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trendletter

May 2017

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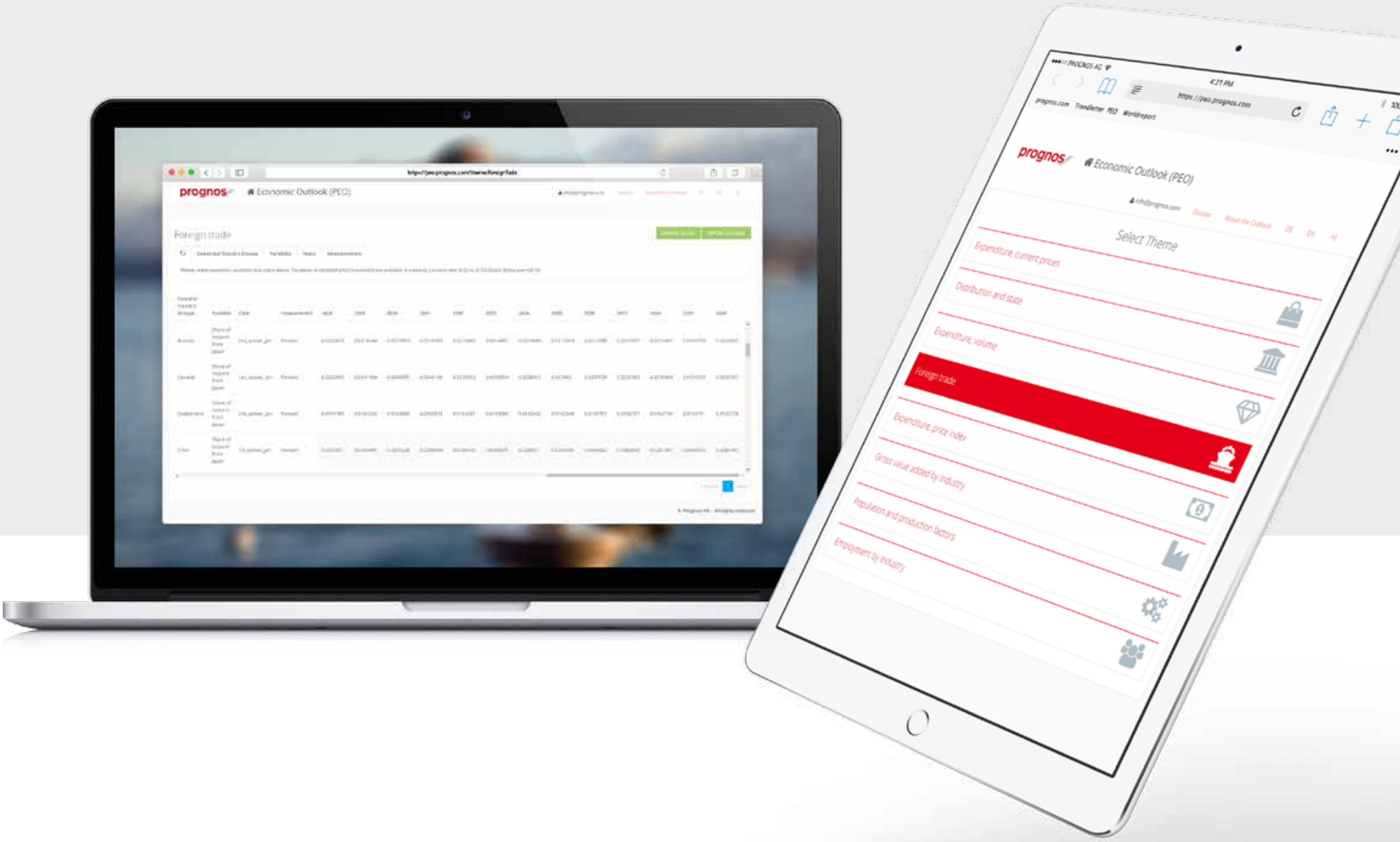

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Freude schöner Götterfunken / Joy, fair spark of the gods

... or is it all over, Baby Blue? That is the (European) question.

For hundreds of years a unified Europe was a mere utopian dream held by a few idealists. Then finally, after a horrifying first half of the 20th century, a united Europe became more than just hope but a warmly welcomed reality. Today, at least two generations have called themselves Europeans. Many have come to identify with a place sometimes referred to as the "old continent". Just like a newly born nation celebrates its formative years, Europe got together about leaving war behind, creating a multicultural atmosphere and boosting prosperity. Here I am tempted to quote Friedrich Schiller's unofficial European anthem: "Thy magic reunites those, whom stern custom has parted; all men will become brothers." These days, however, this eternal project is losing its ability to win attractiveness and support from the people in Member States – even among those who just entered the union. Recent polls and elections show scepticism and sometimes anger. The French presidential elections, held at the time of writing, are a case in point. Whatever the result, one of the bedrock nations of the European Union is facing vast internal resistance.

But one thing is crystal clear: Regardless of the many issues and negative emotions, the leaders of government, economy and society must find new answers. We at Prognos AG inspire solutions, based on facts. We argue with the rational side of our brains and will act consequently in this trendletter. We give pointers to a successful European Union, on topics such as Governance, Economics, Finance, Education, Mobility and Energy. For the past 58 years, our goal at Prognos has been to produce persuasive evidence and establish solid grounds for convincing arguments. This issue is no exception.

But let me also share my personal view: As a member of the generation who grew up with the idea and ideal of a united Europe, I take an admittedly biased stance on the question "Europe, what for?" I am strongly persuaded that the European Union is the future of our children, grandchildren and even great grandchildren. Our past mutual experience gives many good – rational and emotional – reasons for this. One aspect is more important than any: The values we share (especially freedom, democracy and market economy) need a strong home in a world ever more dominated by a few superpowers. Individual countries are not able to handle this; only an excellently governed European Union can look out for our interests and navigate international regulations. To be prepared for this endeavour, many tasks must be achieved. I say let us get to work: A little less complaining, a little more enthusiasm!

I wish you an interesting read and look forward to your feedback.

With best regards,

Yours
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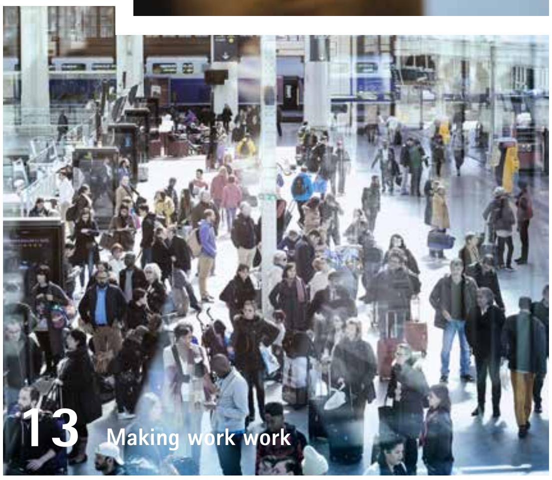
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Lifting the potentials of EU funding

EU support is vital for all Member States and regions. It stimulates jobs, fosters innovation and brings environmental and societal benefits. But it is unnecessarily complex. The time has come to change this.

Without a doubt the EU is one of the most successful projects of economic and political integration in modern history. EU funding has made valuable and essential contributions to this success and EU Cohesion Policy, among others, has significantly contributed to sustainable and inclusive economic growth.

But today the Union has reached an inflection point, facing long-term challenges, internal divergence and doubts. Regional economic disparities remain wide. Bulgaria's GDP is only 17% of Germany's. That is a much bigger gap than the one between Mississippi and Massachusetts and comparable to the one between the Indian states of Bihar and Goa.

EU funding is not reaching its full potential

It is obvious that Europe still hasn't reached its full potential for stimulating economic, sustainable and inclusive growth. The 'European paradox' is unsolved: Europe is at the forefront of producing new knowledge but is unable to turn this into economic growth sufficiently. Why is that? Are policies not properly adapted? What stands in the way of the "European added value", i.e. clear and visible benefits for the EU Member States and their citizens resulting from the expenditure of the EU budget? How can the benefits convince the general public? These are not just questions for policy experts. Trust in national governments and EU institutions is now as low as 10-15% (2007: 60-70%), a sign of loss of support as well as loss of faith and confidence in governments and institutions.

EU support schemes have grown overly complex

Most EU funding is given to businesses, researchers or citizens who apply for grants or subsidies. But the EU budget is spent in a complex environment with over 30 policy areas and a wide range of objectives.
Thousands of projects get funding via an array of instruments like grants, subsidies, loans, guarantees or revolving financial instruments. 80% of the budget involves different Member States, several governance layers and hundreds of authorities, known as the principle of shared management (see Figure 1).
Many projects serving complementary, or even similar, objectives receive funding, often under different management and control rules. Currently, over 20 different funding sources with a budget of more than € 960 billion operate across various policy areas (see Figure 2). Take research and innovation projects: They can be funded from at least three different EU sources, including Horizon 2020, ERDF and COSME.
Such schemes also exist in other policy areas, mostly with each source having its own governance and reporting arrangement as well as eligibility rules.

This multi-funding environment with its different funding conditions can result in sub-optimal targeting; there are clear signs that potential beneficiaries are discouraged from applying. The high complexity is also difficult and costly for public administrations to manage the funding.

EU funding post 2020 – what needs to be done

Both the European Commission with its Directorates-General and the Member States are responsible for ensuring that funds are spent well and wisely. Both have already successfully undertaken many measures to ensure this, such as the introduction of European Semester for policy coordination or the introduction of ex-ante conditionalities under the ESI Funds.
But in the coming months, the EU enters a decisive moment of shaping funding post 2020 and needs to develop a new vision for EU policy.
To increase the European added value from funds to enterprises, citizens and

COMPLEXITY OF THE EU BUDGET
Distribution of the EU budget by institutions and policy fields

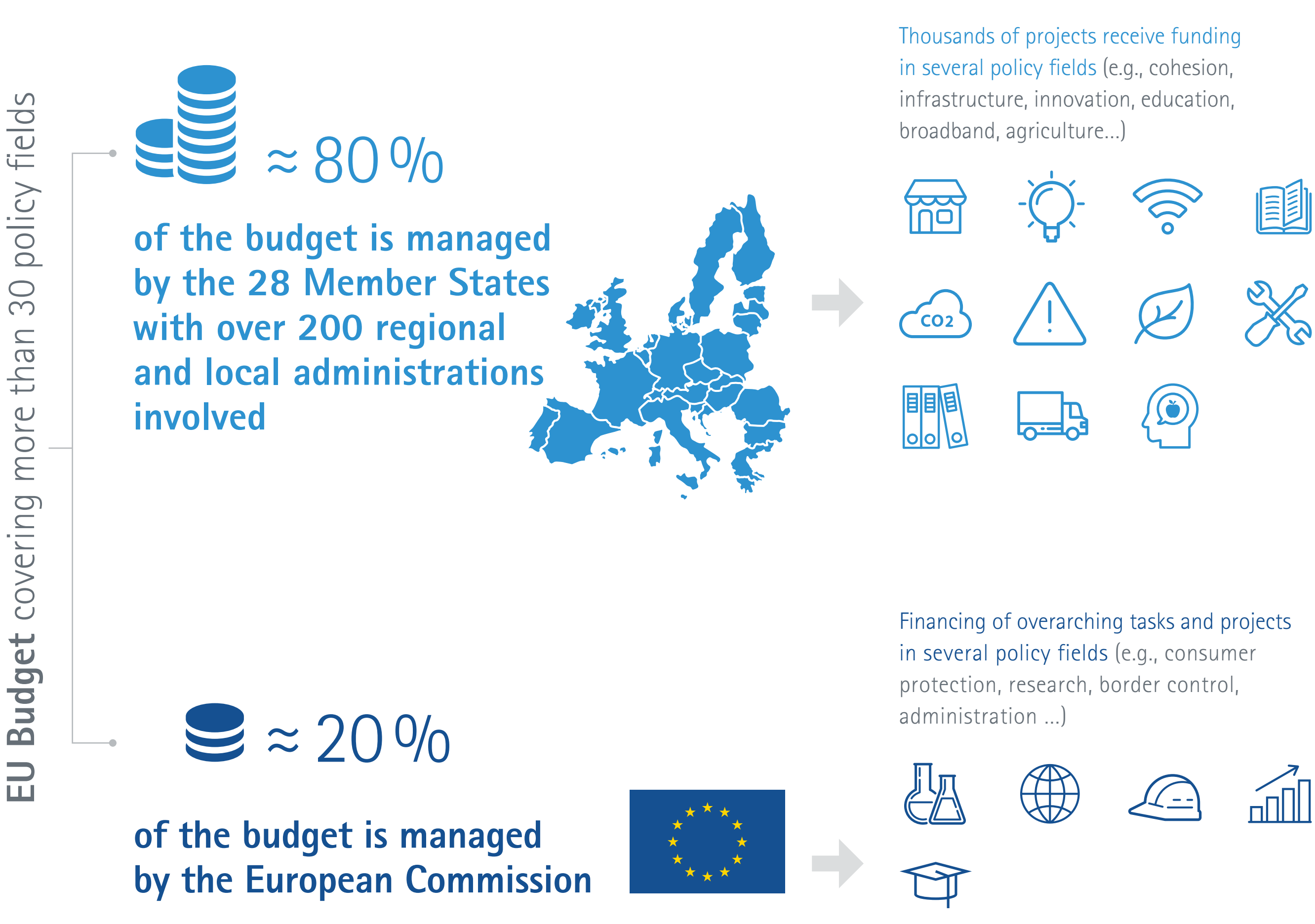


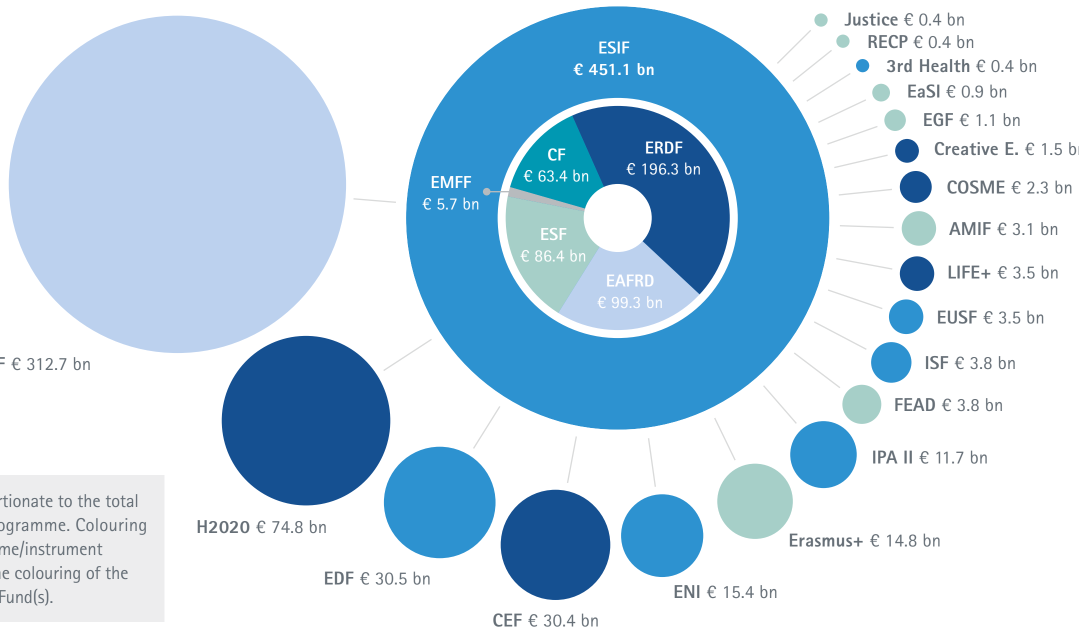
Figure 1 Source: Prognos

regions, the following 7-point plan can give inspiration and orientation to the debate:

1. **Consolidate the funding portfolio:** It is time to perform a thorough landscape review and consolidate the portfolio of diverse structure of funds and instruments. Adopting a portfolio management approach, the Commission and the Member States could leverage project selection and execution success and more realistically achieve their strategic objectives. Research has shown that portfolio management is a way to bridge the gap between strategy and implementation.

2. **Strengthen the European added value by refocussing on key policy priorities:** EU support should refocus on areas that can be better solved together. A given measure should generate economies of scale, produce public goods or stimulate spillovers. In these cases, welfare gains from EU support increase; the more coordinated EU and domestic policies proceed. Only such alignment will lead to synergies in which EU action can focus on stimulating, complementing or leveraging actions (see Figure 3). Key priorities should include support to fundamental research and (disruptive) innovation, regional growth, employment and (digital) skills as well as solutions to reduce and manage climate change. Some path dependencies need to be cut (such as direct payments to farmers unless they are economically justifiable).

BROAD SPECTRUM OF EU FUNDING OPPORTUNITIES
Overview and volume of central EU funding sources in the 2014-2020 period



Circles are proportionate to the total budget of the programme. Colouring of each programme/instrument corresponds to the colouring of the most related ESI Fund(s).

AMIF	Asylum, Migration and Integration Fund
CEF	Connecting Europe Facility
CF	Cohesion Fund
COSME	Competitiveness of Enterprises and Small and Medium-sized Enterprises
Creative Europe	Programme for support to the culture and audiovisual sectors
EAFRD	European Agricultural Fund for Rural Development
EAGF	European Agricultural Guarantee Fund
Erasmus+	European Region Action Scheme for the Mobility of University Students
EaSI	EU Programme for Employment and Social Innovation
EDF	European Development Fund
EGF	European Globalisation Adjustment Fund
EMFF	European Maritime and Fisheries Fund
ENI	European Neighbourhood Instrument
ERDF	European Regional Development Fund
ESIF	European Structural and Investment Funds
ESF	European Social Fund
EUSF	European Union Solidarity Fund
FEAD	Fund for European Aid to the Most Deprived
H2020	Horizon 2020 - EU Framework Programme for Research and Innovation
IPA	Instrument for Pre-accession Assistance
ISF	Internal Security Fund
Justice	Further development of a European area of justice based on mutual recognition and mutual trust
LIFE+	Financial Instrument for the Environment
RECP	Africa-EU Renewable Energy Cooperation Programme
3rd Health	EU Health Programme 2014-2020

Figure 2

Source: KPMG / Prognos (2016) based on publicly available data

EU BUDGET A SMALL SHARE OF MEMBER STATES' FINANCIAL RESOURCES
Member States' resources and public expenditure compared to the EU budget (2015)

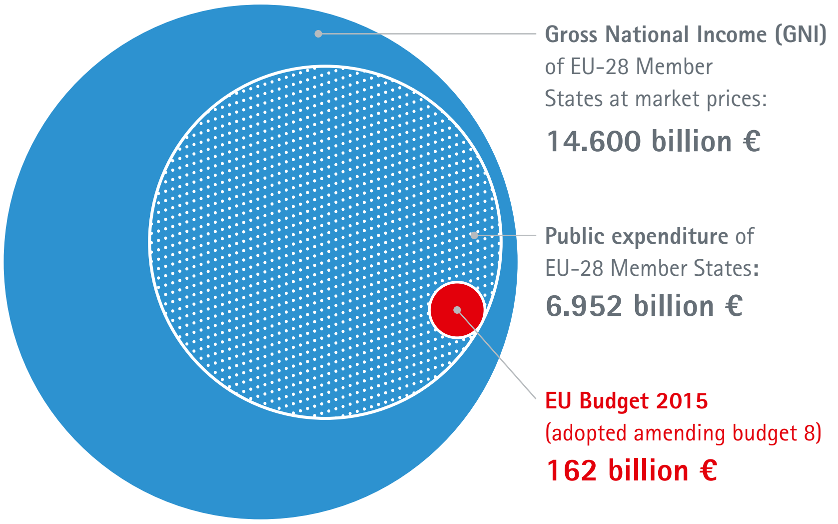


Figure 3

Source: Eurostat, European Commission, Prognos

3. **Develop strategic solutions centrally, implement and control regionally:**
Problem solving should not restrict the national scope but rather expand it. Regional implementation must be promoted. Centralised institutions might have an overview of challenges and their connections but they often know too little about the regional peculiarities, preferences, potentials and ways of problem solving.
Shifting to a stronger regional focus when it comes to compliance, financial management and control could give wings to Cohesion Policy and the ESI Funds in particular. EU level institutions, especially the European Parliament, must accept a reduced level of accountability, but ways can be found to develop a monitoring scheme that enables sufficient oversight (e.g. by strengthening Eurostat).

4. **Make funding a "one-shop stop":**
Applying for public funding is extremely demanding and complex for beneficiaries (e.g., regarding eligibility rules). These barriers need to be reduced to be able to refocus on the real value of EU support. Cutting costs frees up capital for value-creating investments.
The digital revolution has a lot of potential when it comes to big data, artificial intelligence or machine learning. This could also be applied to the world of EU funding. Why not learn from Amazon? "Firms with similar characteristics as yours have also applied for this programme." Artificial intelligence helps users identify otherwise unseen opportunities and learn from the best. Combined with smart navigation through the whole funding process, this could revolutionise the funding world.

5. **Want policy innovation? Listen to the client!**
Of course, checks and balances are needed to ensure accountability, but good public expenditure means benefits from the support schemes reaching the user.
In user-centred design, programme designers analyse and foresee how users are likely to use a programme and make real world tests before launching or modifying a programme. Digital platforms could give beneficiaries a voice and be used to crowdsource solutions (see also page 10).

6. **Simplification, simplification, simplification:**
Recently the Commission has taken steps to reduce and simplify legislation, but Member States and beneficiaries still face difficulties and will continue to do so if no significant simplifications are seen. In some budget areas there are too many layers of rules, which often leads to many interpretations and inconsistent application of the rules, not to mention high administrative costs for meeting compliance, financial reporting and control.

7. **Do good and speak about it:**
Recent events such as David Cameron's (unsuccessful) Brexit communication campaign have exposed the importance of communication. Despite good efforts by the Commission to communicate the many benefits of its activities, such as the "Europe in My Region" campaign, the public is mostly reminded of the "bent cucumber rule" as a symbol of perceived European over-regulation.
Current communication efforts remain overly technical (macro-economic impacts of funding, several thousand kilometres of roads built, etc). Often, they do not convincingly communicate the EU's real achievements. The European Commission should invest more effort in an up-to-date communication strategy which sets out its purpose clearly, builds upon a clear understanding of reputation in the community, and which is implemented consistently and proactively and is constantly reinforced.

We need ambition, vision, competence and expertise, if we want to bring the EU back on a growth path and reestablish trust. The European project will be strengthened again if European policy makers succeed in dissolving the contradiction between greater integration and the need for more national and regional responsibility.
EU funding, especially Cohesion Policy, can play a vital role in this context if we manage to link it closely to the realisation of a shared and convincing long-term vision of an economically dynamic, socially cohesive and ecologically responsible continent._

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A good idea…

A better Europe needs good ideas. Five Prognos experts from different policy fields outline their suggestions.

… to minimize poverty risks of working mothers

One of the ESF horizontal objectives towards "equality between women and men" is to promote balance between family and work. For monitoring purposes, data are collected in programme evaluations. Any increase in maternal employment must be accompanied by determining the scope of the work. Our studies show that by working 28 hours per week, 86% of mothers with their youngest child under the age of 8 achieve an income above the poverty line. At fewer than 28 hours, the percentage drops to only 43%. Currently, these mothers work 25 hours per week on average.

Therefore, despite the current pressure on employment markets in several EU countries, the concept of near full-time employment should be anchored in the ESF as a means to obtain equality. This is the way to minimize poverty risks of working mothers, because higher wages and better careers can be achieved by working longer hours.

Still, near full-time employment of mothers is only possible if appropriate childcare is available and the co-parents cooperate: they must take responsibility for family tasks and switch to near full-time employment themselves. The OECD recently published the international comparative study Dare to share - the path to partnership-based compatibility. In the study, Germany lies in total just below average. The full-time employment rate of working mothers for example is above the Netherlands but significantly below countries like Denmark, Sweden, Austria or France. The study recommends approaches for family policymakers and employers to adapt to new family structures, ensure the long-term livelihood of mothers, and secure skilled workers and economic growth. At Prognos, our sociopolitical scenarios also show that a successful compatibility-based policy is an investment with significant fiscal advantages, in some cases even return on investment. This should be included as part of the objectives and instruments of the ESF. _

… for easier ways to be a responsible consumer

Today, the focus is primarily on laws and producer responsibility. But what about us as consumers? I already have the possibility to return unused material to the construction market. But what if I could also return half a paint pot to be used by others? Food waste could be avoided, if I could return in time too much bought bread and butter. It is not necessary to own a drilling machine as I can rent it. With a bring-back service I would have made more use of it.
But I should have also a consumer responsibility, to bring back for instance electronics no longer in use and, not to forget, handle them with care, so they can be reused or recycled.

For my return I would be compensated, have access to the latest model of drilling machines or a particular model. Industry would be paid for the product and the services.
As an EU market, we have high potential and opportunities for implementation. Sharing instead of owning and a bring-back obligation would save valuable primary resources. It would also make us less dependent on imports from politically unstable countries with lower health and environmental standards. Costs for raw materials can be allocated to several product cycles, supporting in turn the EU's competitiveness. _

… for Europeans to create their own unicorns

Good news for you! You just stumbled upon a gold mine. And even better news: Everyone else can also stumble upon one. Information is becoming the gold of our age. With every click on the Internet, every online purchase, every use of the smartphone, you produce data. Your wearable technology, your car and your (smart) home all produce data very valuable to you. You can get better offers, save energy or monitor your health, just to name a few possibilities.

But one problem remains. The mine is lost. Lost in a jungle of contradictory or even missing laws. EU Member States have their own laws, but data services are global. Many issues need to be solved: is regulation of "data ownership" necessary? Who has the rights to aggregate or process data? What protection and individual rights do the data producers get, when it comes to collection and use? And, crucially, who is liable for damages caused by applications, under which conditions and to what extent?

With its General Data Protection Regulation, the EU has shown that a basic common standard helps all parties involved. Especially people with little access to legal resources benefit from clear and simple common laws. And with its over 500 million consumers the EU has the global influence to set global standards for legal security. _

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… for the EU citizen in the driver's seat

Today online travel portals help me find a lovely place to stay for my next holiday. What if I could get similar help for my next application for an EU grant? Or my search for those labour rules in France my boss asked for?

The EU could think in more user-centred ways like they do in the cultural and creative industries (CCI). But let us go back to the travel portals for a moment. My travel portal gives a quick overview of the many providers, with real pictures, customer ratings and short but meaningful information. This not only informs and targets my search, but makes me excited about my upcoming holiday. A web-based booking process gives me an easy and intuitive way to plan trips. Dare we dream of an EU inspired by this? The customer-centred approach used in the CCI eases customer experiences. State of the art tools like web design transfer information between end customers and suppliers engaged in the buying process. All in a simple and guided way.

Such an approach could gain ground in the EU. With the help of the tools and techniques used in the CCIs the EU could be made more understandable and regain credibility and trust. A more intuitive and guided experience for citizens to understand and use the EU could ultimately create a feeling of membership and unity. _

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… for sharing the good energies

Integration and close cooperation across the power sector can save billions of euros in years to come. These benefits mainly come from the availability of cheaper power supply for more consumers.

One obvious way of getting there is stronger interconnection between countries. For example, a stronger integration of electricity markets in Central Europe would open up for cheap electricity transfer from solar power plants in Southern Europe and wind power in Northern Europe. Still, integration always produces winners and losers. For example, power producers in regions with high prices would lose parts of their market share. However, the whole region will benefit economically, as households and companies will face significantly lower energy costs.

Besides economic reasons, integration has always been motivated by political reasons. Most European countries want to reduce dependency on fossil fuel imports and not least foster global leadership in the fight against global warming. If countries seek to cooperate closely in these fields, additional benefits could arise that are notoriously hard to quantify, but nevertheless of significant importance. _

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The EU can be strong even without a common financial policy

A common financial policy of EU Member States would not produce economic benefits and is politically risky for the cohesion of the EU. In any event, closer cooperation in different policy areas would make sense.

The European Union is currently in a bad state. Among the signs of growing dissatisfaction with the EU are Brexit, the Polish government's refusal to support Donald Tusk's re-election as EU Council President and the rise of eurosceptic parties. One of the ideas that is directed at overcoming dissatisfaction, strengthening cohesion and stabilising the EU is the idea of a common financial policy.

Economic arguments

» Shifting financial competencies from the national to the EU level would undermine subsidiarity and enlarge the distance between the people involved. National preferences in financial policy design would be less accommodated.

» Financial policy as a national competence allows for public revenues and expenditures to be directed towards the preferences of each Member State. This allows for Member States to compete for the best country to host their business. In this competition, the code of conduct for business taxation should be respected. This code defines rules of fair competition, so harmonisation of tax bases or tax rates would not be necessary.

» A common financial policy would sharpen the divide between people who benefit from public expenditure and those who finance it. Such deviation from the principle of financial equivalence is accepted as redistribution policy on the national level, but would camouflage redistribution of income by public transfers between Member States. This would intensify the discussion of fair shares in financing and benefits from the EU.

» The debt-GDP ratio varies widely between Member States, today and in the foreseeable future (see Figure 1). A common financial policy would reduce the direct responsibility of each state to meet the debt target.

DEBT/GDP RATIO
by EU country (% of GDP)

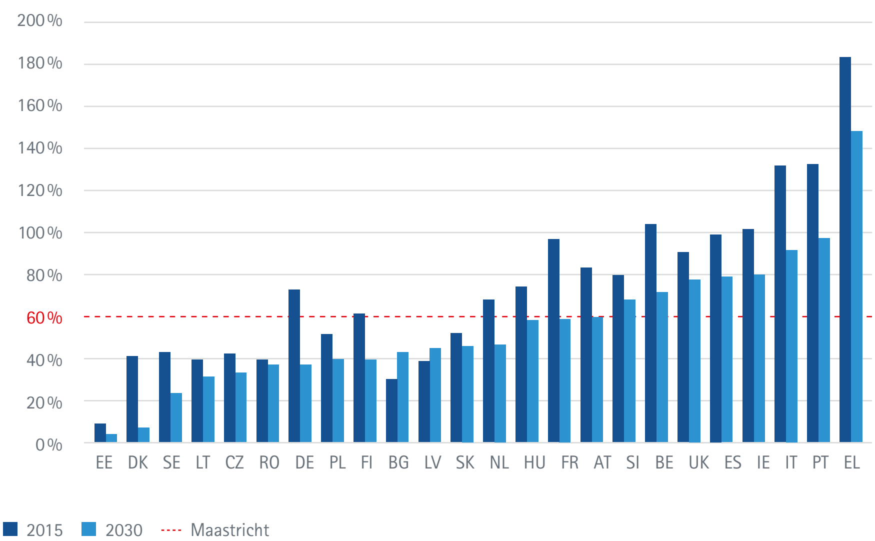

Figure 1

Source: Prognos based on EUROSTAT

Political arguments

» Given the fact that Member States have different preferences, shifting these competencies to the EU level is not a realistic option.

» With growing EU-fatigue, a common financial policy would probably further reinforce criticism of the EU and might increase the risk of the EU coming apart.

» It would make the budget process more sophisticated and expensive, as all Member States would have to agree upon a common budget.

Regardless of all these arguments, other policy fields would benefit from more intensified and harmonised cooperation. First, common foreign policy and defence reduces costs due to scale effects. It would also give the EU more weight in international negotiations than individual Member States have.

Second, common competition policy creates a level playing field for companies within the EU and counterbalances the dominant positions of certain companies. Third, common foreign trade policy strengthens the position of the EU in negotiations on bilateral as well as multilateral trade agreements, both of which are expected to become more important in the near future.

Whereas common financial policy is hardly an option, the near future of EU Member States might see strengthened cooperation in foreign policy, competition and trade, not to mention closing tax loop holes and defining standards for public expenditure policy. _

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Free movement of workers is a success story in Europe, and not a zero-sum game.

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Making work work

Labour mobility has proven beneficial both for sender and receiver countries, but more should be done to raise awareness of these advantages.

In 2016 almost seven million EU citizens lived and worked in another EU country. More than one million people took advantage of labour mobility by commuting to neighbouring EU countries for work. These numbers illustrate how free movement of labour and opportunities gives opportunities for citizens and enterprises.

Free movement of labour is one of the four freedoms of the EU Single Market. Labour mobility is also part of the creation of a European mindset to overcome national borders in the development of the European workforce.

Free movement of workers is a success story in Europe. Member States with shortage of skilled labour can recruite personnel from other EU countries to diminish the amount and extent of bottleneck vacancies on their national labour markets. Furthermore, the latest figures show that citizens living in another EU country are more economically active compared to citizens staying back in their home country. This in turn has positive effects on tax revenues and GDP.

Labour mobility is not a zero-sum game: With regard to the rising youth unemployment in some Southern European Member States, the opportunity to migrate has eased the economic shock in those countries. Moreover, remittances to family members in the home countries have improved the incomes of these households and contributed to the national economies. Finally, in working abroad migrants gain specific skills, which they can transfer to their home countries if they return and take jobs or set up their own businesses.

Labour mobility within the EU is much more comprehensive today than it was 20 years ago. Several initiatives contribute to this development. Through ERASMUS, now Erasmus+, students have discovered mobility within the EU, often as a first step onto the European labour market. The latest figures show that 40% of Erasmus alumni changed their residing country at least once since graduation compared to only 23% among the non-mobile alumni.

The job mobility network EURES has a stronger focus on transnational labour mobility by giving information and supporting more people to work in other EU countries through their matching services. In addition to that, several Member States build up national structures to support the integration of international skilled labour, often with a focus on workers from other European countries. The German region of Baden-Württemberg launched a project in which young people from Southern Europe were recruited for professional vocational education in regional companies. These structures and initiatives together with the legislative framework, as well as the longterm experience with labour mobility, provide an ideal base for further exploitation of the potential of the European workforce. Especially in the EU-15 group, academics and highly skilled workers seize the opportunity to work in another European country. A broader inclusion of all levels of qualification could contribute to a more European mindset for the whole population.

Moreover, employers are hard to convince of the benefits. Especially smaller and medium size companies often hesitate to undertake extra efforts to recruit on a European level. More information on the potential benefits, also in terms of cultural diversity and new perspectives, could be a way to change those attitudes.

Finally, labour mobility should benefit all Member States including those currently giving up skills and talents. Therefore, people who have worked in another European country should get support upon returning to their home countries. Strengthening labour mobility back and forth could reduce longterm brain drain for the sender countries and help them retain skills in their labour markets._

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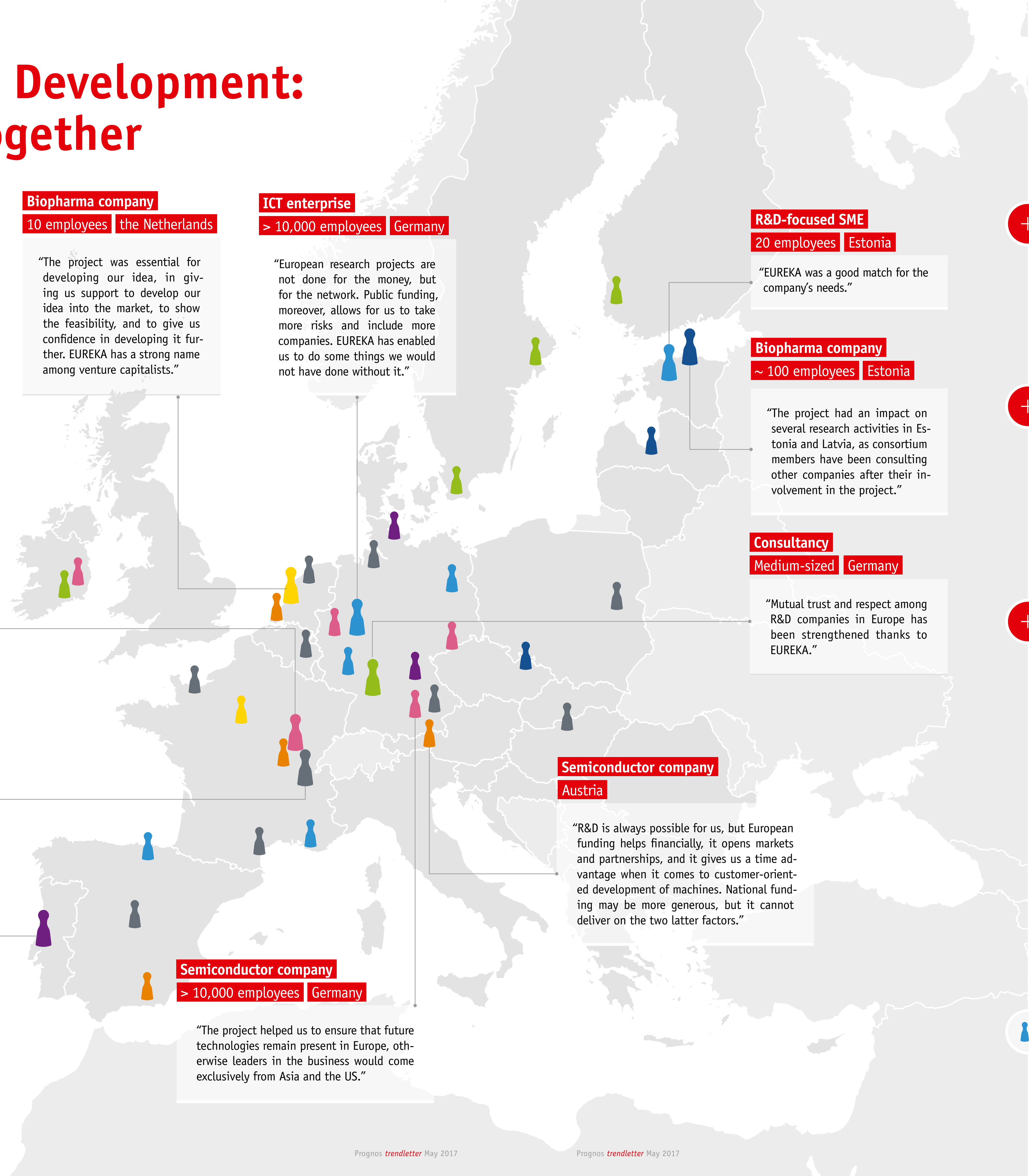
Research & Development: Stronger together

With its R&D programs, the EU and other European initiatives not only support companies but entire regions. As a result, the whole continent competes better on the world market. We have gathered some organisations' views on European research collaboration projects such as EUREKA.



Biopharma company
10 employees | the Netherlands

"The project was essential for developing our idea, in giving us support to develop our idea into the market, to show the feasibility, and to give us confidence in developing it further. EUREKA has a strong name among venture capitalists."

ICT enterprise
> 10,000 employees | Germany

"European research projects are not done for the money, but for the network. Public funding, moreover, allows for us to take more risks and include more companies. EUREKA has enabled us to do some things we would not have done without it."

R&D-focused SME
20 employees | Estonia

"EUREKA was a good match for the company's needs."

Biopharma company
~ 100 employees | Estonia

"The project had an impact on several research activities in Estonia and Latvia, as consortium members have been consulting other companies after their involvement in the project."

Consultancy
Medium-sized | Germany

"Mutual trust and respect among R&D companies in Europe has been strengthened thanks to EUREKA."

IT industry company
Market leader | France

"The project allowed us to enter new market areas such as the automotive industry and the Internet of Things."

IT security company
> 10,000 employees | France

"The project allows us to build a critical mass of technological and market knowledge to meet industry needs."

ICT company
300 employees | Portugal

"All our participation in European projects increases our prestige and enlarges our cooperation network. Collaborative R&D widens our scope of competencies.

Participation in an EU research project is an attractive way for companies to access key international groups, leading scientists and potential customers."

Semiconductor company
Austria

"R&D is always possible for us, but European funding helps financially, it opens markets and partnerships, and it gives us a time advantage when it comes to customer-oriented development of machines. National funding may be more generous, but it cannot deliver on the two latter factors."

Semiconductor company
> 10,000 employees | Germany

"The project helped us to ensure that future technologies remain present in Europe, otherwise leaders in the business would come exclusively from Asia and the US."

The participation in European R&D consortia has benefits on different levels:

+ <u>Companies</u> emphasize the opportunity to acquire knowledge and take advantage of R&D results in newly developed products and processes. They strengthen their competitiveness and get access to new markets. An improved reputation of the firms also improves their position in their own markets.

+ <u>Regions</u> benefit from strong and generally accepted research companies. These companies invest in the purchase of materials and services from other regional enterprises. Knowledge spill-overs expand the regional knowledge base. At the same time, they put the region on the European research map, an essential prerequisite for foreign direct investments in knowledge intensive industries.

+ On the <u>European level</u>, the overall European knowledge base is strengthened, which is a prerequisite for increased excellence. European consortia are able to compete with the world-leading research centres. European R&D projects drive the process of harmonization and standardization forward. The dissemination of newly generated knowledge follows different channels, thus overcoming national borders.

Each pawn figure represents research entities we have interviewed about their ideas on European research collaboration. The colours refer to networks of research entities.

Looking back – the start of the Single Market

Back in the late 1980s, Prognos conducted a study to support the process of European market integration. The study was about how businesses around Europe prepared for the Single Market. Its findings are still relevant.

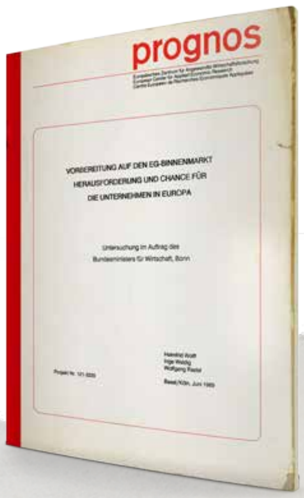
In 1986, the European Community finally paved the way for the creation of the Single Market. European companies had six years to adapt and position themselves in the emerging transnational market. In those early stages of European economic integration, many asked for deeper understanding of the challenges and opportunities ahead. As has happened many times since its founding in 1959 in Basel, Prognos pitched in with a study to put things in perspective, using solid survey methods rooted in the academic tradition. Prognos was commissioned by the German Ministry of Economy to conduct a study. Out came a one-of-a-kind cross-national project aimed at discovering just how prepared companies were for the Single Market. Companies from the UK, France, Italy, Spain and Germany were consulted on their level of preparation. As seen in the chart below, they were quite positive.

Today this study is an important part of the Prognos archive: a 300-page binder, neatly typed on paper, providing facts and figures about the preparedness and expectations of the companies which were about to enter and thereby create a common internal market.

The results of the study were clear: The level of preparedness had room for improvement, but hope and trust in the upcoming Single Market carried and guided collective efforts. One of the authors of the study, Wolfgang Riedel, recalls: "The expectations of the French, Italian and German companies were high, and by and large positive. However, in England and in Spain they were rather ambivalent." On the one hand the study showed German businesses as among the best prepared. On the other hand, the (back then) already lingering and (re-)emerging ambivalence towards European economic integration reflects the current situation in Europe: The South has been hit hard by the economic crisis and the United Kingdom is leaving the Union. Riedel adds that at the time the sales expectations of all companies were indeed high, but the expectations of reducing cost were rather low.

Ultimately, the creation of the Single Market led to an enormous transnationalisation of businesses across Europe. In that context, the Prognos study gave not only policy makers a clearer picture, but also the companies themselves. "Based on the study, entrepreneurs were able to benchmark themselves in an international comparison," Riedel says.

Looking back, it is clear that this study foresaw and anticipated the long-term opportunities and challenges for companies entering and operating on the Single Market. Indeed, the study reflects some of the differences of attitude we still see today between the Northern and Southern parts of the continent._



WHAT BUSINESSES EXPECT OF THE OPENING OF THE EC SINGLE MARKET

COUNTRY	NO DATA	POSITIVE EXPECTATIONS	NEUTRAL	NEGATIVE EXPECTATIONS	TOTAL
GERMANY	0%	71%	18%	12%	100%
FRANCE	0%	72%	22%	6%	100%
UK	0%	60%	40%	0%	100%
ITALY	0%	95%	5%	0%	100%
SPAIN	5%	75%	0%	20%	100%
TOTAL	1%	74%	17%	8%	100%

PROGNOS AG

“My take on Europe...”

In uncertain times, it is often worthwhile to listen to voices with different backgrounds. Four thinkers share their views: What is their advice for the EU? Does it still pay off? And, if so, how can this be made visible?

“My take on Europe is optimistic! We notice that a broad majority of Europeans still sticks to the EU and its values – in spite of populist propaganda. However, Brexit was a wake-up call. European leaders must understand that the EU urgently needs reforms to get big issues like the refugee crisis handled and become more efficient altogether.”

Aart de Geus
Chairman Executive Board,
Bertelsmann Stiftung

“By 2050, Europe will account for only 7% of the global population. In such an environment, European security and prosperity depend on the avoidance of infighting. This message – the need to work together out of self-interest – is what European leaders must drive home.”

Fred Kempe
President and CEO, Atlantic Council

“The frustration of many fellow citizens in advanced economies does not mean rejection of Europe. Europe cannot explain Mr Trump! Stability, peace and prosperity for over more than 70 years are major contributions of the European continental – and Irish – historic endeavor. But the remarkable resilience of the euro zone during the crisis (four new countries entering) should not trigger complacency: Europe must deliver more effective governance and more democratic legitimacy.”

Jean-Claude Trichet
Former President of the
European Central Bank

“Europe will face major socioeconomic challenges in the coming decades and addressing them will require reinvigorated partnerships with Africa. Europe’s own prosperity, peace and security will only be possible if African countries benefit from well-functioning economies, decent jobs and quality of life. We need a paradigm shift now.”

Jennifer Blanke
Vice-President Agriculture, Human and Social Development, African Development Bank

Picture Credits: © Jan Voth; © dpa-Zentralbild; © dpa; © AfDB, Page

Back to border controls means back to expensive hassle

Inside Europe we take the free exchange of goods for granted. Maybe a little too granted.

We have become used to the shared markets in Europe without realizing it. In Europe, we are used to and benefit from the free exchange of goods. Surely, it can be argued whether it makes sense economically and environmentally to send "Dutch tomatoes to Italy for peeling" and then back to Germany. One thing is for sure: It creates jobs.

Business enjoys this comfortable situation for its logistic chains. And there are plans for further digital integration of products, transport and distribution, a trend dubbed Industry 4.0. The dream of the Internet of Things, where goods are programmed to find the optimal route, is within reach. Border control, however, would slow this process down.

As seen in Figure 1, some of the countries that currently see anti-free trade tendencies are Germany's most crucial trade partners.

Let us imagine for a moment border controls in Europe. In logistics, it is crucial to react quickly and flexibly. Increased border control between the Netherlands and Germany would favour Rotterdam's competitors – Antwerp and Zeebrugge – as ocean carriers would reroute ships to save time and uncertainties in their hinterland traffic. In 2015 the port of Rotterdam earned more than € 300 million (some 50% of its total turnover) of dues from each vessel calling the port. Therefore, vessels rerouted to Antwerp or Zeebrugge would reduce the earnings of the port of Rotterdam and maybe reduce investments in Rotterdam.

> **The re-establishment of border controls would tremendously increase costs.**

France is Germany's most important trade partner in Europe. Border control would cause long waiting lines for trucks and poorer train service. According to our calculations, waiting 1.5 hours at the border would cost € 50-70 more per transport, leading to price increases for products in Germany and France.

Border controls would make the timing of transports impossible. Punctuality and dependability are crucial in every logis-

GERMANY'S MOST IMPORTANT EUROPEAN TRADE PARTNERS
Values of German exports and imports in 2016, in billion €

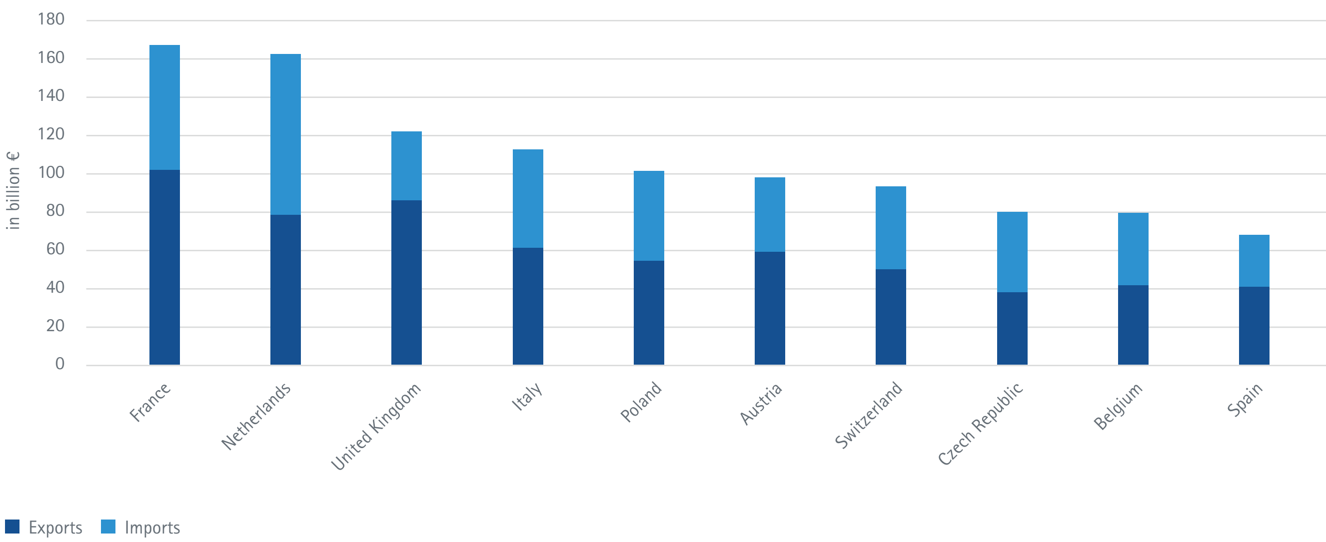


Figure 1

Source: Prognos based on EUROSTAT

tics chain. The aforementioned 1.5 hours for border customs would mean that the driver only makes 80% of the distance per driver shift compared to today. As a result, the total transport time (with resting required by law) for goods transported from for instance Mannheim to Lyon would be 19 hours instead of 8.

Current efforts to improve logistics chains as a basis for Industry 4.0 would be obsolete. In turn, it would imply the loss of jobs. Specialised industries producing intermediate products for export within Europe and overseas have sprung up around Europe. For example, the automobile industry depends highly on open borders to receive parts from all over Europe for final assembly. In fact, a single car requires parts from 4.500 suppliers from 1.500 locations.

> **Waiting 1.5 hours at the French-German border would cost € 50 - 70 more per transport.**

The automobile industry heads the "just in time/just in sequence" logistics, which is a primary push for Industry 4.0. Business can no longer imagine returning to a situation like before when trucks waited at the border for hours. This would mean a costly reconfiguration of the value-added chain, competitive disadvantage on the world market and even the risk of plant closures, loss of jobs and taxes in particular peripheral regions of the EU.

The re-establishment of border controls would tremendously increase the costs for the logistic industries in Europe, especially ports, road and rail transport. The consumers would have to pay more for products. Therefore, a Europe with open borders pays off for all. _

Driving parts across borders: Assembling a single car requires parts from 4.500 suppliers from 1.500 international locations.

Hans-Paul Kienzler
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What if...? Simulating a return to barriers

Scenario-based trade and migration projections show how protectionist measures would have a negative effect on the economies of EU Member States, here exemplified by France and Germany.

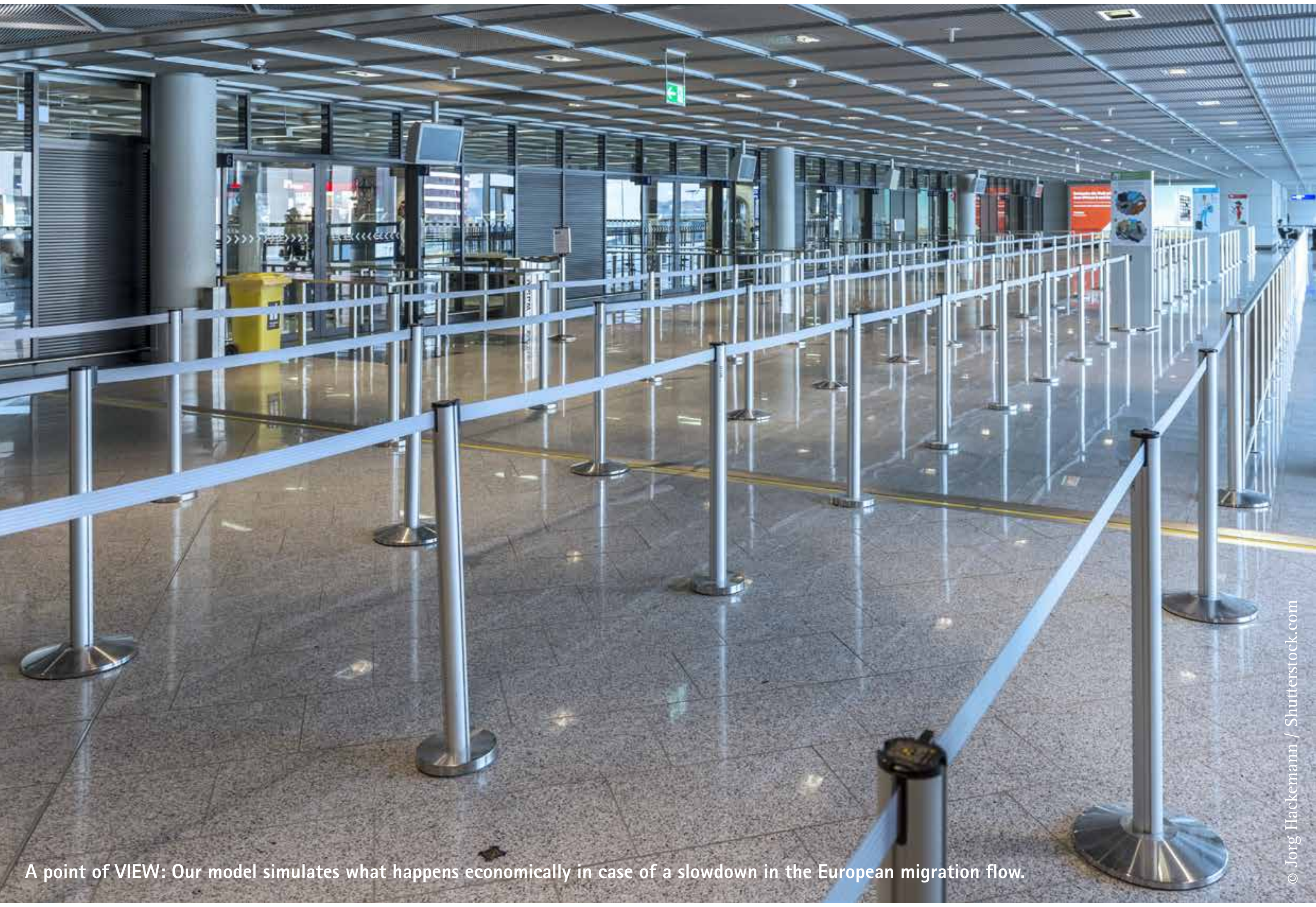
Today, we see free migration and trade within the EU as a given. But what would happen economically if this situation were to change, for instance as a result of the protectionist tendencies we are also witnessing?

At Prognos, our well-proven macroeconometric model VIEW enables us to roughly estimate such effects for France and Germany up to the year 2040. We compare our basic scenario to a hypothetical scenario with the following assumptions:

1. To simulate a standstill within the EU, Eurostat projections for net migration balances in Germany and France are reduced by the share of people currently migrating between EU countries. The 2040 share of such migrants is set equal to the average share observed between 2013 and 2015.
2. Future shares of German and French exports to other EU-countries will gradually decrease. In 2040, the shares will be 25% lower than in the basic scenario.

> **A collapse of migration within the EU leads to a shrinking population in Germany and France.**

This is due to the positive future net migration balance of both countries.



A point of VIEW: Our model simulates what happens economically in case of a slowdown in the European migration flow.

CUMULATIVE POPULATION DECLINE
(assumption)

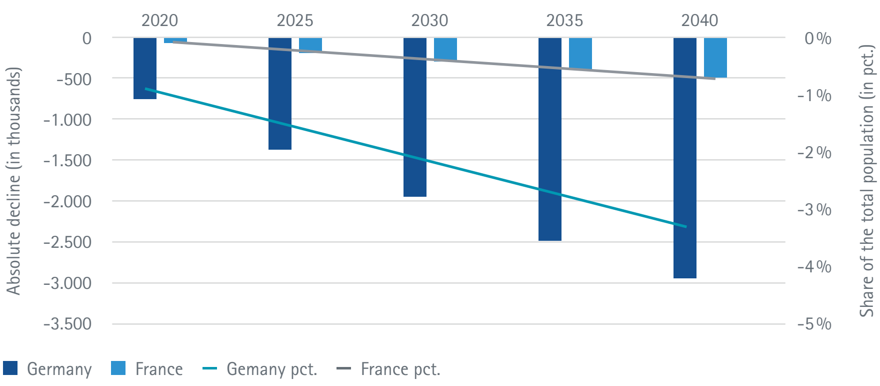


Figure 1 Source: Prognos/VIEW

DECLINE IN TOTAL EXPORTS
(assumption)

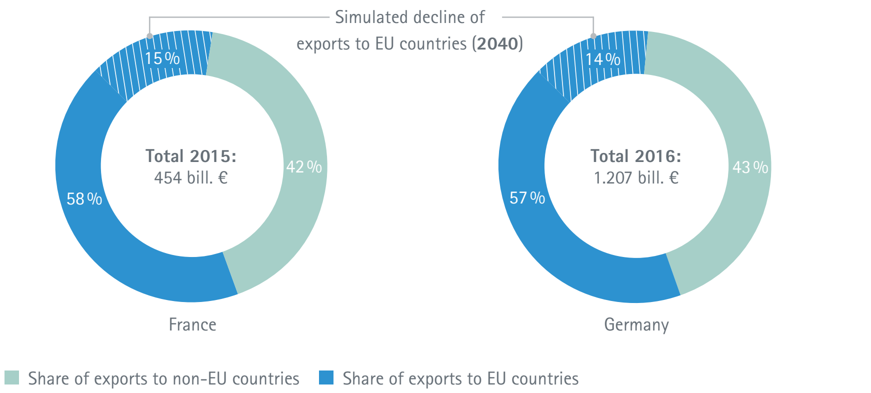


Figure 2 Source: Prognos/VIEW

CHANGE IN REAL GDP VERSUS THE BASIS SCENARIO (IN PCT.)
(simulation result)

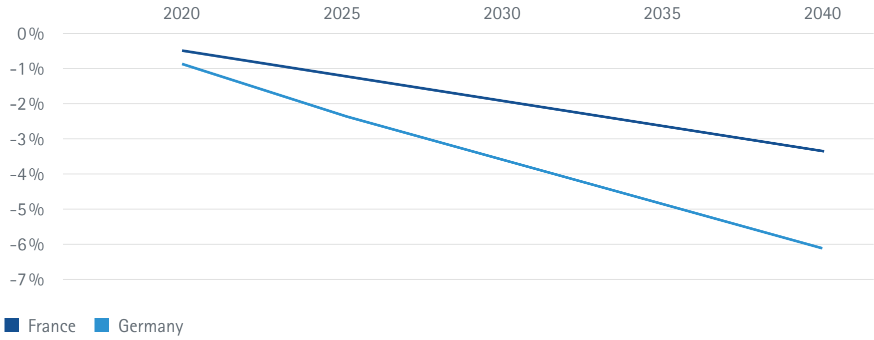


Figure 3 Source: Prognos/VIEW

Therefore, the simulated standstill in the EU's internal migration would reduce the German population by 3 million people, or 3.7% of the total population by 2040. In France, the reduction would equal 480,000 people or 0.7% of the total population (see Figure 1).

> **The impact of reduced intra-EU trade is considerable as well.**

Combined with the effects of stagnated migration, the hypothetical reduction of intra-EU trade would lead to a 14% fall in the total exports in Germany and 15% in France (see Figure 2). Various economic interactions between the countries such as changes in exchange rates are included in our VIEW scenario to make sure that German and French imports are also included in the assumptions.

> **Both effects result in a significant GDP loss in Germany and France.**

Although the calculations are based on simplified assumptions, the impact on both countries is unambiguous. That is, both Germany and France would face negative deviation in their GDPs compared to the basic scenario. In Germany, the relative GDP (per capita) loss would equal 6.2% (2.7%) by 2040. In France, the shrinkage would be 3.4% (2.7%) (see Figure 3).

The negative effects can be contributed to less population which leads to a reduced labour force and fewer consumers. Both have negative effects on production. Finally, the effect is being reinforced by falling demand for German and French exports. The effects the remaining 26 countries would be facing as a derived effect of weakening one of the backbone relationships of the EU economy are considerably negative as well._

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Europe to bet on three energy horses

With or without the debated Nord Stream 2 pipeline, time is on the side of natural gas. Renewable energies and efficiency can take over in the long run.

Natural gas is the fossil fuel with the lowest carbon emissions. Just like other energy experts, we at Prognos look at this fossil fuel as an option when thinking about a (less-carbonized) future. Most scenarios, among them some low carbon scenarios, expect a stable role for gas in Europe's energy supply for 2030 and beyond. In 2015, 71% of the EU's gas demand came from imports. The EU's internal gas production has gone down substantially. And this decrease will continue. Already by 2025, the EU's internal gas production will be about 41 billion m³ lower than it was in 2015 with the logical consequence of a growing demand for imports.

So, the question is where a future gas supply could come from. Norway (25%) and North-Africa (8%) are important sources. But production in Norway is decreasing, and Algeria needs more gas for its rapidly growing internal demand. This gives the EU two options to maintain supply: Russia, with its considerable reserves, and the Liquefied Natural Gas (LNG) world market, which is set to grow in the years to come.

LNG is an important source of flexibility and security of supply across Europe. Three new LNG terminals in Świnoujście (Poland), Dunkerque (France) and Pori (Finland) were taken into operation in 2016. With 240 billion m³ per year, Europe has the world's third largest import capacity. In the hypothetical case of full utilization, about 70% of the 2015 gas import demand of EU-28 and Switzerland could be covered. But LNG is normally more expensive than pipeline gas. Therefore, utilisation rates of the European LNG import plants have only amounted to around 20% in recent years. Thus, in the end Russian gas will play a pivotal role in supplying Europe. In 2015 Russia and the LNG world market supplied about 168 billion m³ of natural gas to EU-28 and Switzerland. The demand supplied by these sources is expected to increase 32 billion m³ by 2020 and 76 billion m³ by 2025 (see Figure 1). Russia's new "gas highway" to Europe would be Nord Stream 2. It is supposed to increase the EU import capacity from Russia by 55 billion m³. Once imported into Germany, gas will mostly be transported to neighbouring countries and fed into the international transmission networks. No European money is spent on establishing Nord Stream 2. However, as a project Nord Stream 2 divides Europe. On the one hand, there are those that emphasize the economic nature of the project. They say Gazprom is building this at its own risk. On the other hand, many oppose the project and argue that it would challenge the Energy Union. The current European Commission has given priority to the Energy Union, and thus to energy security, solidarity and trust; a fully integrated European energy market; energy efficiency contributing to moderation of demand; decarbonising the economy; and research, innovation and competitiveness. It remains unclear why new infrastructure – even coming from Russia - goes against these ambitions. It must be acknowledged that Ukraine, Belarus and Poland will lose some transit fees. But these countries will still be needed as transit routes and should therefore invest in the refurbishment of transmission networks to Western Europe.

Russia does indeed have a strong position on the European gas market. But the flexibility to buy from competing sources around the world, such as LNG, will keep prices fair. At the end of the day, Europe can decide to increase energy efficiency and the use of renewable energies and thus reduce import dependencies from all sources. Nord Stream 2 should not block Europe from doing so._

GAS IMPORT DEMAND EU-28/SWITZERLAND
and possible origin in billion Sm³

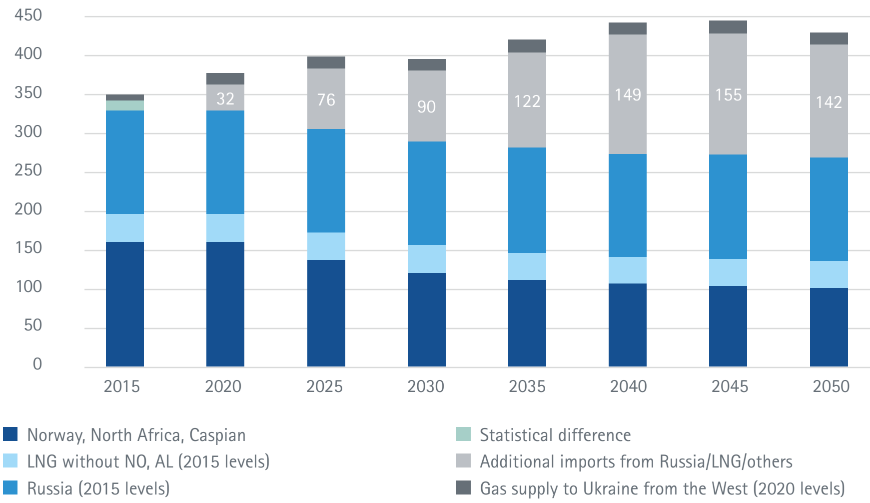

Figure 1 Source: Prognos AG (2017)

Dependency: Europe has more than one energy option

An EU with a more local flavour – Sharepoint Europe

If the gap between rich and poor gets too wide, Europe starts to come apart and needs rethinking. Who will be key actors in shaping that process, and what role will the local level play?

To many people the EU system only works one way - top-down! The consequences? People, even entire Member States, feel left out or even patronised by Brussels bureaucracy. Many feel married to the EU by force rather than love and see the union as a faceless administrative building rather than an identity-forming home.

The staunchest Europhiles see no borders. They are businesses who operate all over Europe. They are young people reaching all corners of the continent via Erasmus or Interrail. They are start-ups with virtual business setups which have no room for national borders. They feel every day hands-on what Europe means for peace, freedom and prosperity, and they could be the ambassadors for the European idea. For a convincing Europe, organisations and stakeholders must get in on shaping it.

Top-down we have heard much about. What is needed is a bottom-up approach. Glocalisation by participation. Sounds innovative and fresh? Doable? Identity forming? It is! But there is also anxiety and worry: How much sovereignty can we let go of? How many refugees can we house? Are we giving up our financial autonomy? How big of a threat is the globalised economy? If participation fosters democracy, then the same goes for Europe.

So, let us take a brief moment for the following scenarios becoming routine: At virtual roundtables across Europe, local stakeholders discuss new concepts for the EU Commission to implement. This is the core idea of a Europe in progress.

Local authorities present sustainable long-term plans for why businesses should be located on their turf. As an organiser, as a marketplace, the EU provides a framework for this. It sets quality standards, both economically efficient and socially and environmentally responsible. This way local authorities can attract businesses and make available the necessary skilled labour and quality of life. In addition to this, you get respectful use of the land.

Local forces are key to the reception of refugees. For the ones who came, and for the many who will still come to the continent as a result of climate change and famine. The summer of 2015 showed the incredible importance of the local environment and of local acceptance (or non-acceptance). These very people and organisations can get involved in devising the integration strategies, even across nations. This would ensure a fair and efficient distribution of the burden across Europe and more local acceptance.

What potential can be found in the people involved in Pro Europe rallies, such as Pulse of Europe? Which parts of structural policy making would be better handled by local European stakeholders than at the central level, and what could they learn from each other, despite different national characteristics?

In March 2017, another anniversary of the signing of the Rome Treaty was celebrated. The European idea is turning 60 - and is ready for its second spring. Ready for a rethinking which involves turning some things upside down._

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_ **Printing**
Arnold Group Berlin

_ **Edition & Distribution**
Print: 10.500 copies
Digital: 13.500 subscribers

_ **Concept & Production**
STÜRMER & DRÄNGER, Berlin

_ **Picture Credits**
Cover: STÜRMER & DRÄNGER, Berlin
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Selected projects

Meeting the Paris climate targets in the power sector
The aim of the 2015 Paris Agreement is to limit the increase of the global mean temperature to well below 2°C compared to pre-industrial levels. The study by Oeko-Institut and Prognos shows the impact meeting these targets has on the German power sector. The German power sector in this scenario has a budget of up to approximately 4 billion t CO_2, which may be released into the atmosphere in the future in total. 80% of the emissions today come from coal power plants. The authors show how these emissions can be minimized in a robust way without risking shortage of supply. Key elements on this path are a definitive phase-out of coal power plants by 2035 and a limitation of generation accompanied by a rapid expansion of renewable energies._

WWF

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Benefits of connected mobility in 2025
In less than ten years, there will be completely new possibilities with the integration of cars into the Internet. In the study “Connected Car Effect 2025” Bosch in collaboration with Prognos investigated more closely what this trend will mean specifically for the US, Germany and the major cities of China. The result: safety systems and cloud-based functions can prevent around 260,000 severe accidents, save 390,000 tonnes of CO_2 emissions and offer drivers more time for other activities. The authors assess a total of eleven technologies for private passenger transport, particularly their dispersion and impacts by 2025 based on unique model calculations._

The Bosch Group

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European Cohesion Policy programmes on the test bench
In close cooperation, KPMG and Prognos have evaluated several Cohesion Policy programmes on behalf of Directorate-General for Regional and Urban Policy, which were conducted from 2007 to 2013 in all 28 EU member states. According to the ‘Ex-Post Evaluation – Delivery System (Work Package 12)’, most programmes performed well in terms of implementation, selecting and carrying out projects – the main exceptions being Romania and Croatia, which as newer member states experienced some teething problems. However, projects were often selected as much for their ability to absorb funding as for their contribution to desired impacts in the region.
The ‘Ex-Post Evaluation – Large enterprises (Work Package 4)’ focused on the support of large enterprises in eight EU Member States. Based on a novel evaluation technique, the authors analysed under which conditions the support of large enterprises reached the desired effects and developed recommendations for future large firm support under Cohesion Policy. As a main recommendation, future support programmes should be more selective, focusing on attracting investment from third countries, inducing benefits for small and medium-sized enterprises and local economies thus helping mid-caps obtain financing and growth._

European Commission

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How EU members perform in hazardous waste management
Planning, classification, labelling, record keeping, collection and treatment – managing hazardous waste is firmly regulated by the EU. A consortium led by BIPRO is analysing Member States’ performance in its now second project for DG Environment. Prognos takes part as statistical expert. Based on an overall performance analysis, in-depth country specific analyses are carried out for selected countries to identify challenges and best practises as a basis for the recommendations. In the second project the researchers focus their analysis on the waste management of polychlorinated biphenyls (PCBs)._

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Travelling in Europe: Trains beat flights on the short haul

Experts from Prognos have investigated the most popular flight and rail routes in collaboration with the European Federation for Transport and Environment in Brussels. The “Short Study on intra-European Flights” investigates whether high-speed trains can replace short-haul flights on certain routes. The top destinations with a travel distance of up to 600 km are mostly domestic connections inside Germany, France, Italy, Germany and Spain. Air and rail are used here. Distances over 600 km are mainly flown, especially when mountains and seas have to be crossed. The train is then a real alternative, if the journey leads from city centre to city centre and travel time compared to the airplane is competitive. This applies, for example, to trips between Lyon-Paris, Rome-Milan, Barcelona-Madrid and Hamburg-Berlin. The study is based on a comparison of travel times, capacities and official traffic statistics._

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Departure from the Schengen Agreement

The long-term reintroduction of border controls within Europe would reduce economic growth throughout Europe. This is the result of a study by Prognos on behalf of the Bertelsmann Stiftung. Up to the year 2025 for Germany alone a decline in growth can be expected amounting to a minimum of 77 billion € from 2016 to 2025. In a pessimistic scenario these losses could even sum up to about 235 billion € within the next 10 years. In Western European countries, border controls would have significant consequences. Among the Eastern European countries, the negative effects would to the greatest extent affect Poland._

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Advantages of increasing public investment in Germany

Between 2005 and 2014, the German government allocated an average of 2.2% of its GDP for the construction and renovation of roads, schools and day care centres. This is significantly less than the OECD average for the same period (3.3%). A recent study conducted by Prognos uses scenarios to show the impact of increasing and sustaining public investment in Germany by 2025. If Germany were to invest 3.3% of its GDP annually (same as the OECD average), GDP growth would be 1.6% per year. That way in 2025 Germany could generate almost 80 billion more €. Furthermore, the authors confirm that an increase in public investment does not conflict with the German debt rule and the ”black zero”._

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Renewables – a growth market of the future

What are high potential export markets for the sectors renewable energy, energy networks and energy efficiency? The German Energy Solutions Initiative of the Federal Ministry for Economic Affairs and Energy has asked Prognos to study this question by the end of the year 2017. By combining demographic, economic, energy, institutional and regulation data sources the authors can identify the countries which show actual high growth rates in the aforementioned market sectors and which are likely to show a strong market expansion in the future. These countries are ranked by their growth potential. The ministry will use these rankings later on for a deeper country-specific market analysis._

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Prognos in the field

Contribution to the International Innovation Partnership Conference, Leverkusen

Presentation at the European Creative Industries Summit, Brussels

Input on families and democracy, Democracy Congress of the German Ministry of Family Affairs, Berlin

Presenting evaluation results at the Conference on the Quality Pact for Higher Education Teaching, Berlin

Presenting the 5th monitoring report on energy transition, Munich

Keynote speech “Megatrends and the World Economy 2040” at the think tank of the Central Bank of Iran, Tehran

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