantee of fiscal and administrative legal certainty. A great deal of capital is currently available in Belgium, but far too little use is made of it due to a lack of projects with a favourable profitability or risk profile. It is essential to find better ways of bringing this capital together with promising projects. That could solve numerous financing needs.

Belgium urgently needs more investments. If we want to realise these investments, we must implement a number of necessary structural changes. That is what this National Pact for Strategic Investments is about. It is a collection of urgent recommendations on how we could soon invest substantially more.

3. APPROACH

3.1 Establishment of the Strategic Committee

Belgium urgently needs more investments. That is why Prime Minister Charles Michel announced the development of a National Pact for Strategic Investments in March 2017. This Pact will help generate more growth and jobs. This is necessary to protect and strengthen the Belgian social model. The aim of the Pact is to achieve this by reinforcing and accelerating strategic investments in a number of important domains of our economy. Both companies and the government will have an important role to play in this.

A Strategic Committee was set up to draw up the recommendations of the Pact. The Committee was able to issue fully independent recommendations and could also formulate concrete investment proposals. The Committee consists of members appointed for their expertise and experience in the various domains. The members of the Committee are Michel Delbaere (Chairperson), Dominique Leroy, Marc Raisière, Michèle Sioen, Jean Stéphenne and Pieter Timmermans.

The Strategic Committee then consulted a diverse group of people from economic, institutional and academic fields. They helped shape the concrete technical and strategic development of the Pact. Through this broad consultation, the Strategic Committee arrived at a limited number of concrete recommendations. Moreover, these recommendations were widely supported by the experts surveyed. The recommendations have one main common denominator: to achieve a healthy investment climate. This will ensure sustainable and inclusive growth between now and 2030.

3.2 A virtuous circle as the basic structure for the Pact

A so-called “virtuous circle” forms the basic structure for this Pact, illustrated in Figure 5. Belgium faces a number of major economic challenges. This has already been described in the context above. If we want to tackle these challenges, we urgently need major and important large and significant investments for the renewal of our economy. These investments are made by either the government or the private sector. The impact on the economy will be greater than the amount of the initial investment. The additional growth will, in turn, provide additional economic oxygen and offer an answer to the macroeconomic challenges.

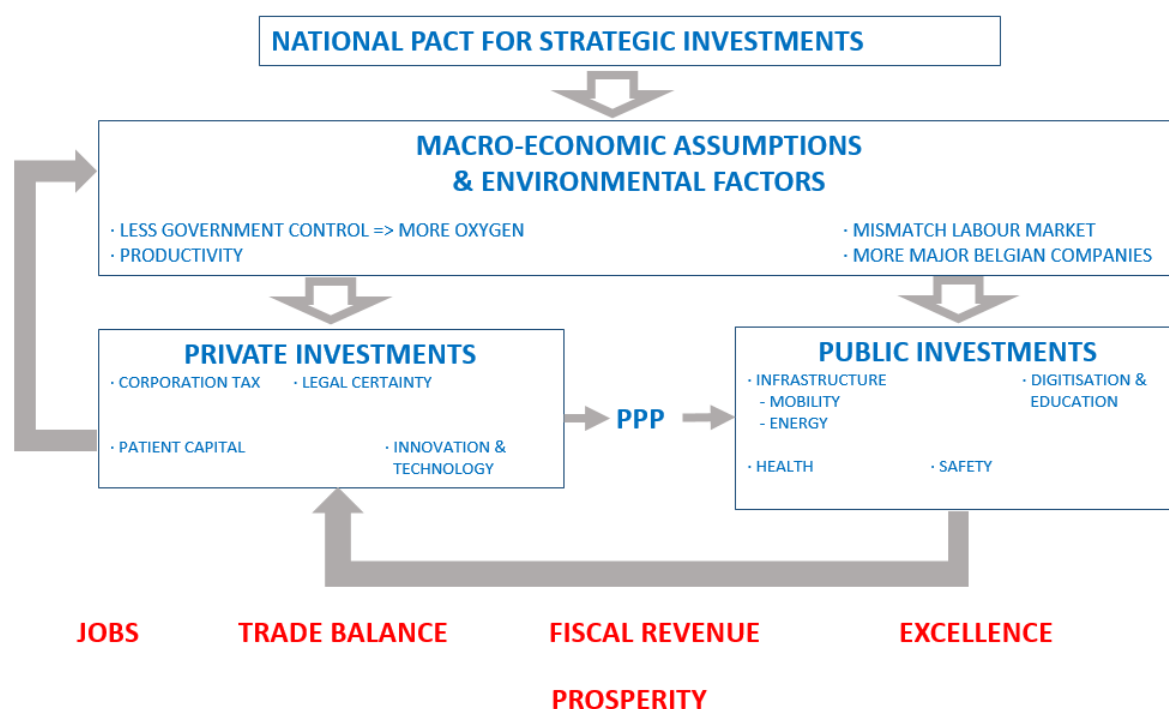
The committee has identified six different domains. This was done based on the expected economic impact. The possibility of achieving major productivity gains also played a role. The six domains are the following: Digital, Cybersecurity, Education, Healthcare, Energy and Mobility. These domains are of course not the only ones in which Belgium should invest. However, these domains are of great importance for the supply of the much-needed oxygen to the economy in general.

The Committee has also identified a number of general environmental themes. They must further support public and corporate investments. These environmental themes can be

summarised in four points: licensing processes and legal certainty, the mobilisation of capital, the use of Public-Private Partnerships (PPPs) and, finally, a budgetary strategy in the Belgian and EU budgetary framework that is favourable for public investments.

FIGURE 5

Basic framework: the virtuous circle between public and private investments



Thematic working groups were set up to develop recommendations within these themes. Each of the working groups was chaired by a member of the Strategic Committee, assisted by Miguel De Bruycker (Cybersecurity Working Group) and Philippe Lambrecht (Licences and Regulations Working Group).

3.3 Working group procedure

The working groups gathered information in the broadest possible way. They did this by surveying interested parties and experts from different corners of society. This was how the various recommendations were developed. This approach contrasts with the usual theoretical approach. The current procedure was thus a very practical approach. This has ensured that a wide selection of experts supports today's recommendations.

- First of all, the working groups spoke broadly with experts in the various domains. In this way, they could clearly understand the current context, trends, challenges and opportunities within the various themes;
- Based on this information, a *long list* of different ideas was drawn up for each working group;
- Then, through further consultation and feedback, the long list was further filtered to a number of major recommendations per group. The impact on economic growth was an important criterion for this. Other important criteria were the potential for sustainable and inclusive growth and the question of the extent to which Belgian expertise would be

used. Of course, the feasibility of the ideas also played an important role in the final selection;

- Finally, this shorter list of major ideas was made more specific in terms of vision, the resources needed and the implementation plan. The role of all social players involved was also considered.

The interim product is this document. It contains the most important priorities that are supported by a substantial number of participants for each domain. In addition, we are presenting a list of urgent recommendations for strategic investments. At the same time, we are giving recommendations on environmental factors that can make the investment climate more favourable. The Committee expects that both the investments and the environmental factors can make the Belgian economy structurally healthier, stronger and more competitive.

3.4 Continuation of the Pact

The Strategic Committee aims to make a sustainable and long-term contribution to the prosperity of this country and its citizens through this Pact. That is why we see this Pact as the beginning of a crucial and, above all, extremely urgent transformation of the Belgian economy. This document can provide a clear guideline in this respect. The final elaboration begins today. The members of the Strategic Committee therefore endorse the conclusions of this Pact. We are fully committed to making the Pact a reality. We also call on the rest of society, citizens, businesses and the government to do the same. We can only prepare the economy for the 21st century together. Because the future is ours!

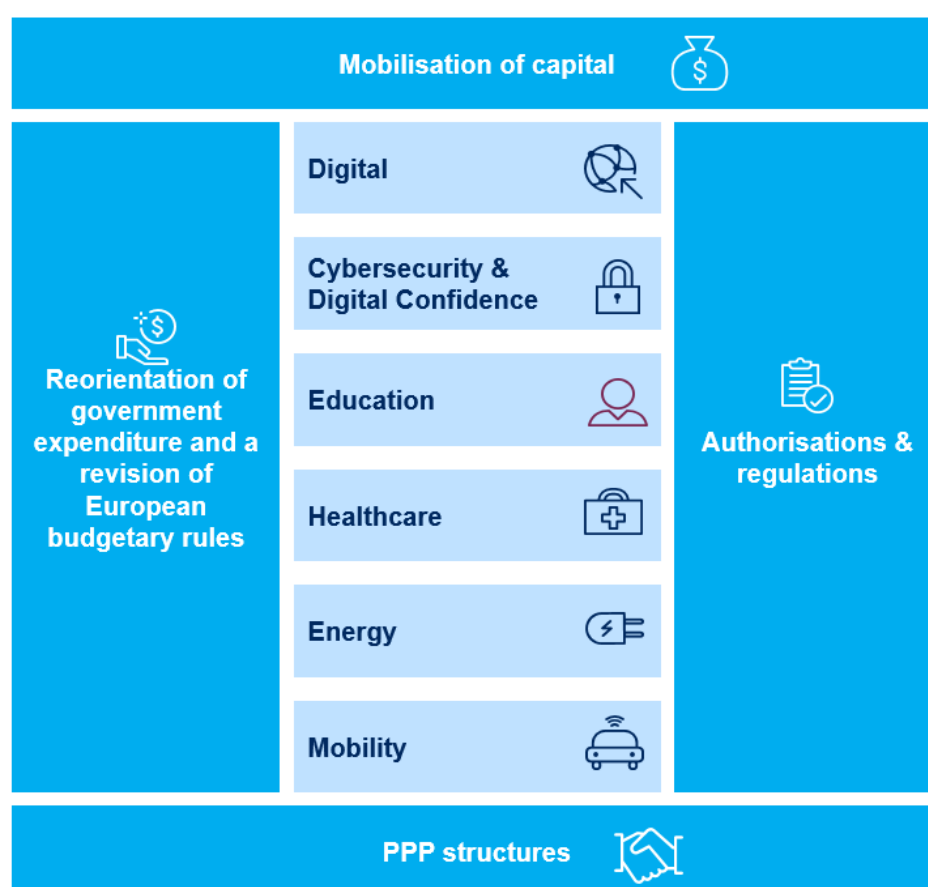
4. CONCRETE INVESTMENT RECOMMENDATIONS

Belgium must concentrate on domains in which it is already strong. This could be because we have developed unique expertise in certain domains. We must then ensure that they fit in well with important trends, challenges and opportunities in our economy. Examples from abroad show that someone who excels in a number of domains makes his or her economy more competitive and prosperous.

In this chapter, we discuss a number of strategic investments that the working groups have identified as priorities for the prosperity of our country. The Committee presents these in the form of six major economic domains and four environmental factors. These environmental factors must make it easier to make urgent investments possible. This structure is shown in Figure 6, which conveys the vision of this Strategic Committee. A healthy investment climate supports a strong core of economic activities. Within the domains, the focus is on human capital, tangible and digital infrastructure and innovation and excellence. In the meantime, we are organising a fertile investment climate with the required regulations and financing possibilities. The Strategic Committee is convinced that all the recommendations - investments and specific measures - will ensure a sustainable economy. Governments, businesses and entrepreneurs will make increasing investments. It is in this way that we will make Belgium a real front-runner.

The six domains that we discuss in this document are Digital, Cybersecurity, Education, Healthcare, Energy and Mobility (see Figure 6). Both private and public investments are involved, as well as combinations of the two. Within the environmental factors, we have proposed a number of urgent adjustments: adjustments to the legal framework and the authorisation procedures for investments, the mobilisation of capital, more extensive use of PPP structures and healthy public investment within EU regulations (see Figure 6).

FIGURE 6



4.1 Investment guidelines

We consulted an extensive range of experts and people involved to arrive at the recommendations. The investment recommendations were made on the basis of six important guidelines.

- **Focus:** In each domain, the focus is on finding investments that will bring the greatest prosperity to the whole country. The investments needed can vary per domain.
- **Disruptive:** When choosing investments, the main consideration was how to make Belgium a front-runner. The aim is to remain or become competitive in the long term.
- **Inclusiveness:** Investment and additional economic growth must help to advance as many parts of the economy as possible. From start-ups to SMEs and from large companies to non-profit organisations. They must also make Belgium a better place for the entire population - regardless of origin, gender, age or culture.
- **Sustainability:** Investments must be sustainable to maintain our current prosperity. This means that they are economically sustainable, but also that they are socially and environmentally sustainable.
- **Endogeneity:** Belgium has every interest in making the investments with its own resources and knowledge. Direct foreign investments are certainly attractive. However, these investments yield lower total returns than domestic investments. By using local resources, all economic benefits remain in Belgium. Moreover, we can develop all our expertise ourselves.

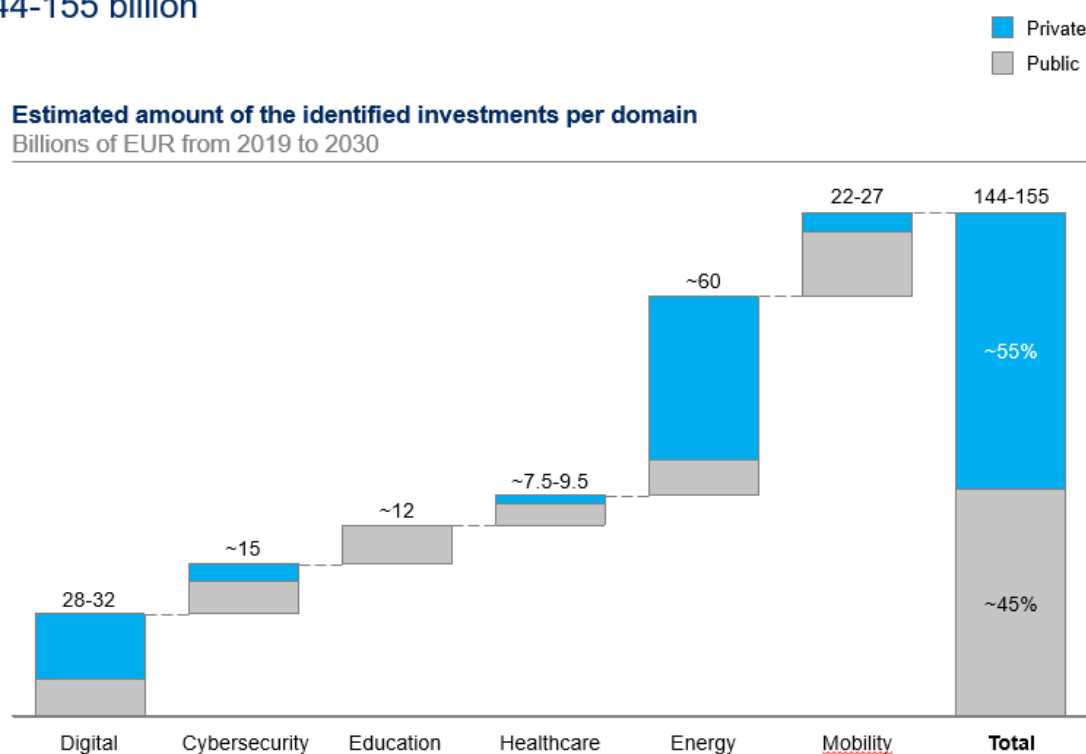
- **Feasibility in Belgium:** Investments must also be widely applicable in Belgium. Sufficient resources and expertise must thus be available, and it must fit within the current socio-economic conditions. Moreover, there must be no insurmountable obstacles in the regulations.

4.2 Total investment demand and impact

The Strategic Committee recommends a number of critical investments in this document. In total, this amounts to around EUR 144-155 billion - see Figure 7. The bulk of this amount will come from companies (~55%), but the government also plays a major role (~45%). The combination of the two will also be particularly important. Part of the private sector's support relates to the financing of public investments, using PPP structures.

FIGURE 7

The total amount of all identified investments across the domains is EUR 144-155 billion



SOURCE: National Pact for Strategic Investments.

This figure provides an overview of the most urgent investments that Belgium should make. This does not mean that these investments will be the only investments for the next 11 years. On the contrary, we need whatever investments that can strengthen the Belgian economy in the long term. The Strategic Committee encourages all these investments. The Committee's proposals do, however, concern an estimate of the investments that we need over the next 11 years in a number of important areas. In this way, it can serve as a benchmark for further encouraging investments in Belgium.

The impact of all these investments will be unusually large for the whole economy. Take investments in the transition to digitisation. Thanks to these investments, productivity will continue to grow strongly and economic growth will remain at around 1.5-2%. Without these investments, we would achieve approximately EUR ~50 billion less prosperity by 2030.

Investments in the transition to digitisation and training the population are especially important. They will help employees to switch more easily to new jobs that require digital skills. The development of broad ecosystems and targeted *centres of excellence* will lead to more prosperity and more jobs. Moreover, they will make Belgium more attractive to capital and talent. If we also get traffic moving, we will be able to grow faster. Long traffic jams cost a lot of time and money. Finally, the investments will also yield considerable savings for the government. Digitising public services and making buildings more efficient will generate a great deal of money. Other financing of healthcare could also generate billions annually. All this money can be used again for additional investments.

4.3 Financing options of the Pact

The amounts mentioned above are impressive. Nevertheless, the Strategic Committee is convinced that they are feasible.

First and foremost, the Pact includes both public and private investment. The projects launched and directly funded by private companies represent almost half of the Pact's total amount. This mainly concerns investments in digital infrastructure and energy. There is also the financing of public investments by the private sector via PPP structures (see below). In total, private financing would cover 55% of the Pact's measures.

The projects proposed by the government account for just over EUR 80 billion.

All these measures are investments for the future, by improving and maintaining physical infrastructure, human capital, as well as research and intangible capital. From a statistical point of view, however, some of these measures are considered as running costs, even though they are closely linked to the optimal use of the investments. This includes the following:

- a structural increase in resources for the maintenance of transport infrastructure;
- additional efforts in the field of education and training during the career for retraining in digital skills;
- a greater focus on cybersecurity.

In total, measures of this type amount to around EUR 25-30 billion over the whole period 2019-2030. This operational expenditure should be financed by reprioritising within the existing public budgets.

In total, the Pact proposes new public investment in the strict sense - in infrastructure or in research and development - of around EUR 55 billion for the next 11 years. This amounts to approximately EUR 5 billion per year. This means that the share of public investment in GDP would increase by around 1.1 percentage points, bringing it closer to the European average.

The Strategic Committee is convinced that sufficient resources are available to finance these investments.

First, as indicated above, around 30% of the proposed public investment could be financed through public-private partnerships (PPP) and energy performance contracts (EPC). This form of financing is not a panacea for all public investments. Nevertheless, PPPs have already been successfully used both in Belgium and abroad. This was the case, for example, for energy efficiency projects for buildings and transport infrastructure. These two domains also feature prominently in the Pact. The funds for investments in infrastructure make it possible to mobilise more private capital for PPPs.

The use of PPPs does not mean that the government will not have to bear any financial obligations. It means that the payments only start when the assets are put into use. In addition, the payments are spread over the lifespan. In other words, when the payback effects on the economy have developed on a large scale. As far as the private sector is concerned, many

financial institutions are showing real interest in this type of financing, provided that the projects are well structured.

Infrastructure investment funds offer the option of attracting private capital for PPPs on a larger scale. It would be good to have a market for alternative financing of public investment projects. In this way, the private sector would also be inclined to develop such funds. This would only increase the supply and quality of such funds. This is a better alternative than, for example, strictly public infrastructure funds. After all, they offer little added value. On the one hand, they are still co-consolidated in government accounting. In addition, the financing costs are higher than if financing is done directly from the budget.

At the same time, European sources of financing are also available for public investment. These include the structural programmes, the Juncker Plan or the traditional activities of the European Investment Bank (EIB). This financing is usually mobilised through PPP and generally serves as a catalyst for private sector funding. The use of these funds could be made more effective by strengthening information and case preparation efforts.

Finally, public budgets - both federal and for the Communities, Regions and local governments - must focus more on strategic investments. This can be done in various ways:

- Redistribution within the budget between current expenditure and investment expenditure. Investment should increase without increasing public expenditure as a whole.
- Improved management of public assets can provide additional financial resources. Selling financial assets can also generate money. All these resources can be used to realise urgent government investments.

Moreover, the government must also urgently negotiate with the European governments in order to view public investments more favourably. At the very least, we must be able to catch up on public investment without being penalised by European rules. For example, we can negotiate a temporary and limited relaxation of budgetary or public debt restrictions. Naturally, Belgium must continue to undertake to reduce government debt in the long term.

The various stakeholders have undertaken to support this Pact. That is precisely why the Committee is convinced that we can find the necessary financial resources. It is very important that we implement this Pact. After all, the return will be greater than the initial costs of the investments. This means that there will continue to be room for government investment. The payback effects come about in two different ways:

- On the one hand, the investments will enable the government to work more efficiently on a permanent basis thanks to digitisation or energy savings. Think, for example, of healthcare or the functioning of public services.
- On the other hand, the implementation of the Pact will ensure permanently higher growth in the economy.

According to the European Commission model, the Federal Planning Bureau has shown that a permanent increase in the level of public investment to 0.5% of GDP makes it possible to increase real GDP by 1.63% after 10 years and 2.77% per year after 20 years⁶. This is the result of the combined effect of higher productivity gains in the economy and more employment. The results of the simulation confirm that, because the economy will grow faster, public revenues will increase in the longer term. However, this increase will not be sufficient to cover the full cost of the investments.

⁶ Biatour B., Kegels Ch., van der Linden J., Verwerft D. (2017), Public Investment in Belgium - Current State and Economic Impact, Federal Planning Bureau Working Paper 1-17, January.

4.4 Recommendations by domain

Based on the investment guidelines, the Strategic Committee has adopted a number of investment recommendations per domain. This is a selection of investments for which the Committee sees the greatest potential to stimulate further growth in each domain. It is therefore not a prioritisation of existing domain strategies or a claim that these are the only important investments in these domains.

Digital

The vision of the Digital Committee

“The Digital Committee has a clear ambition: to build a secure, inclusive and prosperous digital Belgium, which is moreover ranked among the top in Europe.

We must seize the opportunities of the digital revolution and strengthen economic growth. To this end, we propose an ambitious, inspiring and future-oriented plan, with investments in five domains, (a) investing in digital human capital; (b) an ambitious growth project for the development of new ecosystems; (c) rolling out the next generation of digital infrastructure; (d) faster government digitisation and (e) increasing confidence in digital technology.

A great many milestones have already been established in this area: Digital Belgium, Digital Wallonia and digital initiatives in Flanders and Brussels. Nevertheless, we need to accelerate its implementation. We also need to coordinate the various initiatives better and raise the bar even higher. That is why we are requesting that a Chief Digital Officer is appointed. This person should focus entirely on implementing this digital investment plan. To do this, he/she must work together with all the parties involved. A great deal is at stake for our future. There is therefore no time to lose.”

Dominique Leroy



Impact

The proposed investment domains could translate into a possible high-level impact estimate of approximately **EUR 45 billion in additional economic growth by 2030**, the net creation of approximately **40,000 additional jobs** and a **saving of approximately EUR 11 billion (EUR 1 billion per year) for government, citizens and businesses** through the digitisation of the government.

Current climate and trends

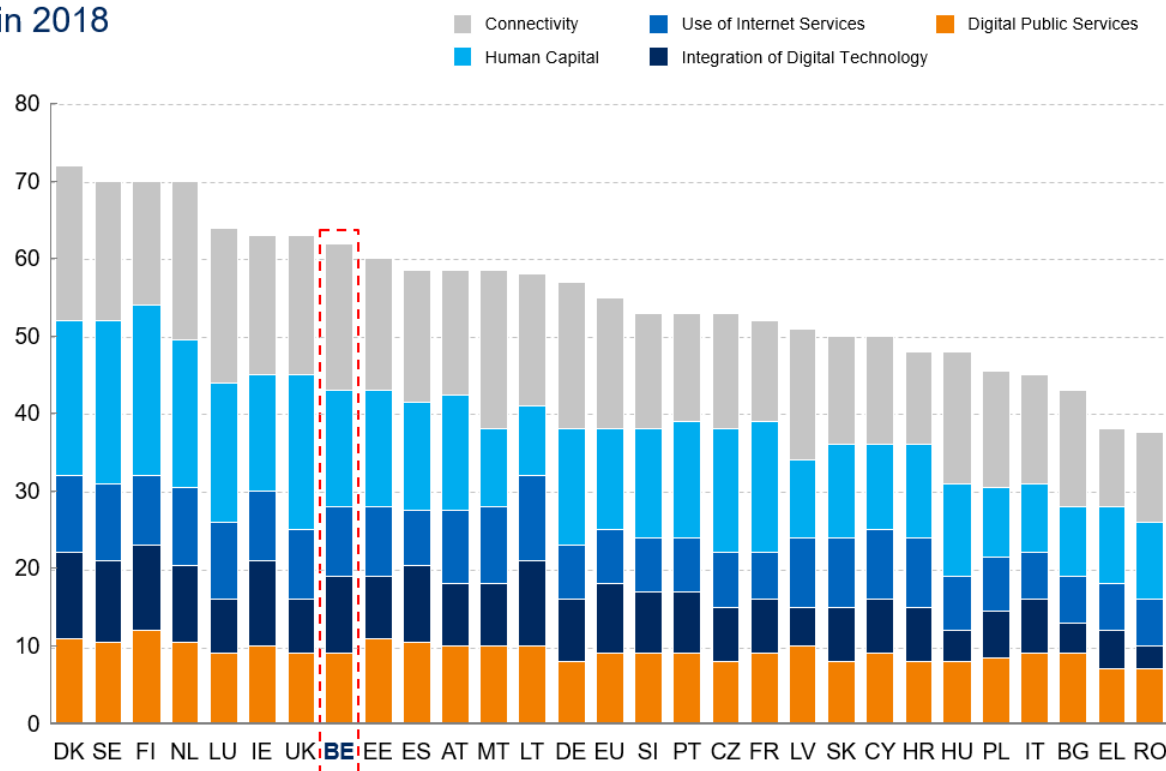
New technologies such as artificial intelligence and the Internet of Things will radically change all aspects of our lives and work, of our whole society. The digital revolution is an element of disruption on the one hand and a driver of our economic growth on the other.

The subject “*Digital*” is not only one of the six domains of the Pact, it is also an environmental factor that pervades all the other domains of the Pact. We will thus not describe all possible applications below. This section will mainly provide concrete proposals. These proposals concern our ambitious plan, how we can free up people and resources and how we can focus on future-oriented investments.

Today, Asia and the United States are the forerunners of the platform economy. Europe and Belgium have so far missed the digital express train. Within Europe, Belgium ranks eighth in the “Digital Economy and Society Index 2018” (European index relating to the digital economy and society⁷, see Figure 8). We do however get a commendable fifth place when it comes to connectivity. At the level of human capital, we are in a weak twelfth place. The reason for this is apparent. The education system is not sufficiently prepared for the digital labour market. Moreover, the working population urgently needs to be retrained in digital skills. There has also been far too little digitisation of public services. We are only in 15th place in Europe in this regard. This leads to major inefficiencies and delays in that same government.

FIGURE 8:

Belgium places 8th on the Digital Economy & Society Index (DESI) ranking in 2018



SOURCE: Digital Economy and Society Index (DESI) ranking 2018.

⁷ http://ec.europa.eu/information_society/newsroom/image/document/2018-20/be-nl-desi_2018-country-profile-lang_4AA749A5-0C23-66F9-DoAA1C661486553B_52351.pdf

Belgium is, in fact, already taking promising initiatives today to continue digitising. With the “*Digital Belgium*” plan, the federal government wants to bring Belgium within the top three of the Digital Economy and Society Index by 2020. The plan is intended to provide approximately 1,000 new start-ups. The plan also provides for approximately 40,000 new digital jobs by 2020. That’s about 25% more than today. At the regional level too, Flanders, Wallonia and Brussels have launched their own digital plans.

All the pieces of the jigsaw that are needed are in place today. Now the jigsaw itself just has to be put together. However, there is a lack of focus in a landscape that is highly fragmented in digital terms. There is a need for simplification, consistency and more decisiveness.

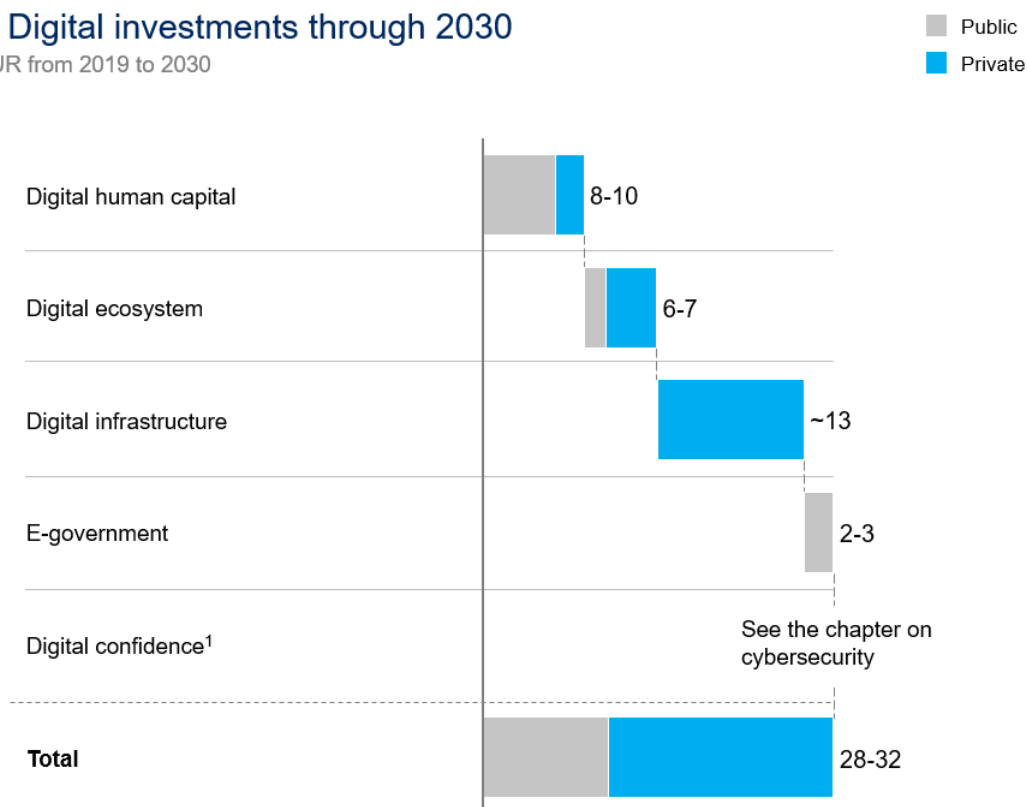
Investment priorities

We propose five concrete investments: a) Investing in digital human capital; b) Development of digital ecosystems; c) Investing in digital infrastructure; d) Government digitisation; and e) Increasing digital confidence. These initiatives build on existing federal and regional plans. Total investments amount to EUR ~28-32 billion over the period 2019 to 2030. Some 65% of these investments will be made by private sector companies (Figure 9). Investments in digital confidence are discussed in the chapter on cybersecurity.

FIGURE 9

Total for Digital investments through 2030

Billions of EUR from 2019 to 2030



¹ The Digital Working Group estimates the investments for cybersecurity at approximately EUR 3-4 billion; this is shown in the chapter on cybersecurity.

SOURCE: National Pact for Strategic Investments.

The proposed investments will translate into approximately EUR 45 billion of additional economic growth by 2030 and approximately 40,000 additional jobs. Government, citizens and businesses will also save some EUR 11 billion through accelerated government digitisation, i.e., around EUR 1 billion per year.

A) Digital human capital

A great many jobs in Belgium will look different because of digitisation. According to an analysis by McKinsey (November 2017), up to 1 million existing jobs in Belgium will change by 2030. We therefore urgently need to invest in retraining the working population. This involves digital, cognitive and social skills. Digitisation and automation will also eliminate jobs. According to McKinsey's analysis, it could involve 670,000 jobs between 2016 and 2030. The use of new digital applications and underlying possibilities could create approximately 250,000 new jobs. Some 460,000 new jobs could be created through higher productivity. As many as 40,000 new jobs could be added by 2030.

This is clearly a vast social revolution. It is vitally important to prepare the population for this. That is why we propose three concrete initiatives:

- ***Large-scale retraining of employees:*** we propose a large national retraining programme. This is intended to help people prepare for the work of the future. Countries such as Denmark, Singapore and France are already fully engaged in this. Every citizen must realise that lifelong learning will become the new norm. The aim is thus to acquire new skills continually. This is already very common for doctors. They attend conferences every year to keep up with the latest knowledge.
Today there is a huge gap between the skills of employees on the one hand and the skills required in the jobs of tomorrow on the other. This gap must be closed. This programme will be of help in this process. This approach applies to all jobs and all sectors. That is why we need everyone who plays a role in the labour market and training today. Regional employment bodies such as the VDAB, FOREM, Actiris and Bruxelles Formation will play a central role in the organisation of the programmes. They will have to collaborate with companies, training institutes and academic institutions to offer the right training. Individual "study credits" that are accumulated during the personal career can be an incentive for employees.
- ***Accelerating the digital transition in education, both in terms of basic and expert skills:***
To achieve this, we propose a number of important investments
 - a) Traditional teaching methods in schools and universities must be modernised to new learning formats. An example is a *flipped classroom* where MOOCs and e-learning platforms are viewed at home and the teacher in the classroom supervises practical exercises. Moreover, today's teaching materials are often outdated. This urgently needs to be adapted to the 21st century. Educators need to be retrained in order to make the most of these digital resources and to teach students new skills.
 - b) The content of courses and curricula often contains too little digital content. That needs to be changed. New skills also need to be acquired. Consider, for example, creative problem-solving.
 - c) More people need to follow STEM education (Science, Technology, Engineering and Mathematics). That is why we need more capacity in STEM education. We also want to organise STEM academies and offer STEM scholarships. We also want to ensure that children learn to code even during primary school.
 - d) The engineering course needs to be renewed: new future-oriented specialisations must be offered. Examples are AI, Cybersecurity and Big Data Analysis. The basic concepts must also be included in existing Bachelor's and Master's programmes in new types of engineering institutes (such as MIT or TU Delft). This is how we respond to the new needs of industry.
- ***Promoting Belgium as a digital hub for talent:*** Belgium must attract more foreign digital talent. We need that talent mainly in industry. If we want more foreign talent, we need a number of measures. For example, exchange or transfer programmes, tax benefits for

digital expats and possibly marketing campaigns to promote Belgium as a *digital hub*. In this way, we can attract more foreign talent to our industry.

We need approximately EUR ~8-10 billion for all these investments. Approximately ~30% must come from the private sector. Approximately EUR 5.5-8 billion is needed to retrain employees. An investment of EUR 2-3 billion is estimated to accelerate digital adoption in education. The largest part (EUR ~1-1.5 billion) is needed for the retraining of teachers. Developing the digital talent hub requires EUR ~300 million.

The impact of these investments will be consistent. As already indicated, McKinsey expects that up to 670,000 jobs could be lost as a result of automation and artificial intelligence. Instead, approximately 710,000 jobs could be created by digitisation. However, these can only be filled if employees and job seekers have the right skills (*“talent match”*). Investment in human capital is therefore crucial for the future of Belgium. Companies see the lack of human digital capital as the biggest obstacle to growth today.

B) Development of digital ecosystems

In the 1980s, the third industrial revolution took place in Europe with the emergence of new technologies, such as microelectronics and biotechnology. In 2018, we are facing a fourth economic revolution. Among others, through the Internet of Things and artificial intelligence.

The Committee drew inspiration for the investment recommendations from successful Belgian initiatives. These are the very successful DIRV initiatives (Third Industrial Revolution Flanders with imec & Flanders Technology, among others) and BioWin (the biotechnology success story in Wallonia, part of the *Marshall Plan*).

Our country needs a strong innovation strategy today, with an attractive political vision at its base. This includes concrete actions to build a world-class ecosystem in six key domains. Only in this way can we create a successful economic growth project for our digital future.

The Committee sets three investment priorities for the development of digital ecosystems:

- the development of an ambitious and attractive vision. This must translate into a concrete action plan and also create the right climate for an SME market such as Belgium.
- Belgium already has a strong position in six domains. These ecosystems must be developed and strengthened more quickly:
 - *Smart Health & Care*: Due to an ageing population and more chronic diseases, our healthcare budgets are under immense pressure. However, digital technologies offer many opportunities for healthcare. On the one hand, through *efficiency gains* in the organisation and administration of healthcare institutions. On the other hand, *innovations* provide an answer to the challenges of tomorrow, such as personalised care, remote care, monitoring via smart devices, smart assisted living, etc. Belgium has a very high-quality healthcare system, a strong pharmaceutical sector and highly educated people. We are world leaders in clinical studies. All of this offers a strong starting position and many opportunities to ensure more economic growth through a *Smart Health & Care* ecosystem.
 - *Smart Security*: Belgium has strong assets to develop a *smart security* ecosystem. The presence of large European institutions and NATO, as well as the presence of strong centres of competence in cybersecurity such as the Cyber Security Coalition, play in our favour. Moreover, we have strong players in the fast-growing cybersecurity market. This market currently amounts to approximately EUR 350 million in Belgium and has experienced an average growth of 5% in recent years, which is higher than the general economic growth in Belgium. Over the past two years, the market has even grown by 11 to 12%. This was mainly due to the development of advanced security solutions such as *vulnerability management* or *incident monitoring*.

- *Smart Mobility*: We have an acute mobility crisis in Belgium. Our regular traffic jams are among the most severe in the world, they are getting bigger and last longer. The economic damage is enormous and the pollution caused by fine particulates must be tackled urgently. Belgium is therefore the perfect test environment for smart mobility. Of course, this also necessitates investment in infrastructure. The use of smart mobility will be very important. This will ensure smoother and safe traffic through better traffic management systems, smart parking, multimodal route planning, C-ITS (*connected & intelligent traffic systems*), or autonomous vehicles. We must thoroughly rethink our investment strategy and focus on the new reality of tomorrow. After all, mobility will look radically different in the coming decades than it does today. The Dutch *Talking Traffic* ecosystem is an inspiring example in this regard. The government there is investing some EUR 90 million up to and including 2020, together with the regions and companies. They are also working closely together in three clusters on new traffic control systems, central data and communication platforms. They also supply and use information services in vehicles for road users.
- *Smart Logistics*: Belgium is a vital logistics hub in Europe. Examples include the ports of Antwerp, Zeebrugge and Ostend and the logistics clusters around the airports of Brussels and Charleroi. Thanks to new technology, logistics is transforming into more open, flexible and collaborative digital business models. This digital transformation is important for our future growth and competitiveness. Belgium must thus be converted into a digital logistics highway. Today, for example, we already have an initiative such as NxtPort. It uses the data potential of the port of Antwerp to make better use of infrastructure and ensure more growth and prosperity. We need many more such projects.
- *Smart Industry*: Industry 4.0 or the disruption of traditional industry. Physical objects are integrated into the information network, the internet is connected to intelligent machines and to production systems and production processes. In this way, everything is interconnected. These new production technologies enable almost unlimited product adaptability. This will further strengthen our competitiveness. Industry 4.0 will “*transform the manufacturing industry*”. It will allow Belgian companies to build a lasting competitive advantage. This requires the right support from governments and research centres. Good examples are the mechatronic and textile industry in Flanders or aeronautics in Wallonia.
- *FinTech*: Belgium has an important tradition in electronic banking. Nevertheless, we have lost our international leadership. Our country is still a leader in providing services to the financial sector however. Just think of Swift and Euroclear or (formerly Belgian) companies such as Clear2Pay and Ogone. This entire ecosystem is one of the reasons why we are holding our own fairly well today in the field of FinTech. We have a strong history and a favourable starting position. In combination with the recently launched B-Hive ecosystem, we need to be able to make this a bigger success.
- We can only grow these ecosystems by supporting digital innovation. This can be done by rolling out a *repeatable model* with academic research, incubators, start-ups and industry (including SMEs).

The investment is estimated at EUR ~6-7 billion. Approximately EUR ~4.5 billion of that is needed for research. Of that, ~30% will have to come from the government. These investments will, in turn, attract additional investments from companies. At the same time, much more attention must be paid to the focus and coordination of various programmes. In this way, we can achieve approximately 1% additional GDP growth in the next decade. Moreover, this will enable us to put a number of new Belgian digital world companies on the map.

Belgium must also urgently shift up a gear in the area of AI. Other European countries such as the UK, France and Germany have specific strategies for AI. The investment is roughly

estimated at EUR 1 billion. However, funding can be obtained from Europe for this - under the Horizon 2020 and Horizon Europe programmes.

C) Digital infrastructure

Belgium is a leader in digital infrastructure. For example, we have been consistently in the top three in Europe since 2015 and we are already investing a great deal per capita. Nevertheless, future-oriented investments are urgently needed. These are an absolute precondition for achieving our digital objectives for Belgium:

- Investing in the rollout of next-generation gigabyte networks (Fibre, Docsys 3.1, wireless 4.5G, 5G). Data centres are also needed to enable *ultra-fast internet* and guarantee sufficient capacity for data processing. The operators are already committed to doing this over the coming years. At the same time, of course, the government must continue to guarantee fair regulation and investment-friendly measures.
- Investing in the Internet of Things (IoT). Engie, Proximus and Orange, among others, have started, but more efforts are needed. A good IoT infrastructure in Belgium is essential to exploit the enormous potential of the IoT economy.
- Investing in more connectivity along major transport routes in Belgium. We must make access to the internet possible especially in these places.
- Investing in coverage of rural areas and zones without coverage (*white zones*). Citizens and businesses in these places must also have access to fast internet. The development of innovative technologies that make this possible can also be exported to regions with low population density.

The total investment is estimated at around EUR ~13 billion. Most of this is for the development of the Gigabyte networks. Thanks to the *Telecom New Deal*, the existing telecom players are committing themselves to carry out all of these investments. This will enable Belgium to maintain its leading position in digital infrastructure. This will however require transparent regulations and prompt authorisation. The government must therefore ensure a stable investment climate for the sector. This means giving priority to fair regulation, a deregulated gigabyte environment, a rational spectrum auction, a faster and more transparent licensing process and workable radiation standards.

Belgium is a digital forerunner thanks to an innovative digital infrastructure. This, in turn, will stimulate technological innovation and economic growth. Moreover, investing in digital infrastructure also creates a great deal of indirect employment. As a result of 1 new job in telecom, approximately 1.3 additional jobs arise elsewhere. An investment of EUR 1 in digital infrastructure contributes a total of EUR 3 to GDP.

D) Digital government

Belgium is in 15th place in the DESI ranking for the provision of digital public services. So there is much room for improvement. Nevertheless, progress is already being made with portals such as MyBelgium, MyEnterprise, MyPension, Tax-on-web, Biztax and MyBirth. But we still have a long way to go. After all, citizens and companies see everything that technology makes possible. That is why they are rightly demanding more and more from the government. This reality will not change and the government must continue to adapt. The internal operations of the governments must also be further digitised as a matter of urgency. At the same time, this ensures better service and it saves the government a lot of money.

The Committee would like to see the digital transformation of government speeded up considerably. This leads to a double advantage. A digital government functions faster and cheaper and can provide better services. Firstly, citizens and businesses get better services that are also actually used. Moreover, the government will work more efficiently, which will save it

a lot of money. A digital government will also have a catalytic effect and accelerate the growth of the economy even further.

- The further internal digitisation of the government is urgent. This is necessary to work more productively and thus save costs. Examples include the expansion of the Government Cloud, Open Data, improved digital infrastructure with fast internet access to services and the digitisation of internal processes. Staff training is therefore necessary to accelerate digital adoption - at federal, regional and local levels. A central *“requirement & procurement unit”* will have to be established. This unit will be responsible for coordinating digital priorities. It must also determine the requirements and thus stimulate industry. Large and medium-sized enterprises, as well as start-ups, should be able to participate in tenders.
- Contact between governments and citizens and companies must also be primarily digital. The existing applications can be expanded even further with coordinated monitoring at regional and local levels. For example, a complete ecosystem must be built around everyone's eID. In addition, every citizen must have direct access to his/her relevant documents and information. Citizens and companies must be encouraged to use these applications as much as possible.

To make all this possible, approximately EUR 2-3 billion is needed. Of this, EUR 0.8 billion is needed to develop additional applications and portals. Some EUR 1-2 billion is needed to digitise internal public services further and to stimulate their use. For the establishment of the central *“requirement & procurement unit”*, we estimate EUR ~10-15 million per year.

A truly digital government can provide much better support to the private sector. The government will become more efficient and information will be available more quickly. Citizens and businesses will receive the documents they need more quickly, will be better informed and will be able to carry out more administrative functions themselves. We estimate savings to be EUR 11 billion (EUR ~1 billion a year) by 2030. These savings apply not only to the government: EUR ~8 billion (through reduction of administrative tasks and IT savings), but also to companies: EUR ~1.5 billion (54% decrease in interaction time) and to citizens: EUR ~2 billion (47% decrease in interaction time).

E) Digital confidence

Confidence in digital technologies and applications is crucial if we want to make the digital shift as a society. To achieve this, we must guarantee privacy and have strong cybersecurity. Closing the digital divide between those who are on board digitally and those who are left behind is of the utmost importance.

That is why the Committee wants to build a secure digital environment. This will make the digital economy of the future possible. We need urgent investments in the massive reinforcement of our cyber defence, in better coordination and in scaling up existing initiatives. At the same time, we must create the right ecosystems and bring investments to the right level.

Within the Digital Working Group, the importance of 4 points on cybersecurity was stressed:

- Major and urgent reinforcement of cyber defence in military and intelligence services;
- Reinforcing and formalising the *Cyber Security Coalition*. Raising awareness and coordination of initiatives that increase the cyber resilience of our economy (e.g. security by design implementation in SMEs). The Coalition also serves as a central platform for sharing expertise and experiences;
- The construction of a national Cyber Security Coordination Centre and Council;
- A commitment to skills and training.

The expected impact will be considerable. Society's increased confidence in "*digital*" is crucial for all other digital developments. If the government succeeds in inspiring and guaranteeing this confidence, companies and citizens will invest more in digital applications. This will lead to a further increase in productivity. Moreover, we will be able to avoid many more cyber attacks. Today, cybercrime costs society at least EUR 3 billion a year. Consequently, the investments will mean a huge saving for the country.

For more details, see the chapter on cybersecurity.

Roles for key players

It is important that all these digital investment projects succeed. This requires the cooperation of several key players. The digital challenge we face is enormous. It would thus be good to have all initiatives coordinated by a central body led by a Chief Digital Officer (CDO):

- *Governments*: the competent Ministers and other involved governments will play a crucial role in executing these investments. For example, they will need to establish a legal framework to facilitate digital investments and activities. At the same time, they must also take the lead to make the execution of the investments possible. It is important that the governments support these initiatives publicly. They must also ensure that the Chief Digital Officer is appointed. The entire government must also continue to digitise itself. It must encourage citizens to make use of digital applications in this regard. All this must, of course, be done in a framework of trust. This means that the government must work on cybersecurity and privacy.
- *Chief Digital Officer and coordination unit*: they will manage the digital shift in Belgium and develop a digital vision for Belgium. At the same time, they will lead the various actors, coordinate projects and monitor progress.
- *Companies*: they have to work hard to make the digital revolution a reality. Telecom companies will continue to develop the infrastructure for this and develop new digital services for citizens and industry. Other sectors must join the digital revolution by modernising, giving their employees digital training and continuing to invest in digital applications/research.

- *Educational institutions (schools, colleges, universities, training institutes)*: they will have to adapt their educational programmes to the needs of the new economy much more quickly. They must ensure that enough people are trained with the digital skills that are needed. These are essential to be able to work in governments and businesses.
- *Citizens/civil society organisations*: all citizens will have to adapt to an increasingly digital economy and society. That is why we must all become more flexible and curious. The issues surrounding privacy and cybersecurity must also be tackled critically and constructively.

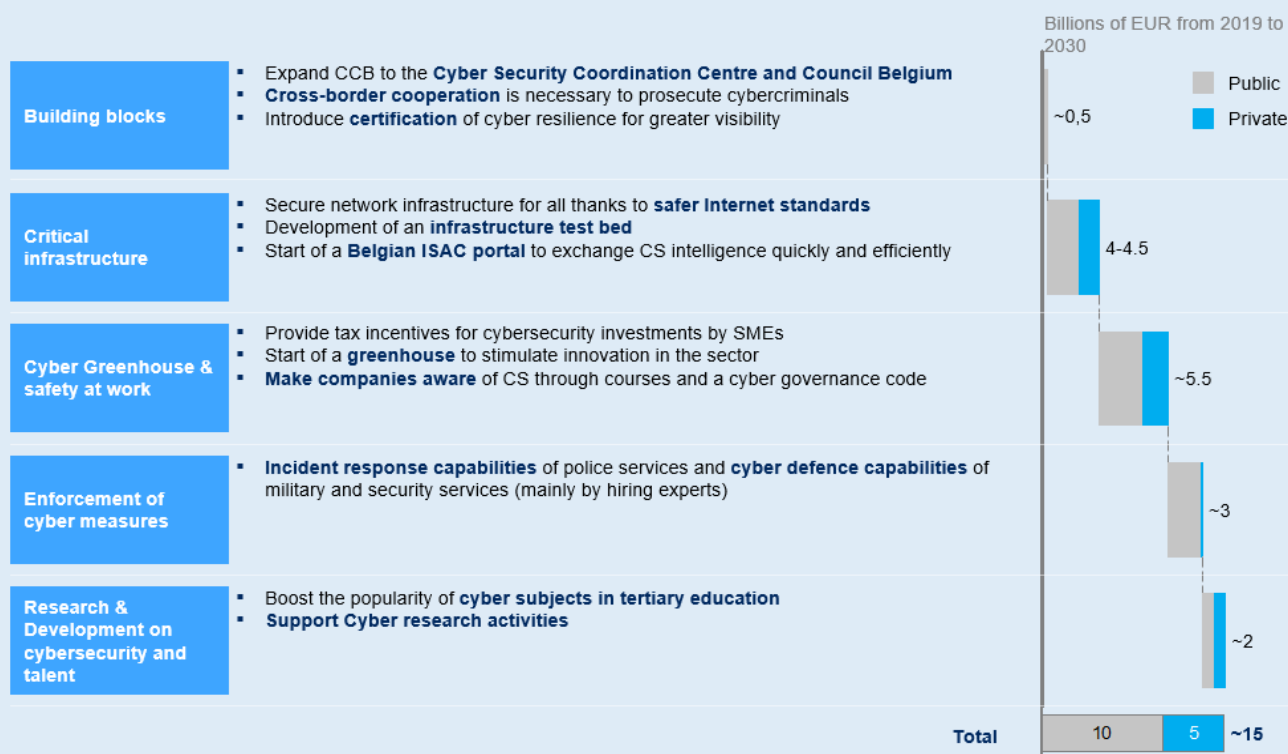
Cybersecurity and Digital Confidence

The Cybersecurity Committee's vision and Digital Confidence

“Our aim with this Pact is to progress towards a secure, inclusive digital society in which citizens and businesses have confidence. The future of our society and economy must be more digital. Cybersecurity, privacy and a minimal digital gap (between people who are digitally competent and those who are not) play an important role in this.

This requires an enormous strengthening of our cyber defences. With the protection of our critical infrastructure. The cyber skills of our security services must be expanded. We need to coordinate and cooperate on a larger scale. We must all become aware of the importance of digital technology. This also requires investment in education and research in cybersecurity. To do this, we need to develop the right ecosystems.”

Miguel De Bruycker



Impact

- Every euro invested in cybersecurity is at least one euro not spent on cybercrime
- If the government succeeds in inspiring and guaranteeing this confidence, businesses and citizens will feel more reassured about investing in more digital applications, which will improve productivity
- The active prevention of cybercrime in Belgium could mean saving up to EUR 3 billion annually

Context and trends

Cyber threats are evolving very quickly. The recent Europol Cyber Crime report (IOCTA 2017) also points this out:

“Cybercrime continues to grow and evolve, taking new forms and directions, as demonstrated in some of the attacks of unprecedented scale of late 2016 and mid-2017. [These attacks highlight] the progressive convergence of cyber and serious and organised crime, supported by a professional underground service economy. “

Recent years have indeed been characterised by large-scale threats (*ransomware*) and DDoS attacks. There were also threats to critical infrastructure and many breaches of personal data. According to Europol, there have been two billion breaches of citizens' data in Europe alone in the past year. The cost of cybercrime is estimated to be around 0.8% of global GDP. For Belgium, this amounts to EUR 3 billion⁸.

Because of these attacks, confidence in the digital economy is decreasing. However, this confidence in digital technology is vital for the future. Studies (e.g. by Unizo and Agoria) show that citizens and businesses lack trust in the security of digital technology. There is uncertainty about our privacy as well as a lack of digital knowledge. For example, 1 in 4 employees does not know how to protect themselves against cybercrime.

EU countries are gradually becoming aware of the importance of investments in cybersecurity. They are working to build trust in digital ecosystems. Increase cybersecurity budgets to protect infrastructure, government, citizens and industry. Steps have also been taken in Belgium in recent years. For example, the Centre for Cyber Security Belgium, the Federal Cyber Emergency Response Team (CERT.be) and the Cyber Security Coalition were established. However, resources are still needed for cybersecurity, protecting critical infrastructure and building the trust of citizens and businesses.

Investment priorities

Five concrete initiatives are proposed in this Pact. They are intended to give Belgium a robust, competitive position in terms of cybersecurity:

- a) Building blocks
- b) Critical infrastructure
- c) Cyber Greenhouse & security at work
- d) The enforcement of cyber measures
- e) Research and development of cybersecurity and talent

This will require EUR ~15 billion between 2019-2030, of which EUR ~10 billion for public investment (see Figure 10).

The impact of these investments will be considerable. However, this will require greater confidence in “*digital technology*”. If the government succeeds in inspiring and guaranteeing this confidence, companies and citizens will feel more reassured about investing in more digital applications. This will improve productivity. Further cyber attacks can also be avoided. Governments are currently spending up to 1.5% of their GDP on cybercrime. These investments would mean savings of EUR ~3 billion for Belgium, which certainly justifies the high investments.

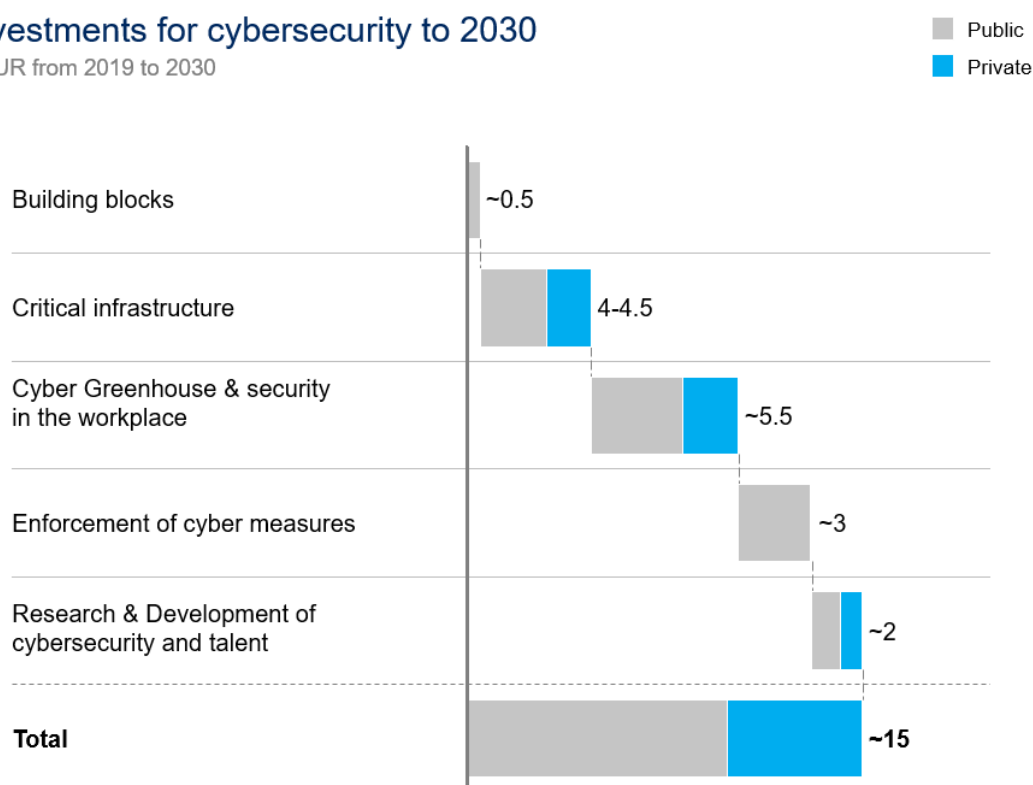
For every euro invested in cybersecurity, we save at least one euro in cybercrime.

⁸ CSIS, *Report Economic Impact of Cybercrime - No slowing down*, 2018.

FIGURE 10

Total investments for cybersecurity to 2030

Billions of EUR from 2019 to 2030



SOURCE: National Pact for Strategic Investments.

A) Building blocks

There are a number of priorities in which investments should be made to raise cybersecurity standards in Belgium. A number of elements are of crucial importance for this.

- Belgium needs a larger and stronger point of contact and coordination centre for cybersecurity. The Centre for Cyber Security Belgium (CCB) should thus also have a coordinating role and a council (Cyber Security Coordination Centre and Council Belgium).

The CCB was established in 2015 to coordinate and monitor the Belgian cybersecurity strategy. Today, this team is limited to approximately 20 employees. In France, on the other hand, the cybersecurity service of the ANSSI (French National Agency for the Security of Information Systems, founded in July 2009) employs no fewer than 600 people. It was set up by the French government in 2009. The Strategic Committee therefore recommends following the example of neighbouring countries such as the Netherlands and France. We need to expand the CCB and prepare it for major national incidents. The coordination centre can also work with other cybersecurity stakeholders such as the Cyber Security Coalition and Agoria.

Companies must become more resilient to cybercrime. The government must support them in this and invest in cybersecurity applications. To do this, the legal framework must be renewed and certification programmes must be put in place.

- The current legislation places particular emphasis on the obligations of companies. However, more attention should be paid to combating or punishing cybercrime. The cyber landscape is extremely complex. In order to prosecute cybercriminals,

cooperation is needed between all parties involved. That is precisely why the legal framework needs to be modernised.

- The certification programmes provide a recognisable label for the general public. This would clearly show which companies are making efforts to ensure cyber resilience. In doing so, a company must be able to demonstrate that its entire distribution chain is resistant to cybercrime. We do not want to burden companies with regulations unnecessarily and therefore are not making this certification mandatory. However, it must be a strong incentive to introduce cybersecurity measures.

For these priorities, a total investment of EUR ~0.5 billion from now until 2030 has been estimated for the government.

B) Critical infrastructure

Belgium still has work to do in terms of investments in cybersecurity services and infrastructure. Our neighbouring countries are doing much better. On the other hand, the number of cyber attacks on the government and critical infrastructure in industry (energy networks, telecom networks, data infrastructure of hospitals, etc.) is rising. Not only must cyber attacks be combated, but also online fraud, identity theft, international espionage, etc. The digitisation of government, companies and other activities is continuously increasing. This also increases the number of possible targets for digital crime.

This is precisely why we need to provide extra security for our society and economy. This means investing in securing our (critical) infrastructure and in the cyber skills of our security services.

There are three important investments to secure our infrastructure:

- Investing in a *secure network infrastructure* for everyone. To this end, we must introduce safer Internet standards (*DNS Security, secure routing, encryption, etc.*). These standards provide a secure way to exchange data ("*safe data transport layer*"). Online data exchange is secured across the board. This limits the risk of an attack on a weak link in the chain.
- Development of a test environment (*test bed*) for infrastructure. A test bed is a platform that allows testing of new infrastructure before it is widely used. It is a reliable, controlled and safe environment. This enables important parties to test new functionalities without that having an impact on society. The response to errors and their repair can also be tested with the test bed.
- Setting up a Belgian ISAC portal to exchange knowledge about cybersecurity quickly and efficiently.

The total investment for this initiative is estimated at EUR 4.3 billion. Of this, EUR 2.6 billion is for the government and EUR 1.7 billion is raised by private investments. Most of the investment goes towards creating a secure network infrastructure.

C) Cyber Greenhouse and security at work

Companies play an important role in the cybersecurity of the national infrastructure. There are many SMEs active in Belgium. Together, these small but numerous companies make up an important part of cybersecurity.

- The level of cybersecurity depends on general awareness and knowledge. The government must set good guidelines for this and promote them. It can offer online courses for companies and develop large campaigns to raise awareness. It can also develop cyber-management guidelines for business leaders, managers and boards of directors and link tax benefits to them.

This will make ICT security systems affordable for SMEs. They often underestimate the risks to which they are exposed and thus do not invest enough in their own security. By linking tax benefits to investments in cybersecurity, the government is giving a clear signal that this is of great importance.

- When two parties communicate via the internet, there is a need for trust. That is why good methods for identity verification are important. Belgium has good initiatives in this area, such as the FAS (Federal Authentication Service). The importance of these services will only increase and the government must continue to invest in order to develop them further.
- With the new privacy regulations, service providers - as well as users - will increasingly pay attention to privacy measures. The government must therefore encourage the development of a secure cloud infrastructure.
- Another very important element is cooperation with and support from other interested parties. For example, the Cyber Security Coalition is a unique partnership between organisations in the private sector, the government and the academic world. They join forces in the fight against cybercrime and will help increase Belgium's cyber resilience.

In addition to securing the existing environment, we must also focus on innovative ideas to improve cybersecurity for businesses even further.

- The Centre for CyberSecurity should invest in a “greenhouse” to stimulate innovation in the sector. Innovative cyber solutions and business models could be tested in a secure environment in this centre.
- Cybersecurity events (such as hackathons) will further encourage cooperation and the exchange of cyber knowledge.

The total investment for this part is estimated at EUR 5.6 billion. The investment from the government will amount to EUR ~3.5 billion. The largest part will go to supporting companies in developing and implementing cybersecurity solutions. The committee proposes to work on tax incentives to support companies. EUR ~1 billion of the budget is earmarked for these tax benefits. Although companies will receive good government support, they are also expected to make an effort themselves. The investment from the business world is estimated at EUR 2.1 billion. Of that, the largest part will go on establishing secure network traffic.

D) The enforcement of cyber measures

The challenge of combating cybercrime and cyber attacks in particular is growing. This is due to the global nature of the internet against the limited powers of the national services responsible for combating this crime.

Cyber attacks are also becoming increasingly complex. To continue to respond to these challenges and to address them quickly, it is necessary to invest in the responsiveness and capabilities of the police, military and security services. They must be able to protect critical infrastructure and also be able to use their knowledge to protect industry.

Good cooperation and agreements with the involved authorities at home and abroad are of great importance to the police and the judiciary. This is necessary in order to be able to take the right actions against cybercriminals.

It must be possible to implement and comply with cyber measures. To this end, the number of experts available in cybersecurity at the intelligence and security services, CERT.be and the Ministry of Defence must be increased to 1,500 full-time employees. This figure was estimated on the basis of information from the police, justice, defence and state security departments.

The total investment of these initiatives is estimated at EUR ~2.8 billion. These are mainly public investments aimed at recruiting specialised employees.

E) Research & development on cybersecurity and talent

Belgium is already doing well with regard to research into cybersecurity. Belgium is internationally recognised for its university researchers in fields such as cryptography, identity control and trust services. The security of the chip in the electronic identity card was developed in Belgium, for example. The double authentication (*two-factor authentication*) for online banking platforms and the recent “ItsMe” application are developments of which Belgium can also be proud. The attractive tax schedules for companies that research cybersecurity have a positive influence on this. In addition, various international organisations, such as NATO and the European Union, are based in Belgium. They also rely on local talent for the security of their sensitive data.

In the field of education, many initiatives have also been launched, such as several university Master’s programmes in cybersecurity. A Bachelor’s programme was also started at University College West Flanders (Howest), in addition to several postgraduate courses in cybersecurity (e.g. at the Solvay Brussels School of Economics & Management). These courses are still in their start-up phase, with only a few dozen graduates each year. These training courses therefore urgently need to be expanded and accelerated because the current initiatives do not have enough trained people to meet the demand from the public and private sectors.

Furthermore, existing research activities must be supported and expanded. Possible areas to deploy are secure processing platforms; encryption; post-quantum cryptography; cloud computing and secure calculation platforms. Safe and open standards must be designed with the maximum possibility of cooperation. In this way, we can ensure that a broad audience can quickly implement these technological advances.

In total, EUR ~1.9 billion is needed, of which EUR ~1.1 billion from the public sector and EUR ~0.8 billion from the private sector.

Roles for key players

In order to fully develop and implement these five initiatives, various parties must assume their responsibilities:

- **Public authorities:** Cooperation between the various competent authorities is of paramount importance. They must provide a coherent and modern legal framework for cybercrime and privacy. This, in turn, must be supplemented by a strategic vision for the future that remains adapted to the constant developments. In addition, the governments must provide sufficient funds for the financing and co-financing of both the CCB (Centre for Cybersecurity Belgium) and the Cyber Security Coalition and the national security services. Funds must also be provided for the development of desired government skills and the financial benefits for SMEs.
- **Private sector and citizens:** An effort is expected from companies and citizens alike to develop their knowledge of cybersecurity and privacy further. They too must invest in their security. Moreover, companies can also contribute to innovation by introducing the latest security techniques quickly enough. They are also expected to share their knowledge and best practices within the Cyber Security Coalition to ensure a safe and robust ecosystem.
- **Academic sector:** Universities and colleges are responsible for expanding existing programmes in cybersecurity. Moreover, they must continue, expand and adapt current research to the needs of tomorrow. They will play an important role in the Cyber Security Coalition and thus in raising awareness among the entire population.

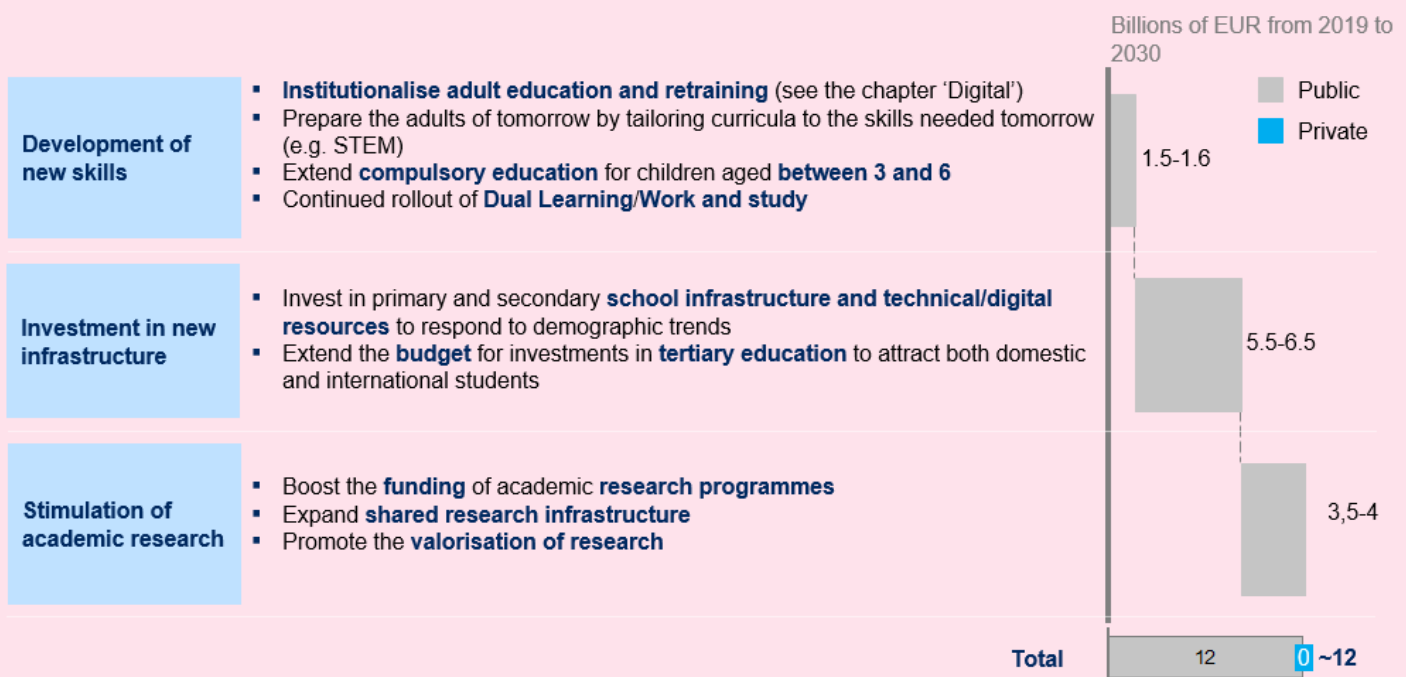
Education

The vision of the Education Committee

“The ambition of the Pact is, on the one hand, to prepare our population for the society and work of tomorrow and, on the other hand, to further develop our excellence in academic research to make Belgian academic institutions a competitive source of talent and innovation.

That is why the Strategic Committee proposes to invest in new curricula for pupils and students and retraining adults to acquire new knowledge and skills relevant to society and the work of tomorrow. Additional investment is also needed in the infrastructure and equipment of schools and universities to equip them for the education of the future. Finally, the Committee also recommends that we invest more in research and research infrastructure in order to further anchor our knowledge centres and put Belgium in first place.”

Michel Delbaere



Impact

- Firstly, investments in education will generate an indirect impact by **matching the work supply with the labour demand**, which could mean **up to 710,000 jobs** within a decade
- Secondly, a leading education system will **attract international talent**, which will ensure a more productive workforce for Belgium.
- Thirdly, research activity and cooperation with industry will lead to the **conversion of knowledge into economic activities** and consequently strengthen Belgium's competitive position

Context and trends

The communities and regions are responsible for education and professional training in Belgium. Each of these regions has drawn up their plans for education. This Pact will not go into any further detail on this. However, we do want to provide a number of clear recommendations on education and professional training that fit in with the ambition of this Pact. In particular, to “*further stimulate economic growth, create jobs and maintain the Belgian social model*”. The Strategic Committee aims to place emphasise especially on

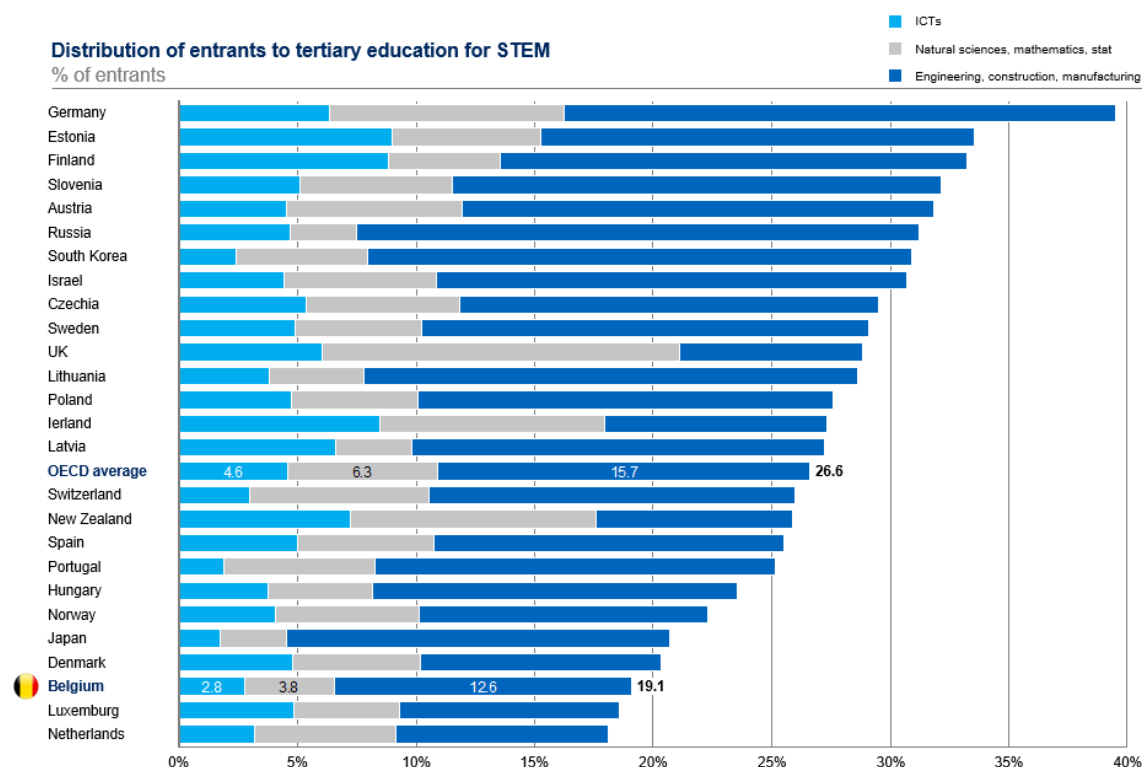
- 1) The digital changes that we are soon to experience;
- 2) The efforts to better adapt educational programmes to the needs of the future;
- 3) The extra investments in academic research aimed at innovation in the economy.

Digitisation has already been discussed. To make use of digitisation, people will need to learn new or different skills. The education system must therefore adapt its offer (the courses) so that everyone can learn these new skills. We must also take into account that education starts from the moment you are born (*Early childhood education*) and continues throughout life. If we want to renew education, this not only means learning digital-relevant skills at an ever younger age but also continuing to learn as an adult.

Major efforts are needed to prepare the primary and secondary education system for the 21st century. Although the Belgian education system has a large budget (5.8% of GDP vs an average of 5.2% in the OECD), its presentations are not in the same line. For example, there are still few students in technical and scientific programmes (19% of Belgian first-year students - see Figure 11) and many students who leave school early. Investment in infrastructure is low compared to other OECD countries (3.5% of the Belgian budget compared to an average of 7.5% in the OECD). New actions such as the *Pacte pour un Enseignement d'Excellence* in the French Community (FWB) and the educational reform of the Flemish Community aim to improve a number of these results.

FIGURE 11

Only 19% of Belgian entrants to tertiary education opt for STEM courses



SOURCE: OECD - Education at a Glance 2017.

Higher education can also be improved, especially regarding investment in key centres of excellence. Belgian universities score better than average on international rankings, but there is not a single university that truly ranks among the top in the world. Belgium invests a large amount in research (2.5% of GDP), but this still does not meet the European 2020 target of 3%, of which 1% is public funding. Finally, more could be invested in lifelong learning. On average, only 6.9% of Belgian workers engage in lifelong learning, which is lower than the EU average of ~10%. In Belgium, higher education institutions only have a small range of professional education courses for adults.

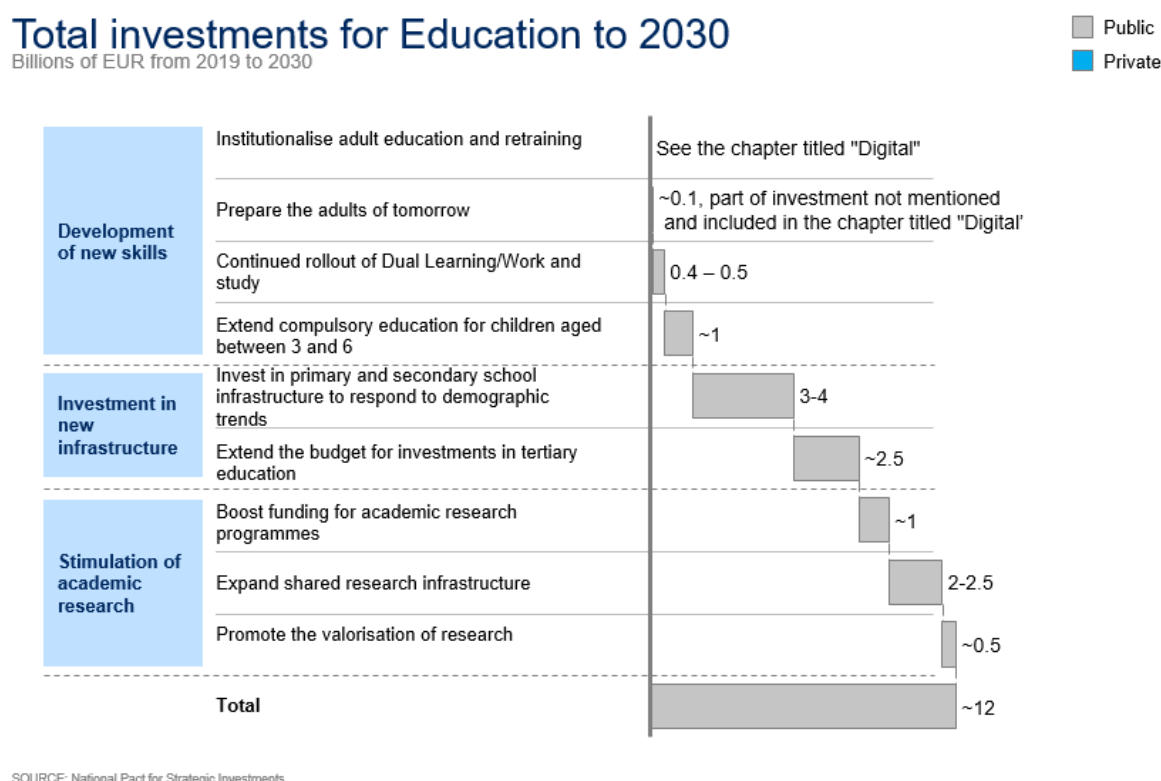
To prepare our education system for the 21st century, it is therefore important to put more effort into building skills for the future and into excellent research. We must try to be number one in the world. People will be very valuable in the future economy. Bringing education and research to the highest level is therefore the only way in which Belgium can guarantee its future prosperity.

Investment priorities

In this Pact, we propose investments on three major themes: a) Developing new skills; b) Investing in new infrastructure; c) Encouraging academic research. Investments in these themes will help employees to reinvent themselves. They will be able to better attune their skills to the demands of tomorrow's labour market. These investments amount to EUR ~12 billion in total, spread between 2019-2030 (see figure 12). Even though we assume that these are 100% public investments, this can be partly financed by other resources, such as the funding received by research institutions from private players for research and development.

Investments in education will have several positive consequences. First, the labour supply will be better matched to the labour demand. The adults of tomorrow will have the skills for the jobs of tomorrow. As a result, the vacancies can primarily be filled by Belgian employees. Secondly, an excellent education system will attract foreign talent, which will result in extra talent in Belgium. In higher education, there is a need for more flexible Dutch language requirements for foreign professors. It should also be easier to offer courses in another language. Thirdly, additional research and cooperation with companies will lead to the conversion of knowledge into economic activities. More economic activity means a stronger Belgian competitive position, which has even more positive consequences.

FIGURE 12



A) Developing new skills

With the digitisation, social and cognitive skills will become even more important than they are today. Other skills will become less important due to automation. In order to prepare the Belgian population for this new environment, the Strategic Committee wants to invest in the development of these new skills. In doing so, we give priority to four things:

- **Institutionalise lifelong learning:** The Education and Digital working groups consider this to be one of the most important issues. For a detailed explanation of what is meant, see the Digital chapter.
- **Prepare the adults of tomorrow:** Education will have to ensure the new knowledge and skills needed for tomorrow's work by adapting the content of teaching material, attracting more students to technical and scientific disciplines and investing even more in learning multiple languages. These measures are discussed in more detail in the Digital chapter. The Education Working Group does, however, require additional attention in the following two areas. First of all, more students have to opt for healthcare programmes because the ageing of the population means that there is an increasing need for

healthcare personnel. Secondly, investments must be made in language teachers and immersion education that give pupils a “language bath” to boost the multilingualism of future employees.

- *Extend compulsory education for children aged between three and six:* Today, our enrolment rate for the nursery class is around 95%. This is actually rather low because international research shows that the nursery class is a very good way to improve the academic performance of children at a later age. An investment will therefore be required to provide access to education for the last 2-4% of children between the ages of three and six. Otherwise, there is a risk that these children will suffer a learning disadvantage. Investments in nursery classes are also necessary because there is an increasing number of children between three and six years old in Belgium (growth of 3%).
- The further roll-out of “*duaal leren / formation en alternance*” (dual learning) - the combination of learning in schools and working in a company is called “*duaal leren / formation en alternance*” (dual learning). It is a promising form of education because the training of students is tailored to the demands of employers. This way of learning can be rolled out by launching information campaigns and dual programmes. This can begin in secondary school or higher education. After that, the dual method can be applied during the further career in those sectors where dual learning can be a major advantage. Consideration should also be given to the right incentives for students and companies to participate in this form of education. The government could, for example, provide a sort of *voucher* (company subsidies) for companies with which they can purchase support for starting up a dual learning programme. The popularity and approach will vary per region. In Flanders, for example, more than 180 schools took part in dual learning in the school year starting in September 2018.

The estimated other investment not mentioned in the Digital chapter is approximately EUR 1.5-1.6 billion. Of this, EUR 350-500 million is intended for dual learning, half of which goes to starting up pilot projects (information, programme design, piloting) in Wallonia and Brussels, and the other half to the subsidising company vouchers in Flanders. The extension of compulsory education will require around EUR 1 billion, mainly for additional teachers and other resources.

As mentioned earlier in the Digital chapter, the impact of these investments will be considerable. Approximately 670,000 jobs are expected to be lost as a result of automation and AI by 2030⁹. At the same time, some 250,000 new digital jobs and 460,000 jobs will be created as a result of increased productivity. Adding up, it is estimated that digitisation creates 710,000 jobs, which can only be filled if employees and job seekers have the right skills. The future of Belgium therefore depends largely on this investment in human capital.

B) Investing in new infrastructure

For several years, too little has been invested in the Belgian educational infrastructure. To counter this, the Strategic Committee proposes two priorities:

- *Invest in primary and secondary school infrastructure:* Both the physical infrastructure (buildings) of Belgian schools and their technical and digital equipment must be improved. The population is growing every day. This means that more infrastructure is needed. The number of pupils will increase considerably, especially in Brussels and other major cities. New knowledge in pedagogy has also taught us that extra space is needed to carry out projects in teams and for science laboratories. Digitisation also means that greater investment in software (e.g. eduware, blended learning, e-learning platforms, etc.) is necessary, especially to equip teachers. Teachers must also be trained to be able to use this software in their lessons.

⁹ In the basic scenario of the scenario analysis contained in the *Future of Work* report by McKinsey.

- *Extend the budget for investments in tertiary education:* There is also a great need for investments in buildings and other forms of infrastructure at universities. More students will be able to go there as a result. Furthermore, investments in modern buildings, learning centres, laboratories and innovative teaching methods will make schools more attractive to Belgian and international students.

In order to pay for these improvements, we propose increasing the percentage of investments in primary and secondary education from 3-4% of the total budget to 7-8%. The percentage then corresponds to the average for all OECD countries. In total, this is approximately EUR ~3-4 billion (total until 2030). For higher education, the proposal is to triple the current annual amounts, from EUR 110 million to EUR ~330 million.

Investment in infrastructure will allow more pupils and students to go to well-equipped schools adapted to the education of the future. Universities will also become more attractive to foreign talent. This leads to a more diverse and talented source of employees in Belgium.

C) Encouraging academic research

Academic research has an indirect impact on our prosperity. That is why it is an important part of this Pact. According to the Strategic Committee, the three most important issues are:

- *More investments in academic research programmes:* A great deal is already being invested in research in Belgium, but the system could still use a boost. More long-term financing could help to support more research that takes a long time and carries more risks. The budget of e.g. EOS¹⁰ could be doubled to EUR 60 million annually. This can be used to encourage cross-border fundamental research. More money should also be made available for research in academic hospitals (currently only 4-5% of their budget is spent on research, compared with 21% in the Netherlands).
- *Expand shared research infrastructure:* More could be invested in high-tech research infrastructure shared between universities. This will improve the efficiency of academic research in Belgium. *Centres of excellence* could then arise around this shared, high-tech infrastructure. In Brussels, for example, there are the so-called PTEs (*Plateformes Technologiques d'Excellence*) with priorities such as ICT, *spatial* technologies, advanced materials and molecules.
- *Promoting the valorisation of research:* According to the EU 2020 innovation targets, the government should spend 1% of GDP on research and development (R&D) investments. Investing in research and development activities increases the likelihood of new knowledge and technologies. Companies and other organisations can convert this knowledge into more patents, more successful start-ups, more innovative products and services and new business models. By focusing on academic research, and also on cooperation between the research and the business worlds, the economy in Belgium will grow and be stronger compared to other countries. This is also apparent from research into the effect of investing in research and development: most studies estimate the return on research and development at 10-30% for a country's economy. This can be done by focusing more on the funds for applied research, such as the Industrial Research Funds.

We propose to spend an additional EUR ~1 billion on research programmes such as the EOS and research in academic hospitals. In addition, a further EUR 2-2.5 billion will be needed for investments in shared research infrastructure. Finally, EUR ~0.5 billion extra is needed for research and development in higher education and enterprises through additional funds for applied research.

¹⁰ The Excellence of Science.

Roles for key players

Cooperation in education will be needed to ensure the success of these investments. Since education is primarily paid for by the government (88% in Belgium), the governments will play a significant role.

- *Governments:* The competent Ministers for Education and Training and other involved governments will be responsible for supervising and monitoring investments. Governments will also have to release additional budgets for education to pay for the investments. Finally, the legislation must be adapted to make investments possible, for example, the financing model of schools and universities and means to encourage companies to grant their employees access to retraining.
- *Employment organisations:* In cooperation with competent governments, companies, sector associations, social partners and educational institutions, VDAB, Actiris and FOREM are at the helm of designing a national re-skilling programme, should resources be made available for this.
- *Schools and universities:* Educational institutions will be asked to invest the new resources in renewing their education system and infrastructure. They must also help their staff learn and use digital methods. They must also give them the opportunities to retrain to get the most out of these investments.
- *Companies:* Among other things, companies must give their employees the opportunity to retrain. They are also an important link in starting up the *dual learning / work and study* programme.

Healthcare

The vision of the Healthcare Committee

“The ambition for the Pact is clear. Firstly, we want to keep Belgian healthcare affordable in times of an ageing population and a declining inflow into the labour market. Secondly, we want to make our country a forerunner in certain areas of research. Belgium already has important players in this regard today.

The Committee thus proposes accelerating the introduction of new technologies. With selected *centres of excellence*, we can conduct the research we need with more focus and resources. This will be reinforced by sharing patient data securely between different parties.”

Jean Stéphenne



Impact

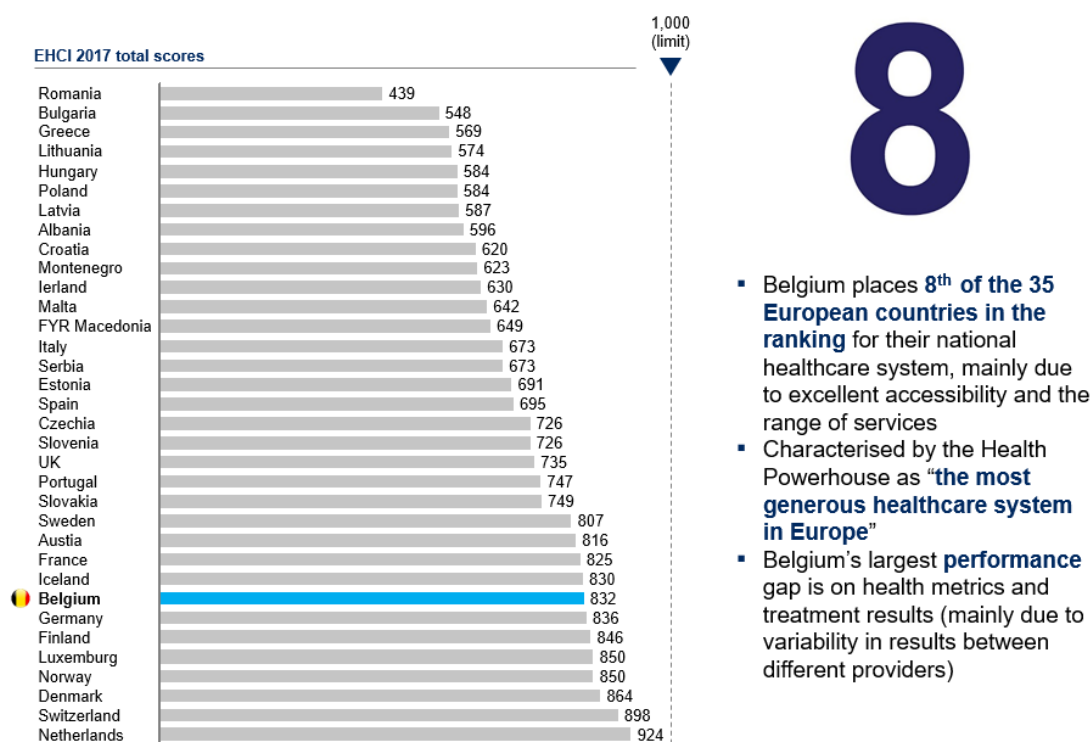
- Better access to data will make the situation of Belgian healthcare **more transparent**; the **competitiveness of companies will increase** and will provide **better and modern applications** for the benefit of the patient (this could already result in an estimated EUR 330m per year in increased productivity of chronically ill people in Belgium).
- More efficient technologies in the healthcare sector will lead to **lower healthcare costs** and a **significant saving for Belgium**
- **Competitiveness of research centres will be enhanced** by easier access to **more data**, **faster testing possibilities**, **dense feeding ecosystems** and **more capital**

Current climate and trends

In general, the Belgian healthcare system scores well: 78% of us report good health according to the *Health System Performance Assessment*¹¹. That is why we score better than the European average. Belgium ranks 8th in the *Euro Health Consumer Index*, in which 35 countries participate (Figure 13). Our assets are a large capacity, a wide range of services, ample accessibility and strong financing. The sector is an important part of our economy. For example, 14% of the working population works in healthcare. In addition, the pharmaceutical industry exports EUR 7 billion in products and services abroad. Nevertheless, our system faces an enormous challenge. Our social system is under pressure from an ageing population and technological progress over the next 25 years. On top of this comes the growing number of complex and chronic diseases. These have to be treated by a steadily ageing population. The proportion of people aged over 65 is rising: between 2020 and 2030, we expect an increase from 19% to 23%. By 2050, this will even reach 27%. This will put pressure on both sides of the equation. On the one hand, the costs of healthcare will have to be reduced, while on the other, the high quality will be maintained. There is thus a need for a system that is more result-oriented and uses modern technology that guarantees productivity and labour participation. We must have the courage to think radically about this.

FIGURE 13

The Belgian healthcare system ranked 832/1,000 in the 2017 Euro Health Consumer Index



SOURCE: Euro Health Consumer Index 2017.

Substantial investments are needed to renew our healthcare. To this end, Belgium can rely on a number of important companies and world-class research centres. We are strong in areas such as oncology, vaccinations and gene and cell therapy. The Belgian biotech clusters support

¹¹ KCE report 259 (2016). Performance of the Belgian Health System - Report 2015. Health System Performance Assessment (HSPA) is a process that allows the health system to be assessed holistically based on measurable indicators.

Belgium's economy and competitive position. They provide jobs for more than 35,000 people and are responsible for 11% of exports. To maintain our competitiveness in the *life sciences*, we must continue to invest in research and innovation and in services to the *life science* clusters.

Digitisation is an important trend for both healthcare and biopharmacy. As in other domains, digitisation in healthcare offers new opportunities for greater effectiveness and efficiency. However, Belgium is still lagging behind in the digitisation of healthcare. Few doctors feel involved in digital care. Applications such as *remote Healthcare* (remote diagnosis) are hardly used. There is also still too little data sharing between different centres. The reason lies in our data infrastructure, which is still insufficiently integrated.

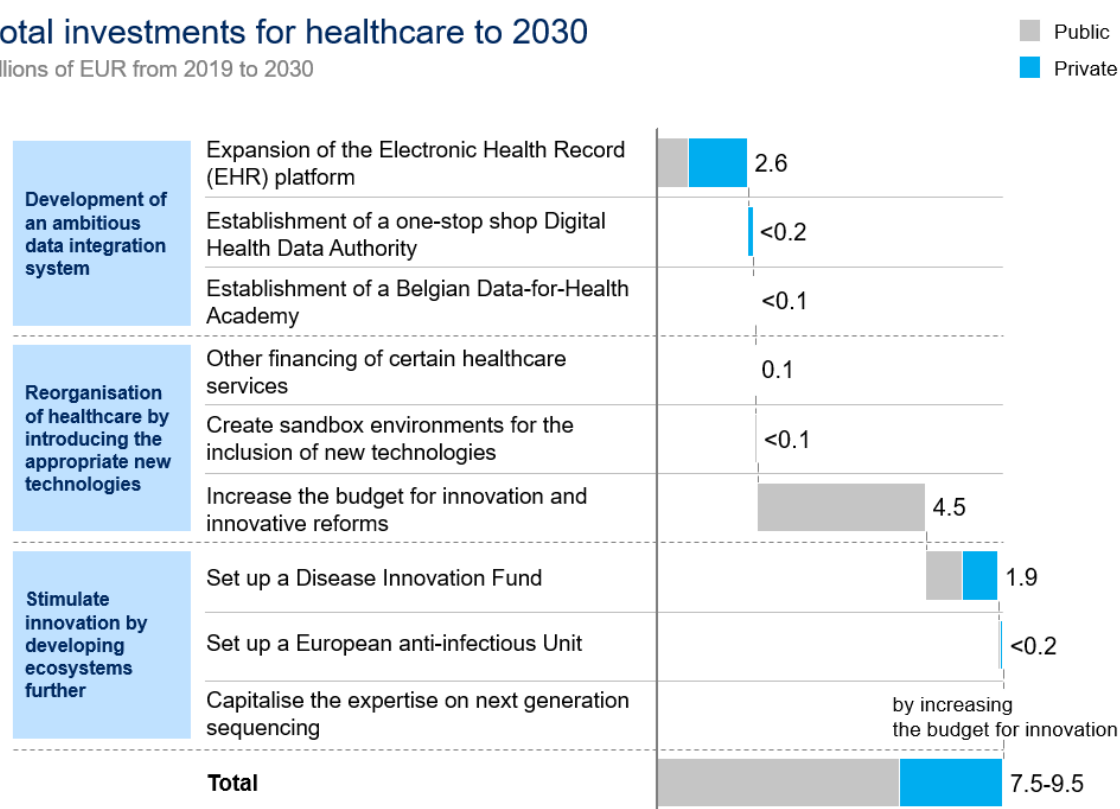
Investment priorities

The trends inspired the Committee to follow the following three main tracks in the coming years: a) Development of an ambitious data integration system; b) Reorganisation of care by using the right new technologies; and c) Stimulating innovation by developing ecosystems further. In total, this represents an investment of approximately EUR ~7.5-9.5 billion for the period up to 2030. Of this, approximately 30% must be borne by private investors (see Figure 14).

FIGURE 14

Total investments for healthcare to 2030

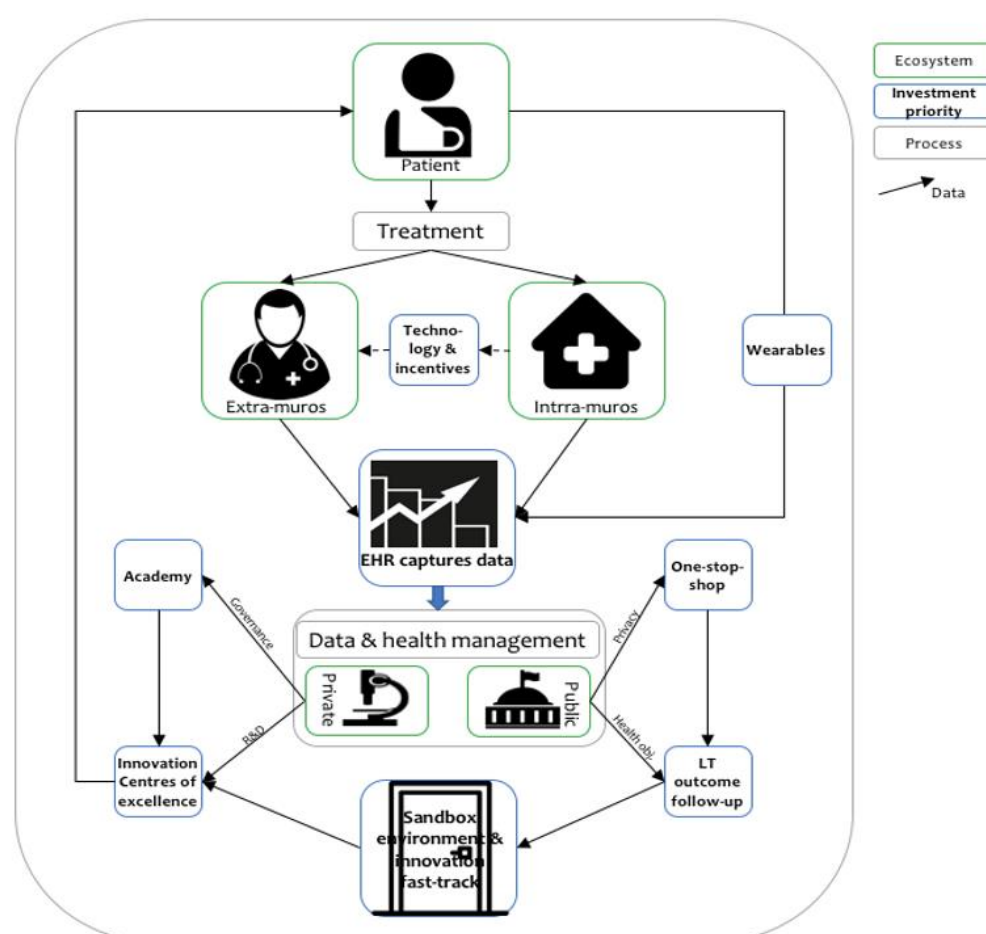
Billions of EUR from 2019 to 2030



SOURCE: National Pact for Strategic Investments.

The investment projects will generate a positive spiral. Patients, caregivers and businesses will all benefit greatly from an integrated data system. Services will improve and research will become more efficient and of a higher quality (see figure 15). The innovations in healthcare and in industry will have a positive influence on each other. In this way, Belgium can absorb the changes in the sector and excel as an innovator and forerunner. This will lead to the development of a *Smart health & care* ecosystem in Belgium.

FIGURE 15



A) Developing an ambitious data integration system

Better availability and integration of outcome data are the basis of these recommendations. Hospitals and research centres today have their own platforms and data systems. Unfortunately, there is little cooperation. This is a missed opportunity for Belgium.

A number of interventions are required to integrate our data systems. The Committee proposes three concrete ideas:

- The expansion of the *Electronic Health Record (EHR)*. This platform should make all patient data accessible together with other (external) data (e.g. existing registers, biobanks, academic research, etc.). This requires the provision of additional hardware (e.g., storage capacity, servers) and the development of new applications for data analysis (e.g. the right software, new algorithms).
- The establishment of the “one-stop-shop” *Digital Health Data Authority*. This will ensure the privacy and correct application of the GDPR legislation (see above) for patient data. This central body will be the only access point for the data, with a special access method. The Danish *Sundhedsdata Styrelsen* could be an example for the Belgian model.
- The establishment of a Belgian *Data-for-Health Academy* to serve as a *centre of expertise*. We must make optimal use of our available data and facilitate, correct, maintain and develop the data system. The Academy would bring data and health experts together for this purpose. The academy thus serves to bring knowledge together, to allow cross-fertilisation and even to provide training.

The Committee estimates that investments of around EUR ~2.6 billion are needed for these projects. More than 90% would go towards expanding the EHR budget (this is equivalent to three times the current budget). Most of the rest of the amount is needed to establish the *Digital Health Data Authority*.

These investments will make Belgian healthcare more open for everyone, and the objectives will be clear. Furthermore, the competitiveness of companies will increase. Modern applications will find their way to patients more quickly. For example, improved healthcare services could deliver up to EUR 330 million a year in the increased productivity of chronically ill people in Belgium. The easier access to data will also make research centres more competitive. They will be able to identify and recruit candidates for clinical trials more quickly. The collaboration between hospitals on rare diseases will also be improved. Patients will be able to make informed choices thanks to accessible and transparent data on the different care centres.

B) New, appropriate technology to reorganise care

Restructuring healthcare must take place in such a way as to promote quality and effectiveness. We must dare to take our services in a new direction. An example would be developing more care outside the hospital, using new technologies. We must be able to develop and test these new technologies more quickly. That way they can be used more quickly, after all. As a starting point, there are remote Healthcare apps and *wearables*, which have already shown promising results.

The Committee presents three concrete proposals to take the system in a new direction:

- The financing of the Belgian healthcare system must be reviewed to allow for new and better technologies. The resulting savings can be used to appoint coordinators. They will manage the changes. We must provide financial incentives for the use of new technologies that lead to shorter hospital stays. An example is updating the list of outpatient admissions.
- Create *sandbox* environments to accelerate the uptake of new technologies in healthcare. Firstly, procedures for certain technologies must be speeded up. Secondly, test environments must be set up with adapted legislation, innovative reimbursement options and clear monitoring of objectives. Belgium must become the reference in Europe as a test lab for innovation. Innovative access models must make it possible to test new technologies in a protected environment and on a relatively small scale.
- More budget must be provided for health insurance to enable innovative ideas and initiatives in Belgium. If Belgian patients gain more access to innovations, it is not only health that will benefit. It will also be possible to collect more data more quickly and in such a way that even more innovation is possible. Various government reforms will require temporary and conditional investments in innovation, transition management and healthcare institutions. This increase in the budget is similar to the extent to which our neighbouring countries invest in healthcare.

We will need to free up around EUR ~4-5 billion for these improvements.

Better care at a lower cost are the most important effects of the investments. Today's technology has already made it possible for us to reduce the length of hospital stays. The use of better technologies will also allow healthcare providers to be more productive. This will thus provide patients with even better care. With the introduction of new technologies, Belgium can position itself as the *access sandbox* (test lab) of Europe.

C) Stimulating innovation by developing ecosystems further

Belgium is among the best countries in the world in certain fields of research. Examples include oncology, vaccination, cell and gene therapy. We absolutely must promote this, but the sector is fragmented today. There is too little focus on investments in knowledge centres. Worldwide, we see a trend in which research centres are highly grouped into *clusters*. It is easier to attract talent, investments and ideas to such *clusters*. As a result, they form a good basis for pioneering ideas and innovation.

The Strategic Committee therefore proposes to focus fully on these *centres of excellence*. We must aim to place these clusters at the top of the world ranking. The Committee proposes three ideas:

- Set up a *Disease Innovation Fund*. This fund must focus on the *life sciences* ecosystem in Belgium. Investments will go to start-ups and SMEs dealing with rare diseases, cell and gene therapy, emerging diseases and personalised medicine. The aim of the fund must be to link research with care itself. A central point of contact must also be set up under the Federal Agency for Medicines and Health Products. Start-ups can easily find guidance and information here about legislation and regulations, for example.
- Set up a *European anti-infectious Unit*. We propose that a specialised infrastructure be built. This can be financed through a public-private partnership (PPP). This would provide an optimal environment for phase 1 and human *challenge* clinical studies. Belgium already holds expertise in vaccines and tropical medicine. Through such a structure, we can strengthen our reputation and become the “*clinical trial hotspot*” in Europe. This will attract many pharmaceutical, medtech and biotech companies. The expertise built up can be applied directly and scaled up in the *Mobile Global Health Lab*, which specialises in emergency support for outbreaks of epidemics. We can try to attract the experts of this team to Belgium - to increase our own *talent pool*. Samples of identified viruses could be stored in a bank in Belgium for further research.
- Belgium is one of the leaders in the field of *genomics*. By providing sufficient resources, we can reap the benefits. This mainly concerns investments in data capacity, innovative test projects, artificial intelligence for analysing these data and the reimbursement of tests that will enable predictive and personalised medicine.

The total investment in these projects would amount to EUR ~2 billion. Of this, approximately EUR 1.9 billion is for the *Disease Innovation Fund*. The remainder of the budget includes the investments in the *Mobile Global Health* and *Anti-infectious unit*, and also the *genomics* revolution ahead of us.

Thanks to these investments, Belgium can position itself further in the areas in which it is already strong. By stimulating investment and focusing on a number of ecosystems, we can make a profit in a number of crucial areas. We can stimulate research activity further, as well as our export potential. We will also make Belgium more attractive to foreign talent and companies. The setting up of new knowledge centres would only reinforce this inflow of capital and talent. Moreover, studies show that the return on R&D investments is between 10-30% for the entire economy.

Roles for key players

How do we bring these projects to a successful conclusion? The various actors in the healthcare landscape will have to act.

- *Governments:* The competent minister and the involved governments will play an important role in the implementation of these investment priorities. Their role will be to guide and monitor the process. Secondly, governments will have to free up extra budgets for healthcare. This will enable them to finance the stimuli that the Pact requires. In addition, the legislation will have to be amended in order to make investments possible, for example, for the financing and repayment model. Furthermore, the governments must make the available data available with respect for the privacy imposed in the GDPR legislation.
- *Hospitals and other healthcare providers:* All available patient and research data must be included in the extended EHR platform. Here we need the help of all healthcare institutions. However, this is not enough. We need to create a culture in which different centres work together and exchange data, and innovations are used to improve services for patients.
- *Industry, start-ups, universities, research centres:* All players involved in research and innovation in the sector will have to make their share of the investments in order to remain permanently ranked at the top in the world in terms of research and development.

Energy

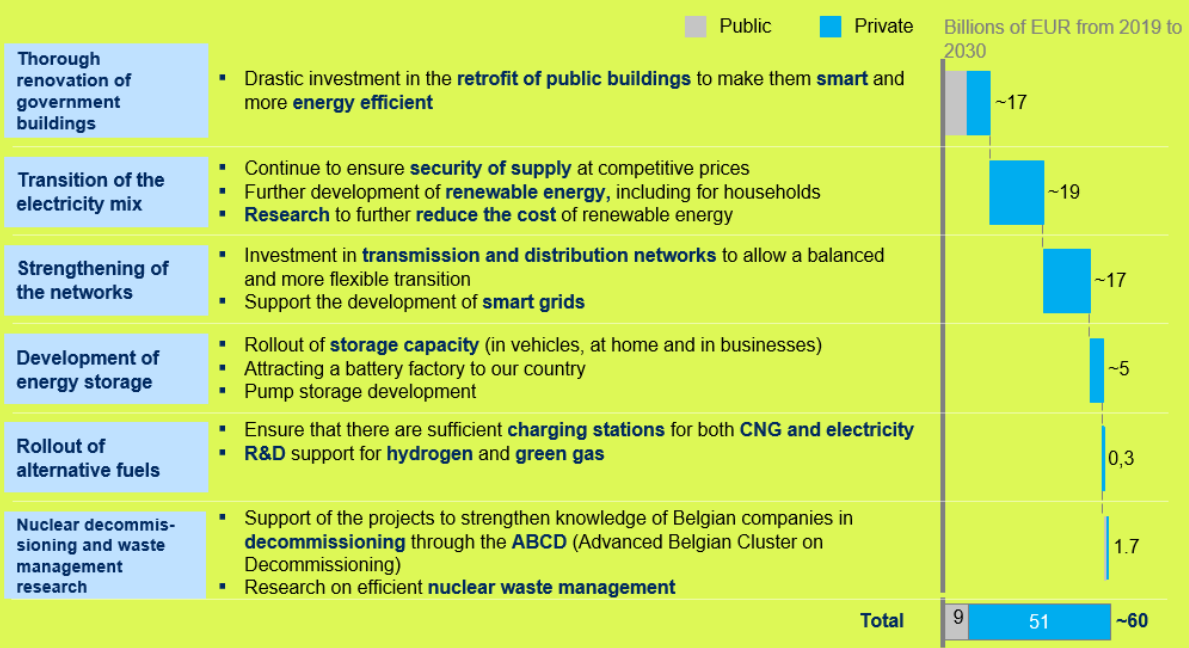
The vision of the Energy Committee

The energy market faces many challenges: reducing greenhouse gas emissions, rolling out renewable energy, making the energy system more flexible, as well as ensuring that sufficient energy is always available at competitive prices. A number of major changes will be needed in the coming decades to meet these challenges.

The Energy Pact of December 2017 “*aims at establishing an energy system that can guarantee a secure, sustainable and affordable energy supply by 2030*”. This sets the conditions for the energy transition to a low-carbon society in 2050.

The investment pact provides an overview of the investments needed to make this transition possible. This transition requires (a) the renovation of buildings to make them energy efficient and intelligent, with the Pact focusing on public buildings; (b) a change in the energy mix; (c) the adaptation and reinforcement of networks; (d) the development of storage facilities for both heat and electricity; (e) the development of alternative fuels and (f) the decommissioning of our nuclear power plants and the management of nuclear waste.

Michèle Sioen



Impact

- The renovation of the building stock will quickly lead to a great **reduction in the government's energy consumption**, which will lead to considerable **savings** and help Belgium achieve its **energy objectives by 2030**. Large **spill-over effects to SMEs** and other private sector players
- Investments in networks and production capacity will help ensure security of supply
- Further development of the Belgian nuclear sector and its **export capacity** in a rapidly growing market
- A **healthier living environment** for Belgian citizens by encouraging the use of CNG (and other clean fuels)

Context and trends

For over 10 years, we have been experiencing major changes in our energy system, many of which originate at the European level. Europe has set targets for the liberalisation of markets, the reduction of greenhouse gas emissions, renewable energy sources, energy efficiency, interconnections and so on. According to these targets, Belgium must reduce its greenhouse gas emissions by 35% by 2030 compared to 2005 (for the non-ETS sectors).

The governments in Belgium have recently concluded an Energy Pact with the ambition of supplying energy that is delivered in a reliable, sustainable and affordable manner by 2030. The Energy Pact lays down a number of measures to enable the transition to a low-carbon society in 2050. Furthermore, the governments have also decided to phase out nuclear energy between 2022 and 2025.

This Energy Pact forms the basis for the National Energy Climate Plan (NEKP) to be submitted to the European Commission before the end of the year. This plan contains five dimensions: (1) the reduction of greenhouse gases (2) energy efficiency, (3) security of supply, (4) the internal market and (5) research and competitiveness.

The energy transition requires major changes in the way we use and generate energy. A clear, stable and stimulating political vision and regulation are very important. Especially since the private sector (companies or private individuals) controls most of the energy system.

Investment priorities

The energy transition will have an impact on many people, companies and organisations. An example is the market for renewable energy. Many producers, as well as individuals and companies, invest in the production of renewable energy. This requires additional investment to make the networks stronger and more intelligent. The number of electric vehicles on the road is increasing and cheaper batteries are being developed. Consumers who have an electric car or a home battery will be able to store or dispose of energy according to the circumstances, thus helping to absorb the variable generation of renewable energy.

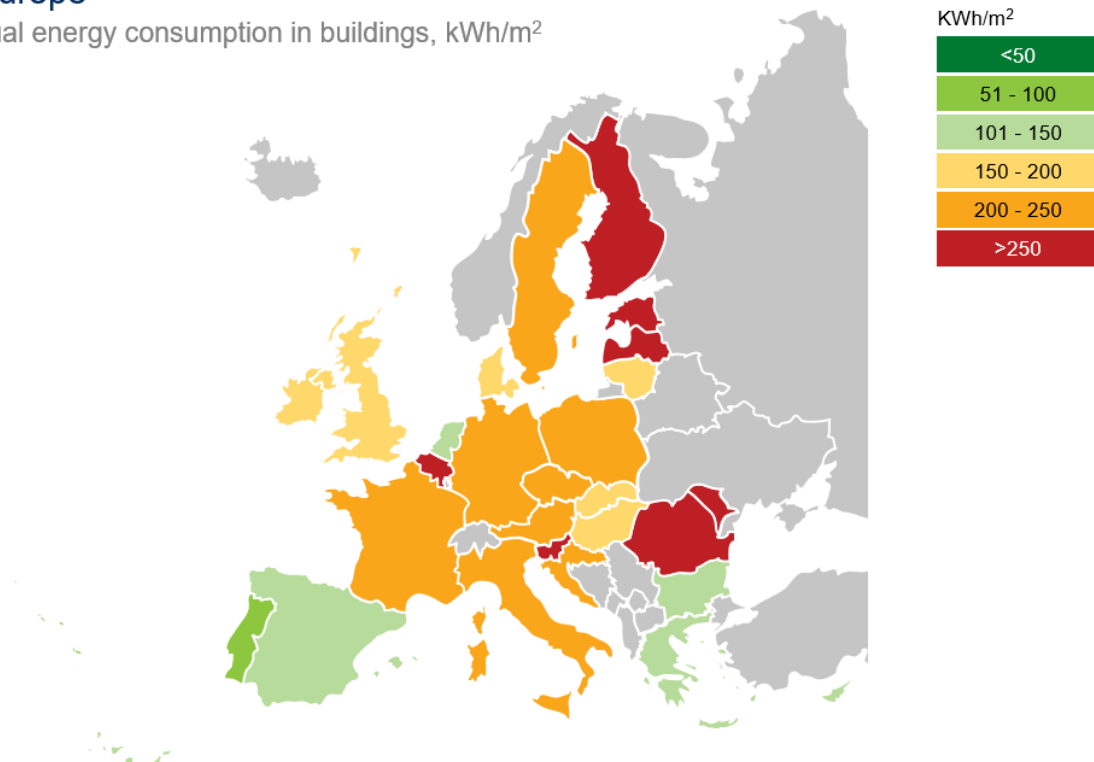
The nuclear phase-out requires a way for the government to guarantee investment in new gas-fired power stations. The closure of nuclear power plants at Belgian, European and world level means that there must also be investments in the decommissioning of these power stations. In addition, new possibilities must be sought for the processing and management of spent nuclear fuel (nuclear waste).

When we look at heating, where gas is currently the main fuel, we see that there is still much room for improvement in terms of energy efficiency in buildings. Major efforts must be made in buildings with an average consumption of over 250 kWh/m², which are among the least efficient in Europe (see Figure 16). One explanation for this situation is the neglected state of our buildings, half of which are over 70 years old and the buildings are often not well maintained. This investment pact only takes into account energy efficiency in public buildings.

FIGURE 16

Belgium's energy consumption is higher than 250kWh/m², one of the highest in Europe

Annual energy consumption in buildings, kWh/m²



SOURCE: BPIE (2017). Is Europe ready for the smart buildings revolution?

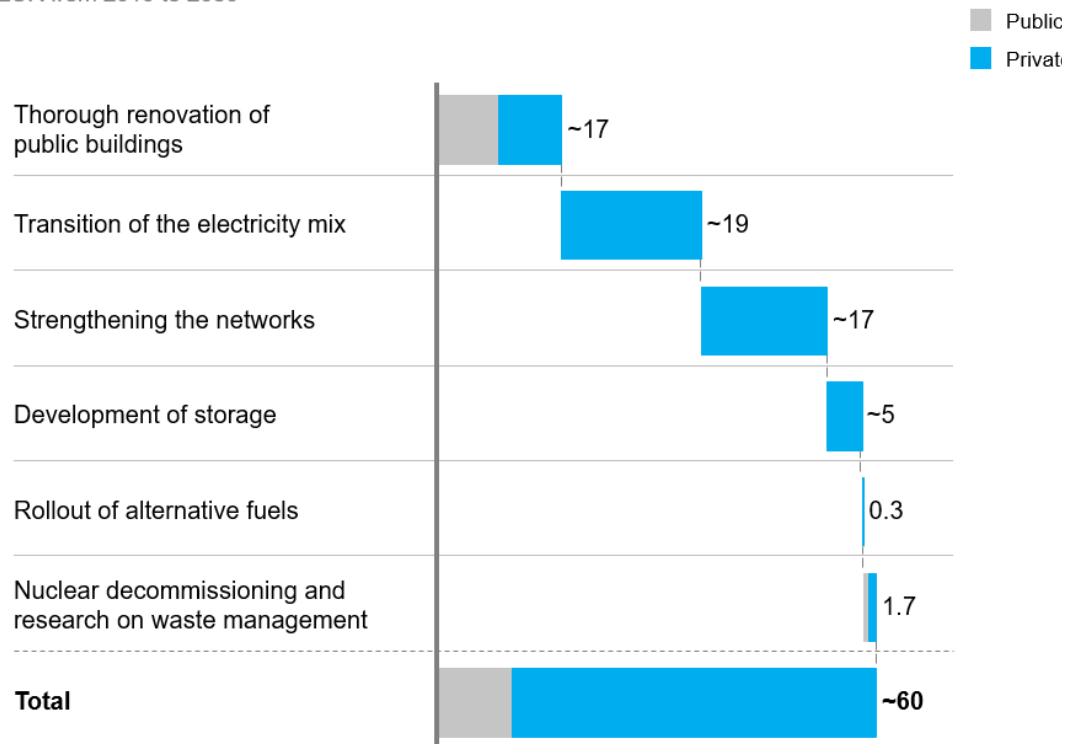
Besides energy efficiency in buildings (including public buildings), companies must also invest to improve their energy efficiency. Projects for the production of green gas and hydrogen must also be started. Electric vehicles must be combined with gas-fuelled vehicles. That is why more investment is needed for recharging points for both.

Together, these projects represent an investment of EUR 60 billion to 2030. Renovating public buildings is particularly suitable for public-private partnerships (PPPs) and/or energy performance contracts. We have therefore taken the public-private share of the proposed investments into account in the graph below (Figure 17), a ratio of 50% public - 50% private for this project.

FIGURE 17

Total investments for energy to 2030

Billions of EUR from 2019 to 2030



SOURCE: National Pact for Strategic Investments.

A) Government buildings: a (possibly thorough) renovation

It is important for our government buildings to be energy-efficient and intelligent. This applies to administrative buildings as well as, for example, swimming pools, schools or public libraries. All these buildings set an example and will help convince people to renovate houses and other buildings as well. Public buildings are not in good condition, so major work will be needed. The work on these buildings will thus generate a large number of jobs with a very high multiplier effect. After the renovations have been carried out, not only will the CO₂-emissions from these buildings decrease but so will the energy bills.

The Energy Pact stipulates that “government buildings must be energy neutral by 2040”. In order to achieve this objective, we must act urgently. After all, the renovation of government buildings must be tackled thoroughly. Firstly, we need a complete inventory of government buildings and their state. Although the governments have long called this a priority, we note that the situation has not changed much. That is why we propose to 1) agree on objectives, draw up an inventory, assign and carry out the tasks, all in a clear and open manner, and 2) establish a “delivery unit”. This is a group of people who ensure that the renovation projects for government buildings are carried out. RE:FIT London has successfully used this working method for the renovation of more than 550 buildings in London since 2009. The CATCH initiative for the economic development of the Charleroi region has also been inspired by this way of working. We also propose to 3) set up a foundation to help pay for these renovation projects. The energy savings after the renovation of the first series of government buildings can be returned to this foundation to strengthen its effectiveness.

The total investment for the thorough - and necessary - renovation of government buildings by 2040 is estimated at around EUR 33 billion. By 2030, this represents an investment of EUR 17 billion (linear projection), of which EUR 1.65 billion is for federal government buildings (i.e. EUR 150 million per year). Although the amounts are very high, this does not mean that they have to be paid in one instalment. PPPs (public-private partnerships) and/or energy performance contracts are particularly suitable for such projects. If a PPP is chosen, the renovation projects must be carried out in a group as much as possible (large volume and risk spreading) and they must not be too different. ESCOs (Energy Service Companies) can play an important role here.

B) Electricity mix

The electricity generation fleet will continue to develop significantly in the coming decades. The development of renewable energy will continue (investments estimated at EUR 16 billion by 2030). A fleet with gas-fired power stations will also be developed (investments estimated at EUR 2.9 billion by 2030). To this end, the federal government is setting up a *capacity remuneration mechanism* (CRM) a compensation mechanism for capacity.

This trend will reinforce the decentralisation of the means (machines) to generate electricity. The importance of the “prosumers” - a consumer who is also a producer of energy - is also growing. These are positive developments, but appropriate and renewed legislation is needed to advance these developments.

Three things will have to be balanced in order to find solutions for electricity: sufficient supply of electricity, competitive prices for consumers and, at the same time, achieving our environmental goals.

C) Strengthening the networks

In addition to the changes in the electricity mix, our electricity networks must also change. Distribution networks will need to be more intelligent: real-time measurements, dynamic management of the network to adapt to generation itself and the emergence of energy communities, which are also increasingly taking place at the local level. In some cases, reinforcing the networks will be very important. Consumers will also have smart and communicating meters that allow them to adapt their consumption behaviour to the energy price at a given time. Total distribution investments are estimated at EUR 1 billion per year over the next ten years.

By investing in our gas and electricity transmission networks, Belgium will remain an energy hub at the heart of Europe. This will promote trade, but also provide greater security of supply. Investments in electricity amount to EUR 2.3 billion for the period 2018-2022 and EUR 670 million for the period 2017-2026 in gas.

D) Development of storage

The generation of renewable energy is difficult to predict. The storage of renewable energy sources will thus be developed by private individuals, networks and companies. Investment for this by 2030 is estimated at EUR 3.9 billion.

In addition to batteries for individuals or companies, often in combination with solar panels, research is being done into larger storage facilities via pump turbines, such as the expansion in Coe (EUR 600 million) or an atoll at sea.

It would be useful to work together in Belgium with the aim of bringing a battery producer to our country because these technologies will play an important role in our energy future. The establishment of a development centre for li-ion battery components would require investments of around EUR 150 million.

E) Roll-out of alternative fuels

Both cars and HGVs have been travelling an ever increasing number of kilometres recently. This has led to an increase in the emission of harmful substances (CO₂, particulate matter, NO_x, etc.). Various measures have been taken to reduce emissions: adjustments to taxation, the introduction of EURO standards or the use of alternative fuels. The use of less polluting vehicles (gas, green gas, electricity, hydrogen, etc.) is, in fact, part of the solution to reduce our emissions, as well as greater energy efficiency of traditional vehicles with diesel or petrol combustion engines or actions to meet the demand for mobility.

To ensure that more use is made of vehicles powered by electricity and CNG (compressed natural gas) - and eventually hydrogen - there must be sufficient recharging points. The total investments for this amount to approximately EUR 300 million by 2030. This amount must be adequate to provide sufficient recharging points for all users.

By ensuring that there are sufficient recharging points, more people will be inclined to buy “alternative” vehicles. This does not mean that further incentives are not necessary, for example, for the purchase or use of a natural gas-powered car or for the development of a CNG-powered public car fleet.

F) Nuclear decommissioning and waste management research

Belgium has a certain knowledge in the field of nuclear energy (generation, storage, processing, research, radioisotopes, etc.) that is internationally accepted. Besides the seven nuclear power plants, Belgium has research reactors and is the market leader in the production of medical radioisotopes (65% of the market with high demand). Belgium has also developed knowledge on the decommissioning of nuclear reactors thanks to the decommissioning of the BR3 research reactor.

In the coming decades, many nuclear reactors will be closed and will have to be decommissioned. Such decommissioning requires special skills due to the radiological risks. A cluster of companies is being set up in Belgium to strengthen their positions on the decommissioning market: *Advanced Belgian Cluster on Decommissioning* (ABCD). The group wants to improve cooperation between these companies and thus create greater added value for decommissioning projects. Most of these companies carry out research projects that require funding.

Nuclear waste is stored over tens of thousands to hundreds of thousands of years, which raises many questions. The transmutation of spent fuel should shorten this period to 300 years.

The following investments are therefore necessary:

- Supporting projects of the ABCD cluster (EUR ~ 50 million) on the decommissioning of nuclear power plants. A project selection committee should be established to assess each project on the basis of the importance of the plant decommissioning project and the potential to position the company on the market.
- Support research and development into new technologies that could, for example, offer better solutions for the treatment of nuclear waste. These investments must go hand in hand with Belgium’s desire to become a world-class nuclear research centre, including the production of radioisotopes. This will require EUR 1.6 billion over the next ten years, of which the government would account for 40%.

Roles of the key players

Many different players must play a role in making the energy transition in Belgium possible. Private companies are important investors, but the government will have to create a good vision and regulations in which these investments can develop.

For the projects mentioned, the Committee specifically sees the following roles for key actors:

- **Governments:** The competent governments and administration in Belgium must ensure as much stability as possible to further encourage investments in the energy sector. It is important that the government makes efforts to invest in the energy efficiency of their own buildings and additional investments in nuclear decommissioning. They will also specifically adapt the legislation to support changes in the energy market, with special attention to innovation and energy taxation in the energy transition.
- **Users:** Energy consumers will need to become more aware of their consumption and prefer more energy-efficient solutions. Fleet managers for bus and transport companies should consider more environmentally friendly options, such as CNG options.
- **Nuclear sector:** Players in the nuclear sector should work together better to put Belgium at the top in this sector. They must pool their knowledge and promote it as an export product.
- **Private investors (including ESCOs):** The retrofits of government buildings can often be financed through PPP structures. On the one hand, the government has a role in creating these structures, but on the other hand, this requires the growth and deployment of ESCOs in the Belgian energy landscape. The possibilities for alternative financing are discussed in the section on Public-Private Partnerships.

Mobility

The vision of the Mobility Committee

“Belgium faces a major challenge to mobility: the accessibility of workplaces and logistics centres is worsening by the day. Traffic jams are getting heavier and longer and public transport is saturated. This hampers economic activity and the well-being of the population. In addition, increasing traffic leads to a greater negative impact on the environment.

The aim of the Pact is to make a number of targeted investments to get Belgian mobility back on track. To this end, the Strategic Committee wants to focus on Transport as a Service (TaaS). To do this, we first need a better picture of mobility needs and behaviours. It is then proposed to invest in integrated transport networks and services. Smart mobility solutions must also be made possible and, finally, transport demand must also be managed in various ways. Finally, it is important to develop a supportive framework with favourable governance conditions.”

Pieter Timmermans



Impact

- Smarter mobility and a reduction in the demand for mobility result in **reduced economic loss due to queuing in traffic jams**
- Large infrastructure projects ensure **employment**, which has an important **multiplier effect** on the economy
- Boost of **digital and other high-tech players in the smart mobility component**

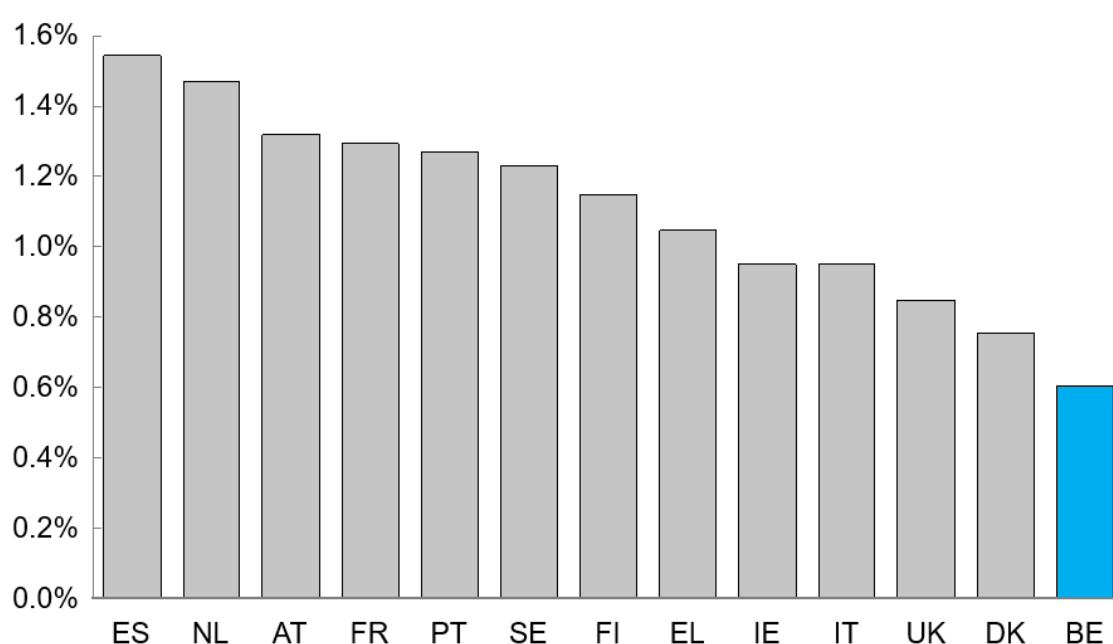
Context and trends

Belgium has one of the densest transport networks in Europe, with its many kilometres of motorways, waterways and railways and various airports and seaports. Investments in transport infrastructure, however, are particularly low compared to other EU countries (0.6% of Belgian GDP, compared to 1% on average), see Figure 18. The underinvestment makes our transport infrastructure less attractive. This scores lower year after year in the World Economic Forum's Global Competitiveness Report. Investments in public transport show a similar trend.

FIGURE 18

Public investment in transport (average 2000-2013)

% of GDP



SOURCE: Eurostat.

The limited investments in transport infrastructure and services are in stark contrast to the increasing demand for transport. Passenger transport is expected to grow by 11% between 2012 and 2030. For goods transport, this is as much as 45%¹². These developments are largely the result of demographic and economic growth. Due to Belgium's position as a logistics hub in Europe, the growth of international trade (on average 3.5% per year) also has an impact on the demand for sea, air and rail transport.

These increasing transport flows must be absorbed by the mobility infrastructure to avoid congestion. After all, most passenger and freight transport currently takes place by road. There is already a major mismatch between the demand for mobility and the supply there. This leads to 100-250 km of traffic jams every rush hour, day in, day out. For example, Brussels and Antwerp are regarded as two of the most congestion-prone cities in Europe. The expected increase in road traffic by 22% until 2030, combined with a low (and decreasing) level of

¹² Federal Planning Bureau.

investment, will only increase traffic jams. If no structural solution is found for the traffic congestion problem, the average speed on the road could drop by about a quarter in peak periods and by 10% in off-peak periods by 2030.

Belgium therefore risks losing its appeal as a logistics hub. This is due to the saturation of networks combined with rigid legislation and competition from other countries. In addition to the reduced accessibility of logistics centres, the accessibility of city centres and employment is also under threat. Furthermore, the increase in traffic and the use of polluting fuels (including a lot of diesel) has a negative impact on the environment, including low air quality and high CO₂ emissions.

Investment priorities

Given these major mobility challenges, it will be especially important for Belgium to take the lead in the shaping and adoption of a new mobility.

It is crucial to draw up a long-term visionary strategy from which investments must follow. Mobility as a Service for passengers and Logistics as a Service for goods will play an important role in this. Because these two concepts are closely linked, we use the shared term “Transport as a Service” (TaaS) in this document. Transport as a Service is aimed at offering users flexible, efficient and user-friendly mobility and transport services. As a result, users often no longer need to have their own means of transportation (e.g. their own car). Non-integrated services will also be used less. This benefits multimodal transport solutions that are used as a service. This will also ensure that a Smart mobility and logistics ecosystem is developed in Belgium.

We propose four specific investment initiatives in this Pact: a) the maintenance and development of integrated transport networks and services; b) the facilitation of smart mobility solutions; c) the management of transport demand; and d) the establishment of a supportive framework. These investments represent EUR ~25 billion spread over 2019-2030, of which ~25% by private investors (see Figure 19). Most investment projects in the mobility domain belong to the public sector. We can also use innovative financing methods to guarantee the continuity of investments in the transport domain. Kilometre charging/tolling, for example, allows users to pay for the use of transport infrastructure and services directly. Public-private partnerships (PPP) can also be used to support transport infrastructure investments. Indeed, the A11 motorway was financed in this way. European funds are often underused by governments due to ignorance and lack of guidance.

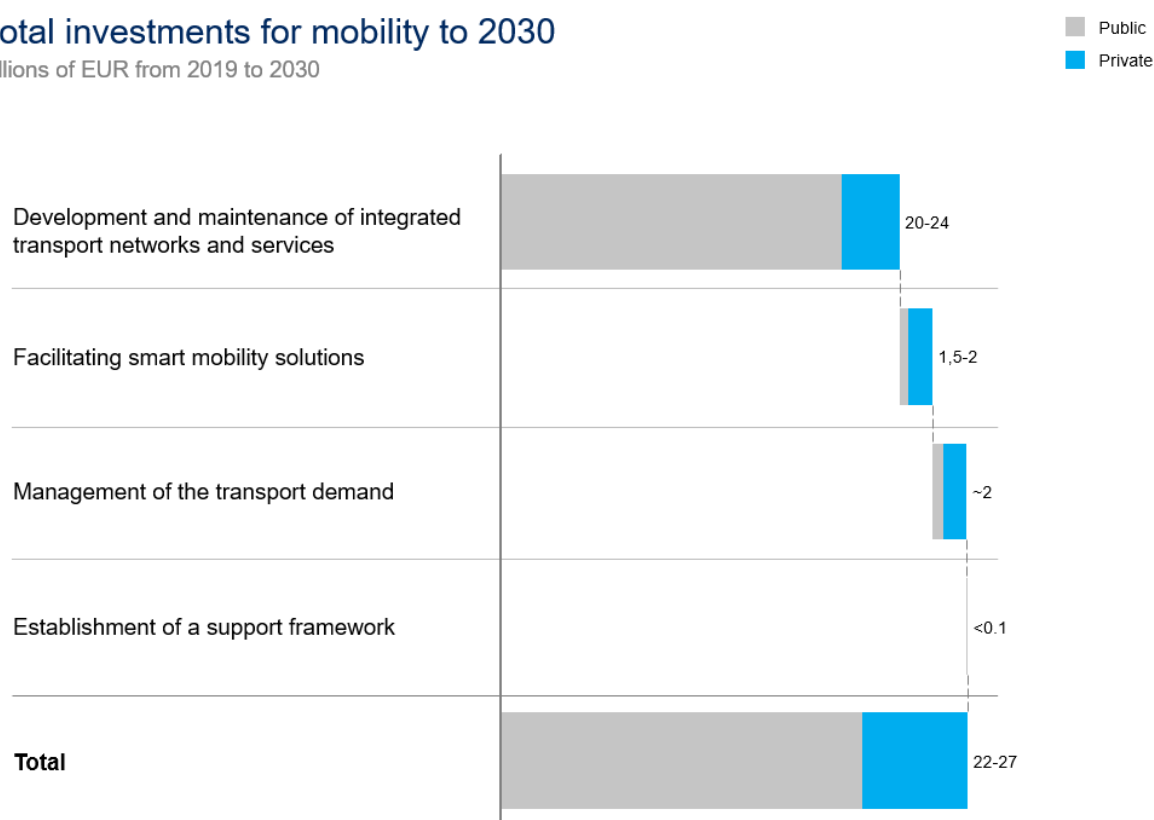
The proposed initiatives will contribute to the better accessibility of economic zones. They will make Belgium more attractive to companies active in mobility or logistics. The investments will also help achieve the environmental and air quality objectives. They will reduce the negative impact on the health and quality of life of citizens. The economic impact of this can be enormous: Belgians lose almost one working week every year in their cars. If the traffic jams were to disappear, productivity would thus increase enormously. According to the OECD, Belgium’s GDP could be as much as 2% higher. This is an increase of EUR 8.6 billion¹³.

¹³ ING, *The motor show and our mobility*, 2017.

FIGURE 19

Total investments for mobility to 2030

Billions of EUR from 2019 to 2030



SOURCE: National Pact for Strategic Investments.

A) Development and maintenance of integrated transport networks and services

Our transport networks form the physical basis of our travel. The existing infrastructure is suffering from a considerable backlog of maintenance and continues to deteriorate. The increase in traffic will only saturate the current networks even further. This is already apparent from the congestion of the roads. It is therefore crucial to increase investment in transport networks and services. These investments will also guarantee the performance of the railways. This will also guarantee the accessibility of the activity zones to and from these railways.

Firstly, sufficient resources must be provided for the maintenance and upgrading of existing infrastructure, with particular attention paid to bridges and tunnels. The quality of our existing infrastructure is substandard. This is because we systematically invest too little in good, high-quality maintenance. As a result, the value of our assets is shrinking. The Strategic Committee proposes paying more attention to maintenance by incorporating it into tendering procedures in a smart manner. In this way, the government guarantees an infrastructure that is better maintained. If we compare our investments with the expenditure in the United Kingdom, the budget in Belgium should increase by 130%

Two priorities have been set for the development of the transport networks and services:

- **Improve access to cities:** Firstly, the Pact proposes to invest sufficiently in the development of suburban rail networks such as the RER. These suburban rail networks are mainly concentrated on the periphery of cities. These rail networks must also be integrated with other transport services (public and private). Other forms of transport must also be integrated to form multimodal platforms with a high level of service (e.g.

through P+R car parks). Finally, it is proposed that 600 km of cycling highways be built, spread across the three regions between the city centres and their peripheries.

- *Improve access to logistics areas:* Bringing the intermodal logistics platforms up to standard is certainly a priority. A first concrete proposal is to optimise access to the ports by rail. This can be done by automating the industrial bundles in the ports. Furthermore, the maintenance of industrial tracks in the hinterland must be monitored. The permitted length of the trains must be adjusted to 750 metres (for which sidings must be adjusted). To increase the capacity of the waterways, investments must also be made in modernising locks, raising bridges and deepening waterways. To supplement railways and waterways, investments can also be made in the development of pipelines for the transport of liquids and gases.

Total investments for these proposals are estimated at around EUR 20-24 billion. The cost of maintenance is estimated at EUR ~9 billion¹⁴ and for the expansion of the network at EUR ~13 billion. Of this, approximately EUR 7 billion is attributable to investments in rail infrastructure for freight and passengers, approximately EUR 2 billion to waterways, and EUR 3 billion to other transport projects. Some 14% will come from private sources, including through PPP structures and/or tolling.

An emphasis on infrastructure and services that increase accessibility will significantly improve the accessibility of the activity zones. These measures have a positive impact on the economy because much less time will be lost in traffic. Moreover, large infrastructure projects also create employment in the construction sector. This ensures local employment in a sustainable manner. Furthermore, an investment of EUR 1 in cycle paths would have an impact of EUR 2-14 on health benefits¹⁵.

B) Facilitating smart mobility solutions

Smart mobility is the collective name for solutions to make the best use of infrastructure, vehicles and equipment for smooth passenger and freight mobility. These solutions use information and communication technology. They use the data collected by infrastructure, individuals and vehicles (big data) to provide customised mobility solutions. To facilitate smart mobility solutions, the government must focus on:

- *The establishment of a central “Data lake”:* One platform - at the national level - where the data of the various transport operators and infrastructure managers meet. The data collected must be dynamic. They are collected in real time. These data relate to both public and private transport. They must also meet strict quality requirements.
- *The creation of a MaaS (Mobility as a Service) platform:* This refers to the bundling of different mobility services on a single mobility app. All modes of transport and all steps of a route are brought together for simple “door-to-door” mobility. This platform is based on the open data collected in the “data lake” described above. The backend B2B platform could be opened up to B2C app developers who provide the front-end interface with the end user.
- *Rolling out intelligent transport systems (ITS):* These technologies make it possible to reduce congestion significantly. This can be done by controlling traffic flows using real-time traffic data. Examples include motorway lanes that are open to traffic during rush hours, average speed checks to stabilise speed and reduce congestion, smart traffic lights, etc. These different solutions require investments in, among other things, traffic detection equipment, telecommunications infrastructure, physical adaptations and software. Most of these technologies are already commercially available and can be

¹⁴ This value is a benchmark on investments in maintenance in the United Kingdom. The difference with the current maintenance budgets is considered an extra investment here.

¹⁵ Vito, *Bicycle highways here's to your health*, 2016.

implemented without risk. The government can also set up pilot projects for autonomous vehicles. This requires the introduction of a connected infrastructure that communicates with the vehicles in real time.

- *Enable new mobility services:* information and communication technologies will provide new concepts of “shared” mobility. Examples include carpooling, car sharing, self-service bicycle systems, as well as truck-pooling at logistics level. These new services encourage a more rational use of vehicles and constitute promising business models. The government can support this trend by encouraging innovation and removing legal obstacles.

Total investments for these proposals are estimated at around EUR 1.5-2 billion. Investments in the roll-out of intelligent transport systems represent the largest share, in particular, EUR 1.5-1.9 billion. Developing the digital infrastructure for the data lake and the MaaS platform will cost approximately EUR 0.1 billion. This can also be achieved by PPP arrangements (in which the government will continue to play a steering role). In the current investment demand, approximately 75% is financed by the private sector, which will promote a market-oriented approach.

The solutions described above will significantly increase the efficiency of the transport systems. This will save time. With a good design, users of the MaaS platform can also be moved to more sustainable and efficient choices for their journeys. Moreover, investing in smart and connected mobility creates many opportunities for companies active in the technology industry and for providers of new logistics and mobility solutions. They can also export their know-how abroad.

C) Management of the transport demand

The mobility policy always focused on the transport supply and capacity expansions where they were imposed. The growing impact of transport on the environment and on our health, and the lack of space available for new infrastructure, force us to review this approach. The transport demand must be tempered, modulated in time and space, and oriented towards more sustainable transport modes.

- *Promoting spatial planning and redevelopment of industrial sites:* Accessibility is closely linked to good spatial planning. This contrasts with our current large-scale and fragmented use of space. Core areas with a very high interchange value (good multimodal access) and a high level of facilities (proximity of many facilities at the same location) are ideal. To achieve this, we must focus on area-based renewal projects. They must bring different functions together. Working, living and relaxing must be brought as close together as possible. The methods for spatial planning must also be optimised. For example, the housing tax system must be adjusted (e.g., registration duties, property tax, etc.). A concrete example is the positioning of industrial sites on the basis of existing infrastructure. This means that new sites are only created in close proximity to important transport axes.
- *Setting up satellite offices and co-working spaces:* Investing in this (e.g. in stations) makes flexible working hours and teleworking more interesting. This will reduce the need for transport to the workplace.
- *Smart pricing of mobility services:* By applying flexible rates to transport services, it is possible to move part of the demand outside rush hours. This will reduce congestion during rush hour. The flexible rates will also encourage people to opt for a sustainable and efficient solution. An example is a smart kilometre charge for all vehicles on the road, adaptable to the time and place, emissions and vehicle category. Taxation should not burden the possession of the vehicle, but rather its use.
- *Mobility promotion measures:* Communication campaigns can contribute to raising awareness about public transport and various alternative modes of transport. Companies

must also be informed about the possibilities for goods transport and commuting. Ideally, it will lead to the drafting of new strategies for commuting and goods transport within companies.

- *Regulatory measures:* Adapting legislation (e.g. low-emission zones) in cities or municipalities can also result in efficiency gains. This is on condition that a common framework is created that reduces transaction costs. Off-peak loading and unloading times should be encouraged or even made mandatory.

Approximately EUR 2 billion is needed to enable the management of transport demand. Of this, EUR ~1.5 billion would be dedicated to the development and redevelopment of industrial sites in strategic locations (financed entirely by the private sector) and EUR ~0.5 billion for promotional campaigns; the rest of the measures have no or little financial cost.

The proposed measures reduce or stagnate transport demand. Measures to reduce demand have a positive impact on the accessibility of logistics sites, businesses and other areas of activity. In this way, journey times can be shortened and transport costs reduced. A reduction in transport demand also has a positive effect on the quality of life in cities. The measures to stabilise transport demand also have a positive and direct environmental impact. Less demand for mobility also results in fewer emissions.

D) Setting up a support framework

The fragmentation of competencies is a major obstacle to the formulation of a coherent policy. A cross-modal and cross-sectoral approach is necessary to streamline and coordinate different initiatives. To achieve this, the Strategic Committee proposes two initiatives:

- *Establishment of the National Mobility Observatory:* To motivate investment decisions, accurate and up-to-date data and periodic socio-economic studies on mobility are required. These data and studies are currently lacking. A national think-tank may be set up to carry out these studies. This can be done following the model of the High Council for Employment. This think tank would collect and advise the data of a long-term vision on mobility, taking into account the interaction between flows of persons and goods. This National Observatory would focus on keeping track of a number of indicators for the quality of mobility and also identifying bottlenecks in order to respond to these directly.
- *Building a multimodal multiannual investment agenda:* The Strategic Committee proposes that the various governments jointly develop a common vision, as well as ensure the coordination and implementation of the projects in the vision. In this way, the continuity of the funding lines and ex-post evaluations of the projects can also be guaranteed. This translates into an investment agenda with a priority procedure for the coming years.
- A shared agenda can help with this. Coordination is also needed to implement the various projects, guarantee the continuity of the funding period and carry out ex-post evaluations of the projects. Finally, this procedure must ensure governance structures at the appropriate level (metropolitan, regional, national, etc.).

In total, an investment of EUR ~25 million is budgeted for this, which goes entirely to the establishment and the National Observatory. The introduction of a multiannual investment agenda falls under the current mandate of the governments.

The National Observatory will not have a direct impact on the mobility demand or supply. It will indirectly optimise Belgian mobility (i.e., networks, passenger flows, goods flows, etc.) in the future. The investment agenda will have an indirect impact on the economy by ensuring a more efficient and successful implementation of the investment priorities.

Roles of the key players

Various actors will have to mobilise to bring investment projects to a successful conclusion.

- *Governments:* The competent ministers and other governments concerned will have to create a legal framework and procedure that will facilitate investments and activities. This includes: developing a common and long-term vision of mobility; ensuring appropriate governance structures (on a national, interregional, metropolitan scale); providing financial incentives where necessary; efficiently processing permit applications; investing in ex-post evaluations; and ensuring coherence between the different mobility plans of the governments. The governments should also make funds available, for example, for building infrastructure, developing the open data lake and MaaS platform, communication campaigns, and setting up the national think-tank. In addition, the public transport sector has a role to play in the coordination and alignment of the various transport networks and services, to support the intermodal platforms.
- *Companies:* Companies can contribute to a better organisation of mobility by investing in more sustainable and efficient logistics chains (e.g. using railways and waterways, bundling of goods flows, etc.). They can also play a role in managing transport demand through satellite offices and other measures that make commuting more sustainable. Ports must ensure good accessibility and efficient operation of activities. Start-ups and technology companies also play a role in developing innovative mobility solutions.
- *Neighbouring countries:* Cross-border projects with our neighbouring countries should be encouraged more. Cross-border projects can be jointly defended at the European Commission. This can, among other things, make funding available from European funds for Belgian mobility projects.

4.5 Transversal environmental factors

In addition to concrete investment priorities, the Strategic Committee also sees four transversal environmental factors to create a healthier investment climate in Belgium:

- A more efficient and predictable regulatory framework for strategic investment projects;
- Mobilising capital;
- Public-Private Partnerships;
- A budgetary strategy and European rules that promote public investment.

The vision, context, concrete priorities and roles of crucial actors are explained in more detail below.

Better regulations for strategic investment projects

The Committee's vision for better regulation of strategic investment projects

“The regulations must not hinder strategic investment projects. Indeed, regulation should even stimulate strategic investment. This is usually not the case today. Consider, for example, cumbersome authorisation procedures or the lack of legal certainty.

The Strategic Committee wants investors to be supported better as they go through the sometimes very complex administrative processes. In addition, we see opportunities for a review of specific elements in the licensing regulations and make a number of specific suggestions for improvement. Finally, we underline once again the importance of fiscal and administrative legal certainty for investors. We call on local governments to take part in this effort.”

Michel Delbaere

Priorities

- Establishment of a **strategic unit** to assist investors and authorities with expertise and know-how
 - Coordinates consultation between actors and bundles expertise
 - Assists investors and authorities in completing the authorisation process
 - Can function as a supporting secretariat of an evaluation committee
- **Effective and efficient authorisation regulations**
 - Irreversibility
 - Shorter time and certainty for decisions
 - Proportionality and more room to manoeuvre for the administrative judge
- **Alignment of regional and federal authorisation procedures**
 - Coordination of various regulations for large strategic investment projects that exceed regions
 - Stimulation of the necessary cooperation for the realisation of strategic investment projects
- **Ensure greater administrative and fiscal legal certainty** to investors

Context

Even if companies want to make extra investments, in practice strategic investment projects are difficult to get off the ground. There are often several causes. For example, the complexity of administrative regulations or the long delivery times for permits. There is also often a shortage of project management and a lack of transparency in decision-making.

In practice, therefore, applications for authorisation by private investors are often not processed within the required time frame. This must thus be improved urgently.

In order to make this possible in Belgium, the Strategic Committee sets out four priorities. These must help to realise strategic investment projects more quickly.

Priorities

A) Setting up a strategic unit to assist investors and governments with expertise and know-how

To facilitate the elaboration of a strategic investment project for investors, a *strategic cell* must be established. This will bring together expertise and coordinate the consultation between the various parties involved. The unit will assist the investors and governments in going through the authorisation process. It will also help to complete the different authorisation and administrative procedures successfully.

In addition, the unit can also serve as the supporting secretariat of the external evaluation and monitoring committee. This committee will be set up per strategic project and can help to pass on experience from previous projects.

By offering this assistance, we will attract more quality investors. In this way, we will be able to make the investment climate even more favourable.

B) Effective and efficient authorisation regulations

There are a number of areas for improvement in the regulation of authorisation procedures. The Strategic Committee sees three concrete measures. Of these, the extent to which they are legally feasible should certainly be examined:

- *Irreversibility*: It is possible today to challenge interim decisions at a later stage, even if no appeal was initially lodged. This possibility should be excluded or at least limited. In this way, we can avoid projects being blocked almost indefinitely because people keep returning to aspects of a project that have already been approved.
- *Shorter time limits and more certainty for decisions*: The imposition of shorter time limits for challenging administrative decisions. We are considering, for example, 15 days for summary proceedings and 45 days for decisions on the merits.
- *Proportionality and more room to manoeuvre for the administrative judge*: Extending the room to manoeuvre of the administrative judge. For example, the introduction of principles such as *proportionality* and *marginal testing* can provide the administrative judge with more scope. Today, the judge often only has the option of annulling or suspending investment projects on the grounds of established illegality. The judge must also be given more flexibility in the way in which damage suffered can be compensated.

C) Alignment of regional and federal authorisation procedures

The federal state and the federal states can appeal to the instrument of the cooperation agreements. In this way, they can jointly achieve a number of common objectives regarding permit regulations. For example, work can be done on:

- A harmonisation of the various regulations for large strategic investment projects that go beyond the various regions
- Stimulating the cooperation necessary for the realisation of strategic investment projects, including through the exchange of information and the sharing of know-how (with the help of the strategic unit mentioned above).

D) Increased administrative and fiscal legal certainty for investors

The legislative framework must be sufficiently stable. This allows us to offer investors more confidence when starting up an investment project. That is why the Strategic Committee advocates a stable and future-proof administrative and fiscal regulatory framework on which investors can rely. This legal certainty is vital if we are to continue to attract good, high-quality investors and projects.

Roles of the key players

The rules on authorisations are crucial in the realisation of large and ambitious strategic investment projects. Several key players will have to work together to ensure that the right investment climate is created:

- *Governments:* In close consultation with the regions, the federal government must examine how the rules on authorisations can be coordinated. This is particularly important for strategic investments. In doing so, account must be taken of the priorities mentioned earlier: reducing the administrative burden, reducing the time limits for challenges, increasing the room for manoeuvre for the administrative judge, etc. Moreover, the governments must inform the various stakeholders as clearly as possible about the various procedures. The governments must guarantee maximum legal certainty for investors.
- *Strategic unit:* This unit is responsible for pooling know-how and offering expertise before and during the authorisation procedure. Through its advisory role, it will have a major influence on obtaining the necessary authorisations. This greatly increases the chances of an investment project being realised. It can also make its expertise available to the various governments.

Mobilising capital

The Committee's vision for mobilising capital

“If we want to use every opportunity to expand the sources of financing of public investments and build on private expertise, two general conditions must be respected. On the one hand, the political commitment and management of public investment must be strengthened to a large extent. On the other hand, the various funding channels must be optimally mobilised.

The Strategic Committee therefore calls on the various stakeholders to join forces and start a dialogue on investment issues. This must be done both at the political level and by experts. A better understanding of the State's heritage, a broader mobilisation of capital via infrastructure funds and the use of European funding will reinforce the impact of the National Pact.”

Marc Raisière

Priorities

- Establishment of a **Strategic Investment Committee at the policy level** and of a **community of** (public and private) **experts** on public investment:
 - to confirm commitment to public investment and exploit synergies between the different policy levels, while respecting everyone's competencies;
 - to mutually strengthen technical expertise through exchanges of experience and good practices.
- **Drawing up of an inventory of State assets and their components**, both financially and in terms of infrastructure.
- Rational use of the investment funds **to mobilise capital on a large scale**.
- **Strengthening of the synergies with European institutions** in the area of governance and financing of infrastructure investments.

Context

A robust and sustainable ambition for strategic investments must be supported by strong political commitment, strong governance and increased planning and implementation capacity.

In any case, infrastructure investments are complex projects. This applies both technically and in terms of financial structuring and operational management. In the case of large investments, there is a planning phase, an implementation phase and a use phase. They can be much more efficient if they are supported by strong management. Many other countries have developed mechanisms and procedures to improve the management of public investment over the last 15 years.

Unfortunately, these practices are not sufficiently developed in Belgium. Where these procedures are already in place, they are fragmented by specific contracting governments. In particular, there is a lack of a comprehensive and coordinated land register for public infrastructure. However, such an inventory is necessary to identify weaknesses in existing assets. Only in this way can we draw up a list of priorities for infrastructure projects with full knowledge of the facts.

The investments in infrastructure and research proposed in this National Pact require additional funding of just over EUR 5 billion per year for the period 2019-2030. In addition to the traditional budgetary resources, other sources of funding must be sought. In general, funding is widely available. However, the conditions for a more economically and socially efficient allocation of capital to public investment projects could be improved. This mainly involves mobilising resources that are available from governments, private investors or the European institutions.

The government is both an investor and a potential financier. In addition to a real estate and infrastructure registry, a financial balance sheet of the various government entities is needed to manage the financial assets of the state better. Only in this way can we check whether financial resources and infrastructure are being used in the best way. The land register and the financial balance sheet will also help to check whether the financial resources meet the strategic objectives of the state. Better management of government assets can free up financial resources. These resources should be used as a priority to make the investments that increase the growth potential of the economy.

As with real estate and infrastructure assets, there is currently no complete and detailed overview of the State's financial assets available in Belgium. In the 1980s and 1990s, a Commission for the Inventory of the State's Assets had begun work on this. Unfortunately, this work did not lead to a complete inventory. The National Bank of Belgium does currently publish consolidated statistics on the financial assets of the government. Unfortunately, this information is not sufficiently detailed to allow a strategic analysis of public shareholdings.

Some parastatals, sector associations and non-profit organisations or individuals, as well as financial institutions (banks, insurance companies, pension funds and other investment funds), have large financial reserves. These are often invested in instruments that currently offer a low return. These players may have an interest in using these funds for public investment projects. Concretely, this financing must be structured in the form of a PPP (see next paragraph). However, direct participation in the financing of a PPP is not an option for all these actors because of the minimum capital base and the considerable technical, legal and financial expertise that this requires. On the other hand, infrastructure investment funds are a means of channelling part of these actors' savings to PPPs. These funds relieve individual investors of the need to assess the risks associated with each specific project in detail and allow for risk diversification across the entire project portfolio.

However, the organisation and activities of the infrastructure funds must meet strict criteria:

- They must be managed competently and transparently, and their investment profile must correspond to the investment horizons and risks that the participants can bear. In particular, the collection of private savings must be approved by the FSMA.
- If the government is involved in the structuring or management of the fund or covers the risks of the fund, the fund is statistically (Eurostat) regarded as a part of the public sector. This increases the State accounts and balance sheets.

A number of programmes and instruments have been developed at European level to support the Member States in financing infrastructure projects. They have long been part of the structural funds, the trans-European network policy (transport and energy), support for innovation and energy transition, or urban policy. The Investment Plan for Europe (Juncker Plan) has been operational since mid-2015. This Juncker Plan aims to provide support for long-term investments that increase the growth potential of the European economy. The EIB is the EU's main branch for financing these various programmes.

In 2017, EIB and EIF invested a total of EUR 1.6 billion in Belgium in the areas of the environment, infrastructure, innovation and SMEs. In this respect, the EIB acts as a catalyst by adding its resources to those of governments and private financiers. It also has the necessary expertise in project evaluation. This gives the selected projects a quality label for other investors. However, there is a whole series of programmes, procedures available and a wide range of conditions for eligibility for European funding. This complexity is an obstacle to Belgian governments wishing to invest and seek European funding.

Priorities

In addition to the priorities related to the PPP, the Strategic Committee sees four priorities to facilitate the mobilisation of capital for public investment.

A) Ensuring greater coordination: for more long-term vision and better management of public investment

A sound governance framework is a necessary but insufficient condition for the implementation of a strategic investment plan. Many countries that serve as an example show that this type of plan must be supported from an early stage. It is also important that the various parties involved are on the same wavelength in society. The goal is to develop a long-term strategic vision. Consultation and coordination between the different parts of the state must always be ensured. This must be accompanied by appropriate expertise in public administration and strict procedures for public procurement.

Belgium has a specific reality. To respond to this, the Strategic Committee believes that coordination should be introduced at two levels: politics and expertise. This should make it possible to exploit synergies and strengthen the effectiveness of investment projects.

At the political level, the Prime Minister and the Minister-Presidents of the Communities and the Regions would set up an Interministerial Committee on Strategic Investments (ICSI). Its function would be:

- To be a place for mutual information on the investment programmes of the different entities.
- Leverage synergies between these investment programmes and coordinate joint initiatives.
- Give a lasting commitment to sustainable and efficient government investments.
- Establish common positions in the dialogue with European authorities.
- Involve governments in the exchange of expertise.

- Commit to implementing technical recommendations to develop a competitive market for alternative financing (cf. PPP).

At the level of the experts, a *community* from the administrations and the private partners (Infrastructure Investment Community - IIC) must be set up by the Prime Minister and the Minister-Presidents of the Communities and Regions. Among other things, this would bring the existing national and regional centres of expertise together into a network. This would create a partnership that would allow the expertise in the area of project governance and financing to be combined and strengthened. Specific units would address the following issues:

- Procedures for the planning, preparation and implementation of infrastructure projects.
- Particular attention is paid to issues relating to authorisations and the regulatory framework (see section on this subject).
- Development and joint use of instruments for the assessment of investments: *Value-for-Money*, *PPP Comparator*, the standard method for calculating energy savings, etc.
- Convergence of the practices of Public-Private Partnerships and PPPs and support for the development of a competitive PPP/EPC market (see section on PPP).
- Assistance in preparing and monitoring co-financing by the EIB and European programmes.
- Ex-post monitoring of the effectiveness of infrastructure investments: evaluation methods, results, best practices.

In order to function well, this *community* must be supported by a permanent support unit. This can be housed in the Chancery of the Prime Minister.

B) Draw up a complete inventory of government assets

Each component of the public sector must have a complete, detailed and up-to-date view of its tangible and financial assets. This inventory covers the federal level as well as the communities, regions and local governments. This also applies to public corporations and other dependant legal entities. Given the complementarity between the various entities, consolidation is also necessary at the level of the main components of the state and at the national level.

Drawing up such an inventory is a complex task. Previous attempts have shown this. However, it is an indispensable tool. This applies both to the planning of public investment programmes and to the efficient allocation of public funds to strategic infrastructure that is beneficial for the economic potential.

C) Promoting the rational use of infrastructure investment funds

The infrastructure investment funds are useful tools for channelling capital to the PPP indirectly. For capital providers, such funds can reduce certain entry costs, such as the costs of evaluating a project. They can also reduce the concentration of risks related to a specific project. That is why there will be interest from players in the financial sector (banks, insurance companies, pension funds) as well as public investment entities or individuals and non-profit organisations.

The investment funds must be developed in a reasoned way. The implications of the regulations must be taken into account, for example when attracting private savings. Also important is the statistical “on-balance” vs “off-balance” treatment of the public sector. In particular, an infrastructure investment fund will be considered either part of the private or

public sector, depending on who exercises economic control over it. The criteria for assessing this concern:

- The shareholder structure;
- The financing conditions, in particular, whether they are in conformity with the market and whether or not government guarantees apply to the fund;
- The decision-making autonomy in the investment policy;
- Independence in operational management.

D) Mobilising European funding effectively

European funding is an important lever to support public investment. The EIB's operations in Belgium have contributed to the financing of a wide range of projects. The expertise and financial resources of the EIB are an important complement to those of government authorities and private financiers. However, this channel is not fully used. One of the reasons for this is that there are very many different financing options and the procedures to be followed are not sufficiently known.

The preparation and submission of files to the European institutions and the EIB, as well as monitoring, should be facilitated. That is why a special technical support and coordination unit should be set up within the IIC, following the example of the PPP or authorisation units. By pooling expertise at this level, it will be possible to optimise the use of these European funds.

Roles of the key players

- *Governments:* Governments have an important role to play in ensuring the mobilisation of capital for infrastructure projects. In general, they must make a sustained effort to realise public investments. When planning and executing public investments, they also have to follow strict governance, so that financiers receive transparency and certainty. They are specifically responsible for drawing up and updating the inventory of their assets - both tangible assets and financial assets and liabilities. They should also agree to set up a support and coordination unit to facilitate effective relations between contractors and the EIB. More generally, technical support for investment needs to be strengthened.
- *Private investors:* We call on private investors to participate in financing infrastructure projects - especially when this is in line with their investment strategy. They can do this directly or through infrastructure investment funds.
- *Europe:* The European institutions and agencies are also important partners in financing public investment. They play a catalysing role in this respect, in synergy with the Belgian government and financial institutions. We must use their international experience. They can help improve the management of investment projects.

Public-Private Partnerships

The vision of the PPP Structures Committee

“Public-private partnerships can structurally accelerate the growth of the Belgian economy. They are therefore an important element in making the Investment Pact succeed. PPP offers the government the ability to make investments without suddenly increasing the public debt.

There is already a great deal of interest from companies and financial players today. However, a real market for PPP can only develop if two conditions are met. There must be sufficient political support in the longer term. Moreover, we need to increase the expertise of project leaders further.”

Marc Raisière

Priorities

- **Strengthen the political commitment to PPS formulas in the long term** by offering a clear and stable development perspective to all players.
 - **Register** the PPP projects structurally in the context of a **global governance of government investments**.
 - **Raise awareness and inform** the various decision-making bodies of the government.
 - Create a **‘digital platform of PPP projects’** to increase the visibility of the market and promote competition.
 - **Accelerate and simplify** the approval procedures for infrastructure projects.
- **Reinforce the expertise and the use of good practices** of the project leaders during the preparation phase and the concrete implementation of the project.
 - **Distribute the rules of good practice**, organise training courses and make documentation available to the project managers.
 - Develop template specifications and make standardised contracts available to the public authorities.
 - Develop **support tools** of the ‘Public Private comparator’ type for decision-making and prioritisation of investment projects.

Context

Public-private partnerships are common in many OECD countries - particularly in our neighbouring countries such as the Netherlands, the United Kingdom and France. PPPs can play an important role in accelerating Belgian economic growth and thus provide an additional lever to support the investment pact effectively.

Public-private partnerships are, however, particularly complex and specific - both contractually and in terms of management. They must therefore be used wisely. A PPP structure offers many advantages compared to the traditional execution of an investment. For example, the “life cycle” approach, more efficient execution or risk transfer to the private partner. At the same time, there are also a number of important points for attention at the execution level.

The term “public-private partnership” is used in a general sense here. The working group dealt with collaborations of the DBF (M) type with regard to the design, construction, financing and possibly the maintenance of infrastructure (motorways, tunnels, metro and public buildings). It also looked at third-party investor formulas (ESCO - Energy Service Companies) and energy performance contracts (EPC) with regard to investments in energy efficiency.

PPP is treated poorly in our country. The main obstacles are:

- A lack of support from political decision-makers. This may be due to ignorance or ideological motives. This means that a real market for PPP - with clear rules for investors - hardly gets off the ground.
- Insufficient technical expertise among project managers. This often leads to projects that are unbalanced in terms of risk spreading or that are not sufficiently negotiable (*bankable*). It also leads to lead times for projects that are much longer than abroad.
- PPPs are more complex than traditional investment methods. The involvement of multiple stakeholders causes additional complexity. There is also the lack of specific governance regarding public investment and the cumbersome administrative and legal procedures for the underlying plans and authorisations.

However, public-private partnerships offer many opportunities, in particular through:

- The marked interest and technical expertise of many private companies in, for example, the construction sector or the energy sector;
- The very important financial resources available on the market. For financial partners such as banks, insurers or pension funds, the PPP is a new asset class. It also has an attractive risk-based return profile, which often complements current portfolios;
- A possibility of the deconsolidation of the budget, depending on the precise structure of the partnership. In this context, Eurostat recently published two practical manuals (PPP and EPC) that clarify the interpretation rules of the ESA 2010 system. These should address many of the uncertainties surrounding PPPs. This is an additional argument in favour of using PPPs. However, the Strategic Committee believes their use should be determined primarily by the intrinsic qualities of the management model.

Priorities

In Belgium, we urgently need a more favourable climate for public-private partnerships. It is thus important that we can count on long-term political support and increase the expertise of project leaders.

A) Long-term political support

This political support is expressed in the following ways:

- The inclusion of PPP projects in the framework of the general governance of public investment (see proposal below), such as:
 - Systematically check whether a PPP can be used for each investment project above a certain amount. In the Netherlands, for example, this is from EUR 60 million. This choice must be made on the basis of an objective analysis tool “Public-Private Comparator (or “value for money”) - see below.
 - Accelerate the development of energy performance contracts (EPC). In this way, we can accelerate making public buildings more energy-efficient.
- Develop a “*digital platform for PPP projects*”. This should include a timetable with the contract award, execution and planning. This will give all parties involved (construction companies, subcontractors, consultants, financial players, etc.) access to the project pipeline. This will increase competition from interested players.
- Acceleration and simplification of approval procedures for infrastructure projects. Examples include authorisations, urban development or environmental and mobility rules. In this way, we can shorten the lead time of a PPP significantly - in line with the lead time abroad.

B) Increase the expertise of project managers

This objective would be entrusted to a specific “PPP” cell of the “Infrastructure Investment Community” (see proposal above), which would have priority tasks:

- Disseminate good practices and make project managers available to the guides (“road book”). Such a road book can serve as a guide for awarding contracts and preparing market-based contracts. Among other things, a road book must include quality references relating to performance criteria and the technical, economic, financial, organisational and legal framework of the contract.
- Develop standard specifications for public contracts and standard contracts. Both standard specifications and standard contracts must be made available to government administrations.
- Develop instruments to support decisions and ranking of investment projects.
 - Development of an analysis tool, “*Public Private comparator*” or “*value for money*”. We can analyse whether a cooperation formula allows better use of resources than traditional public procurement with this instrument.
 - Determine a standard methodology for calculating energy savings. This makes it possible for both the project manager and the third financier to guarantee the financial soundness of the project and the repayment capacity.
- Support the interpretation of the budget deconsolidation rules (compliance with Eurostat’s practical manuals) and seek advice from bodies recognised by their expertise (INR, EPEC).
- Organise training for political decision-makers and project managers alike on the different key issues of PPP. Such training should at least include optimal risk sharing, statistical treatment according to ESA standards, public procurement, project management, contract characteristics and financial arrangements.
- Formulating technical recommendations to political governments for improving and optimising the functioning of the collaborations. This could include a harmonised regulatory framework, project development aid mechanism and grant procedures based on existing European mechanisms.

Roles of the key players

The essence of a long-term partnership is a balanced win-win relationship for private and public players. That is why both have a crucial role to play and a shared responsibility for the success of PPP projects.

- *Governments:* However, it is up to policymakers to ensure clear and stable rules for all players. This is the only way to create a dynamic and competitive PPP market.
- *Public and private sectors:* The establishment of a platform for structural consultation between public governments and private players is necessary. This will align the interests of the public entities and private financiers as far as possible.
- *Centres of expertise:* The creation of a network of existing centres of expertise at both national and international level (EPEC, OECD, etc.) should encourage the various partners to propose well-structured PPP projects (marketable, balanced in terms of risk spreading, in accordance with the criteria for deconsolidation of the budget, etc.).

A budgetary strategy and European rules that promote public investment

The Committee's vision for a budgetary strategy and European rules that promote public investment

“Today, European regulations are holding Belgian government investments back. After all, Belgium must reduce the public debt, which is too high, and limit the deficit. This makes it difficult to simply spend a lot of additional money on investments. The Strategic Committee thus proposes the following: (a) where possible, consume less and invest more as a government and (b) examine how the European budgetary framework can possibly be adapted and flexibly applied to Belgium.

After all, it is not the intention to invest recklessly without looking at the consequences for public debt in the longer term. A sustainable balance must always be sought between freeing up financial resources for investments on the one hand and guaranteeing a healthy budget on the other.”

Marc Raisière

Priorities

- **Restructuring of budgetary expenditure**
 - Shift focus of current expenditure to **sustainable investments**.
 - Investments must **be supported in the long term**.
 - **Freed resources** (see Energy, Healthcare and Digital working groups) must focus on new **efficient** ways of investing.
- **Adaptation of the European budgetary framework and its application in Belgium**
 - Provide budgetary rules in Europe that are more in line with the specific contribution that public investment makes to economic potential, with the budget balance calculated on the basis of **depreciation instead of gross investment expenditure**.
 - Pending the introduction of such a framework, make the **conditions** used by the European Commission to qualify for the investment clause more **flexible** by **removing the condition of an unfavourable economic situation**.
 - **Encouraging better cooperation between the various government agencies** in Belgium in studying the options for temporary flexibility for investments.

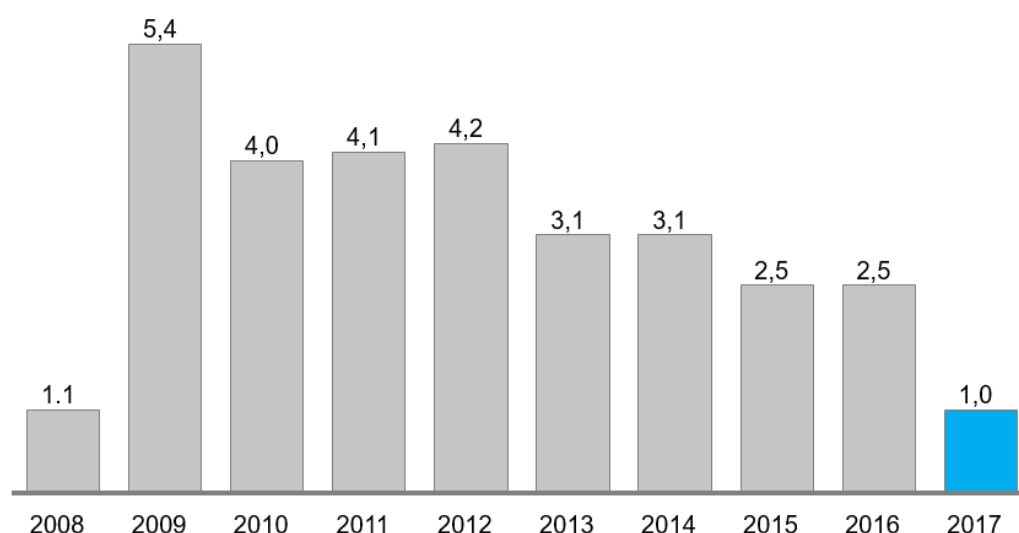
Context

The Belgian government has a distinctive spending pattern. It has very high current expenditure (49.9% of GDP in 2017, excluding interest charges) while investments are substandard (2.2% of GDP in 2017). The result is a government expenditure above the EU average with an investment rate below the average.

FIGURE 20

The budget deficit in 2017 was 1 %, reaching the lowest level since 2008

% of GDP



SOURCE: INR.

The fact that the government consumes too much and invests too little has nothing to do with European budgetary rules. These rules only apply to the total government debt and overall financing balance. Nevertheless, they have an impact on investment possibilities. Within the budgetary straitjacket, it is difficult to suddenly carry out large extra government expenditure - whether it concerns current expenditure or investments.

Belgium is currently subject to the preventive measure of the European budgetary framework. The budget deficit has been reduced to 1% of GDP in 2017. This is well below the European limit of 3% (see figure 20). However, public debt is still far too high according to the European limits (103.4% of GDP at the end of 2017). The high debt, combined with the economic consequences of an ageing population, requires additional budgetary efforts. The aim is to achieve a balanced budget in the coming years. A “Medium-Term Objective” has therefore been imposed to avoid unsustainable budgetary situations in the long term.

If we want to realise the projects in the Investment Pact, the government must be able to release resources. We need to strike a delicate balance for this. On the one hand, the government must make budgetary efforts to balance the budget. On the other hand, strategic investments must increase the growth potential of the economy. If it appears that the European budgetary rules make it impossible to reconcile these two objectives, these rules may have to be adapted.

Furthermore, the European budgetary rules only apply to the Belgian State as a whole, and not to individual governments. At present, however, all entities are required to ensure a budgetary balance in the medium term. Thorough federal consultation is therefore more than urgent. This would provide greater flexibility for temporarily easing restrictions for a specific entity with a peak in its investment expenditure while complying with European budgetary limits.

Priorities

The Belgian government urgently needs to invest more. That is why it should gradually adjust its spending pattern. In addition, the Belgian government should take the initiative to better align the objectives of sustainability and economic growth in the European budgetary framework. When applying this framework in Belgium, more account could also be taken of the specific nature of investment expenditure.

A) Restructuring of budgetary expenditure

Efficient investments generate economic and social returns in both the short and the long term. Restructuring public expenditure by shifting the focus from current expenditure to sustainable investment will therefore bring significant added value.

It is therefore necessary to actively examine how investments can be continuously underpinned. This calls for a strong political commitment. First and foremost, the priorities in the budget need to be redefined. The resources made available must also be used in a new way. This would make public services more efficient. The lasting savings mentioned in this Pact are particularly important. They can make an important contribution to financing urgent public investments.

- Increasing energy efficiency in public buildings will reduce the government's annual energy bill.
- Data from the “data-for-health” system can save money in healthcare.
- By investing efficiently in the digitisation of certain public services, substantial savings can be made in operating and infrastructure costs.

B) Adjustment of the European budgetary framework and its application in Belgium

The budgetary rules must allow for an increase in public investment. Especially because Belgium has to make a considerable effort to catch up on government investments. European budgetary rules should therefore be better adapted to the special nature of investment expenditure. After all, if they are properly chosen and implemented, investments will bring value to the economy throughout their entire life cycle.

In concrete terms, the budget balance should not be determined on the basis of gross investment expenditure, as is currently the case, but on the basis of depreciation on investments. This would make the treatment of investments more consistent with economic reality. This means that investment expenditure is taken into account in a staggered manner. As in business accounting, investments should no longer be recorded once when they are paid, but during the period in which they are written off.

The practical conditions for such an amendment to the Stability and Growth Pact have been set out in a joint report by the Cabinet of the Minister for Finance and the National Bank of Belgium¹⁶. Such an adaptation of the rules of the European Stability and Growth Pact requires

¹⁶ See <https://vanovertveldt.belgium.be/sites/default/files/articles/position%20paper.pdf>, in particular Box 2.

a lengthy discussion and approval procedure, both at European level and in the Member States.

We urgently need more public investment. We can thus not wait for this consultation to be concluded. We must therefore call on the European authorities to adapt the conditions of application of the investment clause and to show flexibility in the assessment of the budgetary trajectory. There is, in fact, the possibility of temporarily deviating from the medium-term budgetary trajectory. This is permitted provided that the investments can structurally support the economy. However, the conditions of application are so restrictive that no Member State is entitled to this clause today. In particular, the condition of a very unfavourable economic situation is at odds with the finding that insufficient public investment in various European countries is a structural problem.

This analysis highlights three recommendations on budgetary rules:

- Ensure budgetary rules in Europe that are better aligned with the specific contribution that public investment makes to economic potential. The budget balance should be calculated using depreciation instead of gross investment expenditure.
- Pending these adjustments, we should try to qualify for the investment clause - e.g. by removing the condition of an unfavourable economic situation - or by applying a certain degree of flexibility when specific efficient investments are made.
- In Belgium, the various government bodies - federal and regional - should consider how they could together be more flexible for investments.

Expansion of public investment through the adaptation of European legislation and more efficient application conditions in Belgium is necessary. However, we must continue to focus on both budgetary sustainability and investment in our growth potential.

Roles of the key players

Various players will play an influential and indispensable role in bringing about changes at the federal and European levels:

- *Government:* The government will play a crucial role in the structural expansion of investments. It will also have to engage in constructive discussions with the European Commission to improve the budgetary framework.
- *Europe:* The European Commission, and where necessary the Member States, will determine what is or is not possible with regard to the (possibly temporary) relaxation of budgetary rules and possible structural reforms. Their decisions must be interpreted in a broader context and will depend on economic and political factors.
- *Think-tanks:* The Strategic Committee recommends actively using economic think-tanks to help shape policy advice. This applies to both the European budgetary framework and the reorientation of government expenditure in Belgium.

5. GUARANTEEING THE IMPLEMENTATION OF THE PACT

Belgium must prepare more quickly for the challenges of the 21st century. It is about giving everyone the opportunity to take control of their future in a rapidly and radically changing environment. Well thought-out investments are crucial to achieving that ambition. It was against this background that the National Pact for Strategic Investments was drawn up.

However, this report is only the beginning of the story. In order to implement the Pact, there is a need for strong political commitment, broad social support and daily efforts to coordinate and implement specific measures. Social movements such as the Flanders Third Industrial Revolution and BioWin in Wallonia are points of reference in this respect.

In order to guarantee the implementation of the Pact, we therefore propose the following measures:

- *Mobilising all stakeholders.* The various governments in our country will have to commit themselves and actively cooperate to implement the Pact. The dialogue that the various governments have entered into in this regard must be continued in the Consultation Committee, at the initiative of the Prime Minister. In the same spirit of exchange and synergy, dialogue must continue at the level of the administrations responsible for investment projects as well as by the private partners.
- *Create broad support among the actors involved and the population.* The input of the people who have contributed to the chapters of the draft Pact must bear fruit during the implementation phase. In that phase, the cooperation of a larger group of experts is needed. It is also important to involve society as a whole in the Pact through awareness-raising campaigns or participation forums. For this reason, the Committee proposes a *roadshow* for citizens and interested organisations throughout society. The Pact must make a strong impression and there must be an opportunity to participate if it is to be accepted by the public. This can be done through *town halls*, online and through personal interaction.
- *Put together a team that supports the launch of the Pact.* During the coming months, this team will have to take the action needed to increase support for the Pact among the actors involved. It will organise the participation of citizens. On this basis, the team will refine the Pact and prepare its implementation. When the Pact reaches its operational phase, a *Delivery Unit* will convert the recommendations into operational projects, encouraging the various actors to undertake the action required and facilitating their implementation.

The Strategic Committee presents its report to the Prime Minister and the Minister-Presidents today. It presents its recommendations to society at the same time. It invites everyone to read the report and to support the ambition of the National Pact for Strategic Investments.

The Strategic Committee continues to support the concrete implementation of the Pact. All members of the Strategic Committee are available to continue the dialogue on the recommendations with the key players in order to refine the plans on the basis of their feedback. The members of the Strategic Committee are also prepared to assume their role in setting up and guiding a team to support the launch of the Pact.

6. EPILOGUE: A START HAS BEEN MADE

The future is ours! This means that we all have the right to enjoy the wealth, jobs and opportunities created in our country. It also means that we all have a responsibility to contribute to the future of our country. Only in this way can we guarantee long-term prosperity.

Building on this inclusive vision, the Committee is asking everyone to play their part in investing in the main drivers of our economy. In this way, we will future-proof our economy and regain our traditional pioneering position as a country. These drivers are the foundations of a healthy economy, being human capital, sound infrastructure and innovation for the future. We must continue to invest in our people to develop the right skills to succeed in tomorrow's digital economy. In addition, entrepreneurship in our country must be supported even more by providing future-proof and sustainable infrastructure. Finally, there is a great need for constant R&D and innovation to keep renewing our economy. Innovation creates new sources of value creation to keep our country competitive in the long term. Only in this way can we remain a forerunner and become one in many more different areas.

To optimally support these investments, we must also dare to change a number of transversal environmental factors. For example, we must optimise the legal and regulatory framework for investment procedures, review the level of investment in the public budget and mobilise the large amount of capital in our country in an innovative manner.

The realisation of these structural changes and investments requires dedication, time and financing. However, we must not stand still: our neighbours and other progressive countries have already taken the first steps to renew their economies. They are doing this by investing in future-proof infrastructure and human capital. The Strategic Committee wants us to seize these opportunities today. In this way, we can really transform the vision of renewing our economy into reality.

This report is the first step toward a prosperous future for all of us. Now it is up to others. We need the government, companies and society to make this vision come true. The Strategic Committee is open to working with all other players to realise that vision.

It was Prime Minister Charles Michel who, on behalf of the government, instructed this Committee to consider a Strategic Investment Pact. The Strategic Committee believes that it has made a concrete and well thought-out start to a future-oriented vision. In doing so, the Committee paid attention to both the long-term vision and the concrete steps in the short term. The Strategic Committee is thus looking forward to a proposal from the government to transform this Pact and the broader vision into reality as soon as possible.

*** THE FUTURE IS OURS ***