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Partner's Foreword

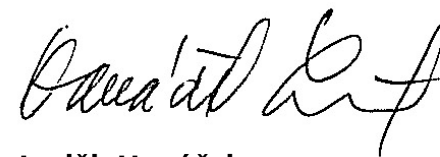
Research and development has many faces, not just white coats and laboratories. Basic and applied research is carried out primarily by the academic sector and financed chiefly from public resources. By contrast, experimental development is largely funded by the business sphere and it represents a way for companies to maintain competitiveness and ensure long-term financial growth. At the same time, however, research and development make up a single whole which no developed country can do without. That is one of the reasons why developed economies of the EU support research and development by investing approximately 3% of GDP per year, but the allocations of Central European countries to research and development are comparatively smaller – between 0.4% and 2.4% of GDP.

All Central European countries which participated in the survey have a set research and development support programme. It consists either of direct support in the form of grants, or indirect support in the form of tax deductions. The indirect types of support also include various financial tools such as loans offered under advantageous conditions. Although there is no unified support model, the majority of EU countries use a combination of these methods. This year's edition of our survey has confirmed that it is precisely the combination of means of support that motivates companies the most to invest in research and development.

Another positive finding of the survey is the fact that companies want to maintain or even increase their volume of funds invested in development. An incentive for increasing investments are also the new grants under the 2014-2020 European Funds programming period, enabling companies to co-finance their development projects.

What makes companies increasingly more worried, on the other hand, is the uncertainty surrounding how they will be evaluated in a potential inspection by tax and other authorities. I believe that the individual state authorities of the countries in Central Europe will make use of this impulse not only for expert discussion on potential legislative amendments, but also to create a unified interpretation practice.

To conclude, please allow me to thank all the companies that gave their time to completing the questionnaire and enabled us to carry out this analysis. This year's edition of the survey was already the fifth, so we can also evaluate the obtained data time series-wise. I hope that you will find the published results interesting and that they will contribute not only to the discussion on research and development support in the individual countries, but also to a dialogue between the private sector and state authorities.



Luděk Hanáček
Partner



Luděk Hanáček
Partner

Macroeconomic view

Economic growth is the basic prerequisite for improving the living standards of the population. And not only in the material sense of the word. A richer society offers people the opportunity to use their leisure time in a more meaningful way and to pursue personal development.

There are different paths to accelerating and sustaining economic growth. The basic perspective to consider is that of production factors. These are usually divided into three categories: work, capital and their productivity. The volume of work is limited by demographic growth. However, in a number of developed as well as developing countries, including Central Europe, this factor is likely to hinder further economic growth given the anticipated impact of an aging population. Investment in production capital also has its limits. Too much investment reduces the marginal rate of return on capital. Economics provides for an optimum distribution of resources between consumption and investment, with the present as well as future benefit to the whole of society maximised (within the growth theories referred to as the "Golden Rule"). What remains is the third factor: the productivity of the production factors. The principal means of enhancing productivity is innovation. Innovation activities may be, in turn, promoted by investing funds in research and development. Spending on research may not necessarily ensure that new ideas and technological processes will be produced; however, they considerably increase the likelihood of it happening. The experience of successful economies, such as the US, Germany, Sweden or South Korea, stands as proof of this.

Central European countries have, for a long time, lagged behind in terms of the volume of investment in research and development. In some of the countries, however, things have begun to look up, with the highest achievers being Slovenia and the Czech Republic. In 2014, the two countries invested 2.4% and 2% of GDP in research and development, respectively. By way of comparison: the European Union average is 2%. Slightly below-average investment in research and development has been made by Hungary and Estonia, oscillating between 1-2% of GDP. The amount of the costs incurred by the rest of the countries in Central and Eastern Europe is below 1% of GDP.

However, it is not only the total sum invested in this area that is at play. The sustainability of a high amount of investment in research and development and a reasonable burden on public finances may be ensured by a suitable financing structure. In certain aspects, the role of the state and its support in the form of direct subsidies is irreplaceable. Nevertheless, it is equally important to provide space for corporate investment supported by an appropriate tax system setup and its practical application.

An important parameter is the effectiveness of research and development costs. In this respect, the highest achiever from among the CEE region is Estonia, having taken 31st place in the list compiled by the World Economic Forum based on innovations and the sophistication factor. The Czech Republic is only one place behind. Lithuania and Slovenia were also among the countries that made the top forty.

The nature of the global economy, and with it the fate of small open economies in Central and Eastern Europe, have changed during the last two decades. The existing factors of economic growth have been exhausted to a certain extent and the external economic environment has been altered by the financial crisis. Investment in research and development will play an ever more important role. Central Europe could take inspiration from economically successful countries, which have been making use of this factor for their benefit. Therefore, it would be useful to increase the priority given as part of the economic policies of the CEE countries to the support of investment in research and development. Additionally, efforts should be made in promoting corporate-level innovation activities. At the same time, the sustaining or acceleration of economic growth will be vital not only for the growth of living standards, but for the sustainability of public finance as well, including the financing of retirement and health care systems.



David Marek

Chief Economist, Deloitte, Czech Republic



David Marek

Chief Economist, Deloitte, Czech Republic

Key findings

- A comparison of the 2016 results with last year's survey shows that companies are planning a greater increase in their R&D investments, over both the next one to two years (45%) and the next three to five years (57%).
- The principal drivers that are motivating companies to invest more in R&D include the availability of more types of benefits, enabling them to use a combination of grants, tax deductions etc. and the availability of skilled and experienced researchers.
- Most companies (71%) are continuing to collaborate with third parties, such as universities and research institutes, which is proving beneficial for both parties.
- The key concerns expressed by companies from all surveyed countries include the uncertainties they face when the tax authorities review the subsidies and tax deductions they have used, the uncertainties in identification of R&D activities and a scarcity of qualified and experienced research personnel.
- The highest proportion of companies mostly use a company secrets policy to protect their know-how and intellectual property (69%), followed by patents and utility designs (40%) and trade marks (31%).



Analysis

Deloitte's ongoing focus on research and development (R&D) is one reason why we carry out this annual survey aiming to map the attitudes of companies in Central Europe to investing in R&D. It also helps find out what difficulties companies face in the R&D area, how they protect their know-how and what kind of government support they mostly use. This is the fifth consecutive R&D survey, mapping the situation in 10 Central European countries (Croatia, the Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Romania, Slovakia and Slovenia). More than 400 respondents took part in the survey.

New support tools

The good news from this edition of the survey is that companies throughout Central Europe would like to invest more in R&D, following the trend seen in previous years. The principal drivers that are motivating companies in this way include the new programming period of EU funds (2014 – 2020); this introduces new R&D subsidies that provide an immediate stimulus for companies to co-finance R&D projects, which can often be extremely financially demanding. Another motivating factor is the implementation of new tax tools for R&D support in individual countries R&D tax deductions introduced in Slovakia (2015) and Poland (2016).

Last but not least, we should mention that the improving economic situation in Central Europe and across the world is having a positive impact on company finances, as higher demand for products and services leads to better results. This means that more funds may be invested in R&D to enable companies to retain their competitiveness in years to come.

Continuing collaboration

Another piece of good news is that most companies are continuing to collaborate with third parties, such as universities and research institutes, which is proving beneficial for both parties.

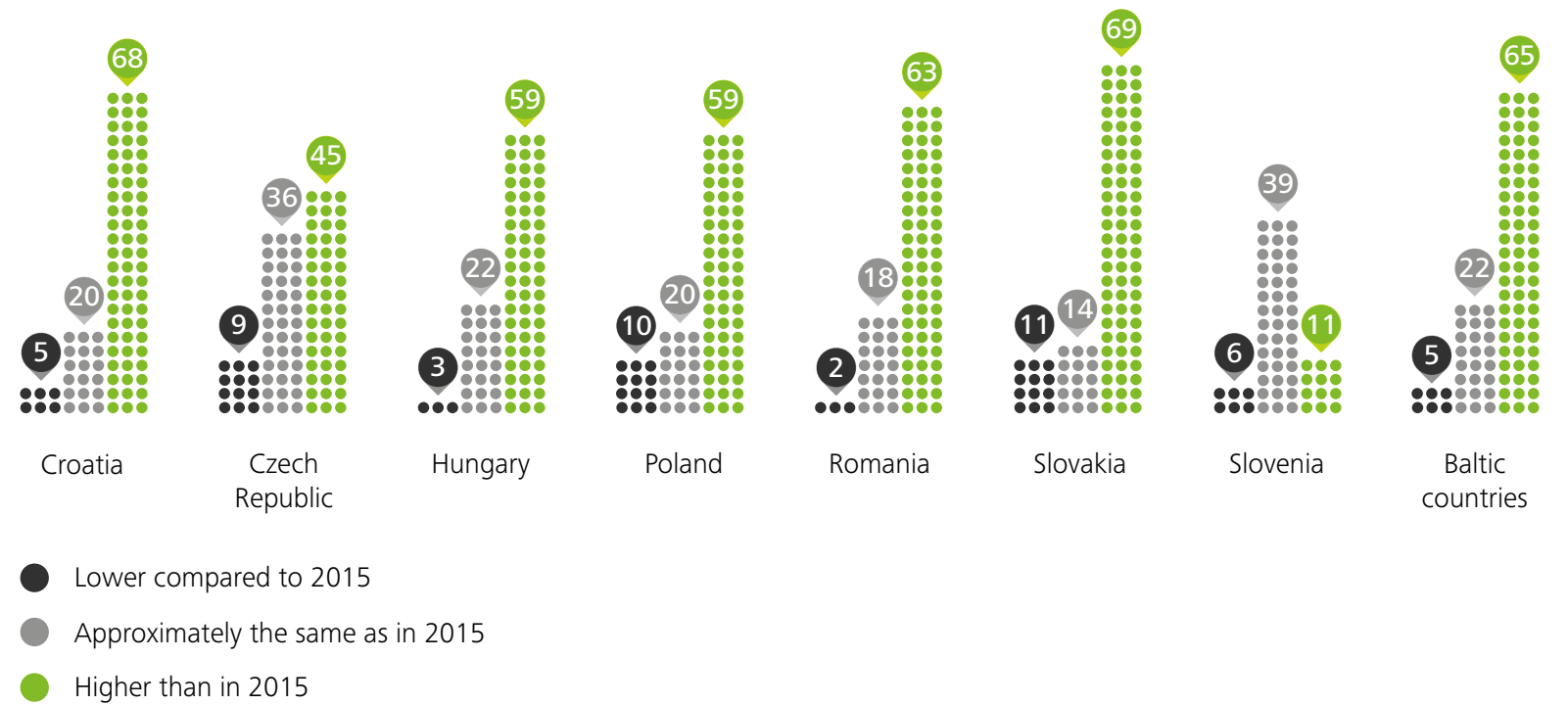
The key concerns expressed by companies from all surveyed countries include the uncertainties they face when the tax authorities review the subsidies and tax deductions they have used. Another area of concern is a scarcity of qualified and experienced research personnel, without whom delivering effective R&D projects is challenging.

How would you foresee your company's R&D spend in years to come?

Responses clearly show that companies are positive about their R&D spending. Compared to 2015, they plan to increase their R&D investments over the next five years.

A comparison of the 2016 results with last year's survey shows that companies are planning a greater increase in their R&D investments, over both the next one to two years (45%) and the next three to five years (57%). The countries where the greatest numbers of companies are planning to increase their investments are Slovakia (69%), Croatia (68%) and the Baltics (65%). However, most Slovenian companies do not plan to increase their R&D spend. It is possible, that last year most companies increased their investments on maximum level and because of this they plan to invest the same amount as 2015 over the next two years (44%) and three to five years (39 %).

Companies' R&D investments over the next 3 - 5 years (%)



Protecting companies' R&D policies and Intellectual Property / know-how

Most companies consider the question of protecting R&D results to be a key one. How a company protects its IP and know-how depends on several factors, the most important being its size. For smaller businesses, the legislative process around registering a patent, for example, may be too demanding in terms of administration, time and finance. Alternatively, they may simply underestimate the risks involved in the disclosure of company know-how. The next most decisive factor is the market area in which a company operates. While technical companies may use patents or industrial design, such solutions are not used by IT companies to protect software.

Secrets policies still dominate

This year's survey results are comparable with those from 2015. Like last year, the highest proportion of companies mostly use a company secrets policy to protect their know-how and intellectual property (69%), followed by patents and utility designs (40%) and trade marks (31%). The least commonly used form of protection is industrial design.

Surprisingly, 9% of all surveyed companies use no form of protection.

How do you protect Intellectual property / know-how in your company? (%)



The most serious problems in the current R&D support system and the usage of R&D grants and tax incentives

When asked 'What do you consider to be the most serious problem in the current system of R&D support?', almost a third of the respondents (31%) cited the uncertainties involved when tax authorities review subsidies and tax deductions. (That is, the concern that following such a review, the company may have to refund part or all of the grant or pay compensation to cover an incorrect tax deduction.) The highest proportions of companies expressing this concern were in the Czech Republic (39%), Romania (35%) and Poland (34%).

Quantifying concerns

A quarter (25%) of our respondents stated that the second most serious problem is the difficulty in identifying those activities that may be considered R&D, highlighting the currently unclear legislative definition of R&D activities.

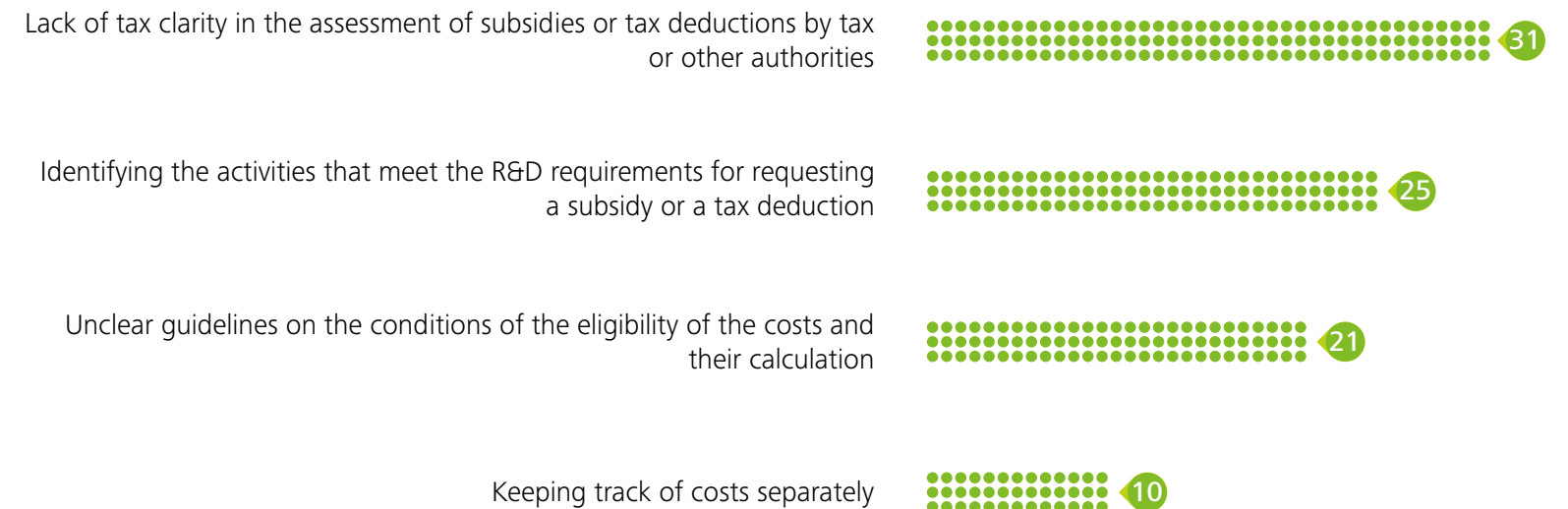
Last year, the greatest proportion of respondents (32%) saw the identification of R&D activities as the most serious problem they faced, followed by uncertainty relating to tax issues (27%). The switch in the ranking of these two problems in 2016 may be the result of several factors. First, the increasing number of companies utilising various forms of R&D support will lead tax authorities to undertake increasing numbers of financial reviews (with potentially negative outcomes). Second, companies will experience uncertainty when using a newly implemented support tool (such as a tax deduction) and are likely to be concerned about its potential assessment by a tax authority.

Media matters

There is a third factor that can have a negative impact on company attitudes – namely, the media coverage of controversial cases. However, such cases can in fact help to set clearer rules, create a better assessment methodology and even initiate legislative change. These benefits can arise in cases where a company does not agree with the procedure performed by supervisory authorities and uses legal means to make an appeal.

Over the long term, the lowest proportion of respondents (10%) sees the related administrative burden (keeping track of costs separately) as a problem. However, this is an increase from 7% in 2015.

What is the most serious problem in the current system of R&D support (both in terms of subsidies and of R&D tax deductions)? (%)



Key factors influencing R&D spending

Many factors influence a company's decisions about whether and how much to invest in R&D activities. The survey attempted to identify the factors that play a key role in a company's decision to increase their R&D investments over the next two years.

The responses show that companies consider the availability of more types of benefits, enabling them to use a combination of grants, tax deductions etc, to be the most influential factor in increasing their R&D investments (64%). The second most important factor is the availability of skilled and experienced researchers (63%); these include university graduates who companies can train as well as seasoned engineers and technicians.

Grants vs tax relief

The survey also shows that companies prefer the opportunity to use grants rather than tax relief. This finding may, however, reflect the fact that the tools available to support R&D differ between different Central European countries. Although grants are available in all the countries participating in the survey, the tax deduction was only recently introduced in Slovakia (2015) and Poland (2016). The way that tax relief is used differs from country to country as well. The proportion of R&D costs eligible for an R&D tax deduction ranges from 25% in Slovakia, to 100% in the Czech Republic and Slovenia, and right up to 300% in Latvia. The amount in question may play a role in influencing whether companies use tax relief or the grants for which they may apply – depending on the type of project and company involved, grants can cover significant part of a project's costs.

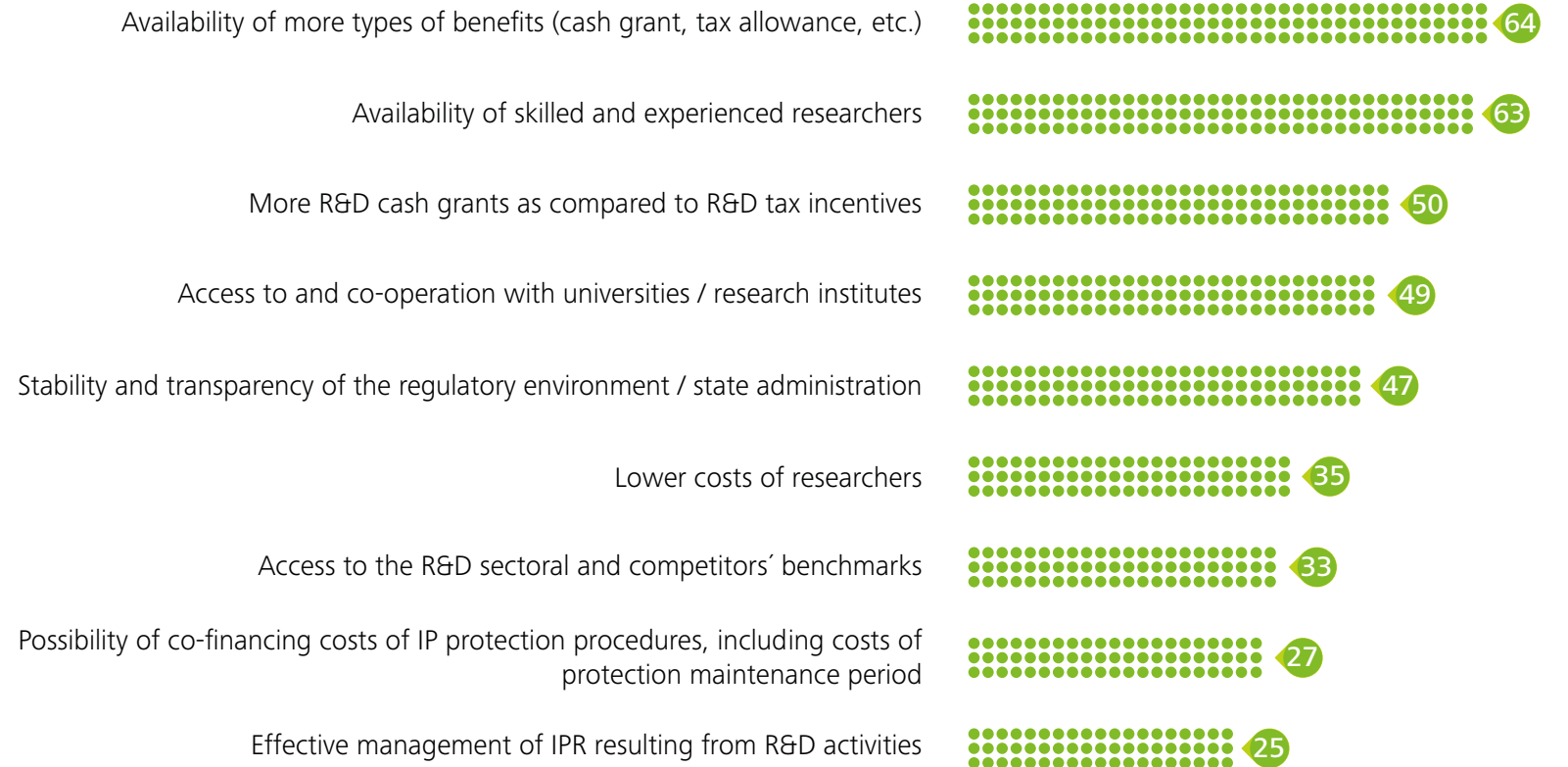
A shortage of researchers

Respondents also confirmed that the availability of skilled and experienced researchers is still a high priority (63%). However, the related costs of employing them are seen as less important than last year (down to 35% from 65% in 2015). The numbers show that there has for some time been a scarcity of research professionals throughout Central Europe, mainly in technical fields and IT. It is not only the higher demand resulting from Central Europe's economic growth that is driving companies to need more researchers and developers. New technologies are also penetrating all industrial sectors – new software tools and digitisation in banking, for example – where such processes were not commonly used in the past.

The above findings correspond closely to the results of previous surveys. At the same time, comparing results shows that companies are now placing greater emphasis on opportunities to collaborate with universities and research institutes (49%). Professional academics and experts can therefore participate in private-sector projects and put their knowledge into practice.

In an issue related to the concerns that companies find most worrying (summarised in the section below), respondents see the stability and transparency of the regulatory environment as very important (47%).

To what extent would the external factors mentioned below influence the increase of your R&D spending in the coming 1-2 years? (%)



Collaboration with third parties in R&D projects

The good news is that, similar to last year's survey, most respondents (71%) do collaborate with universities or research institutes. This can benefit both sides. Private companies with sufficient capital gain from access to experienced experts. And universities not only get the opportunity to focus on practical projects – working with the private sector may also be financially beneficial to them.

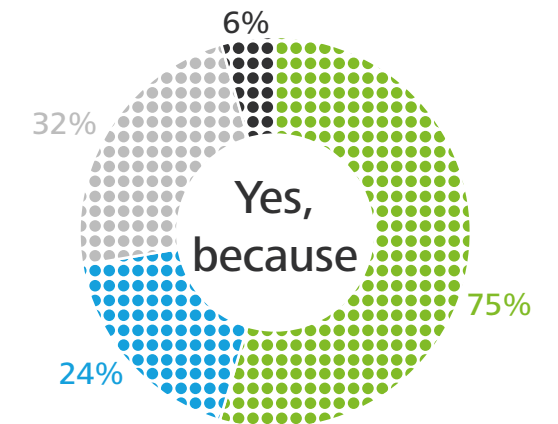
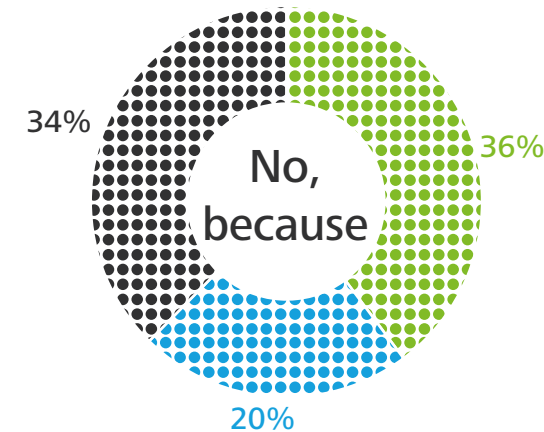
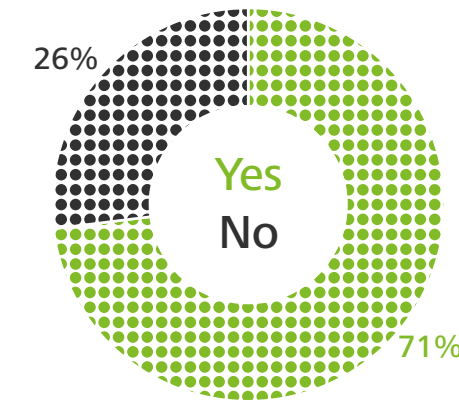
The main reason why companies co-operate with a third party in this way (be it a university, a research institute or another company) is to complete a development task (75%). A rather lower number of respondents said that working with a third party was a prerequisite for applying for or receiving a subsidy (32%) or receiving a higher subsidy (24%).

Leaders in collaboration

So where, according to the survey, is third party collaboration most common? The two leading countries are the Czech Republic (82%) and Lithuania (78%), while the least collaboration takes place in Hungary (64%) and Slovenia (50%).

However, a quarter of respondents do not work with any third parties. This is because they have their own R&D centres (36%) where projects can be taken right through to completion.

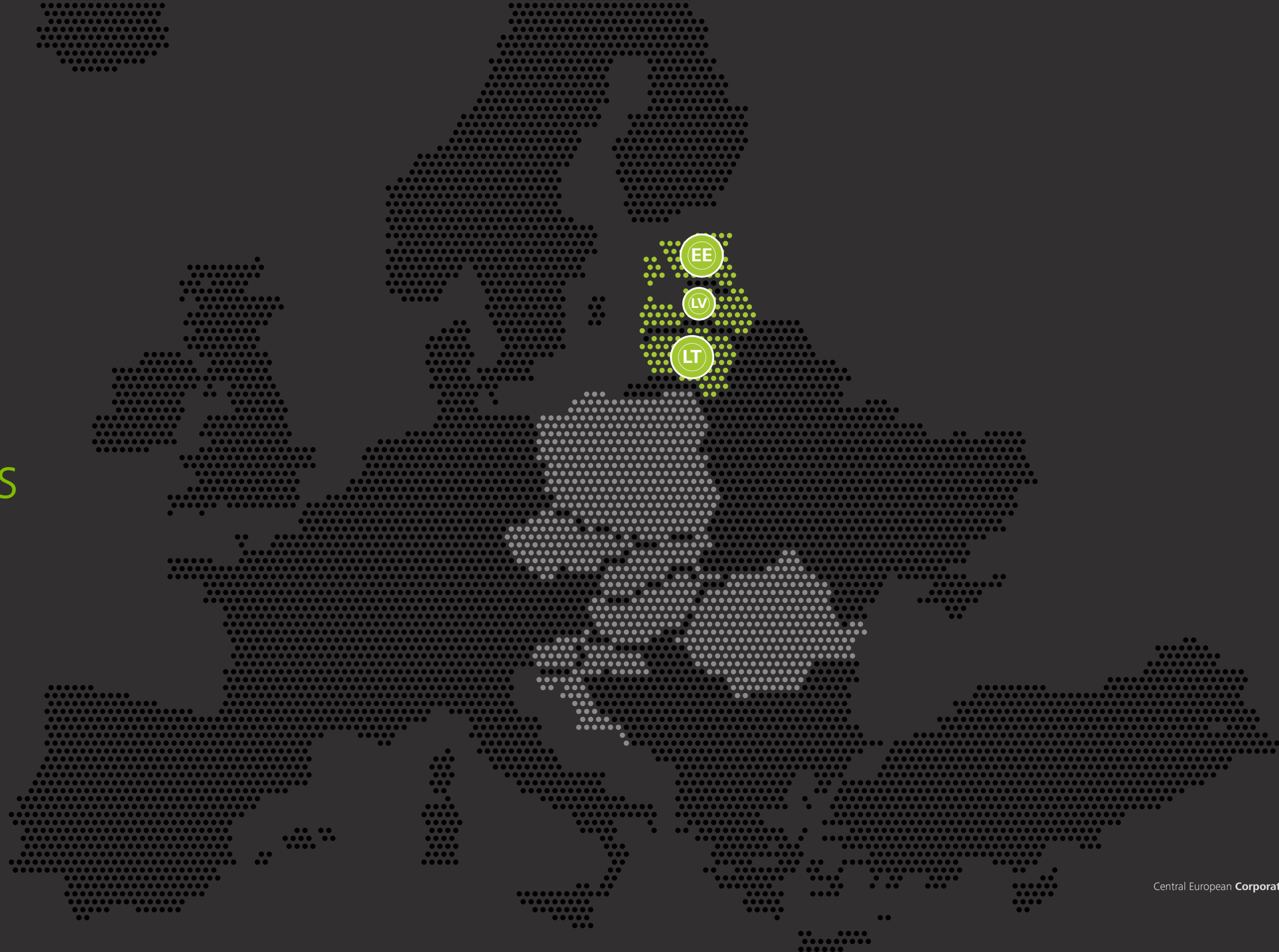
Are you cooperating with third parties when you are carrying out R&D projects?



- Our company has an R&D centre
- Our company has an R&D centre in other firm of capital group
- Other reason

- It is needed for conducting research projects
- It is required in order to receive a higher cash grant for conducting an R&D project
- It is required to apply for grant
- Other reason

Baltics



Key findings

Baltic companies are more positive about their R&D spending than counterparts elsewhere in Central Europe, with 28% of respondents estimating that their R&D spending exceeds 10% of turnover (21% elsewhere in CE).

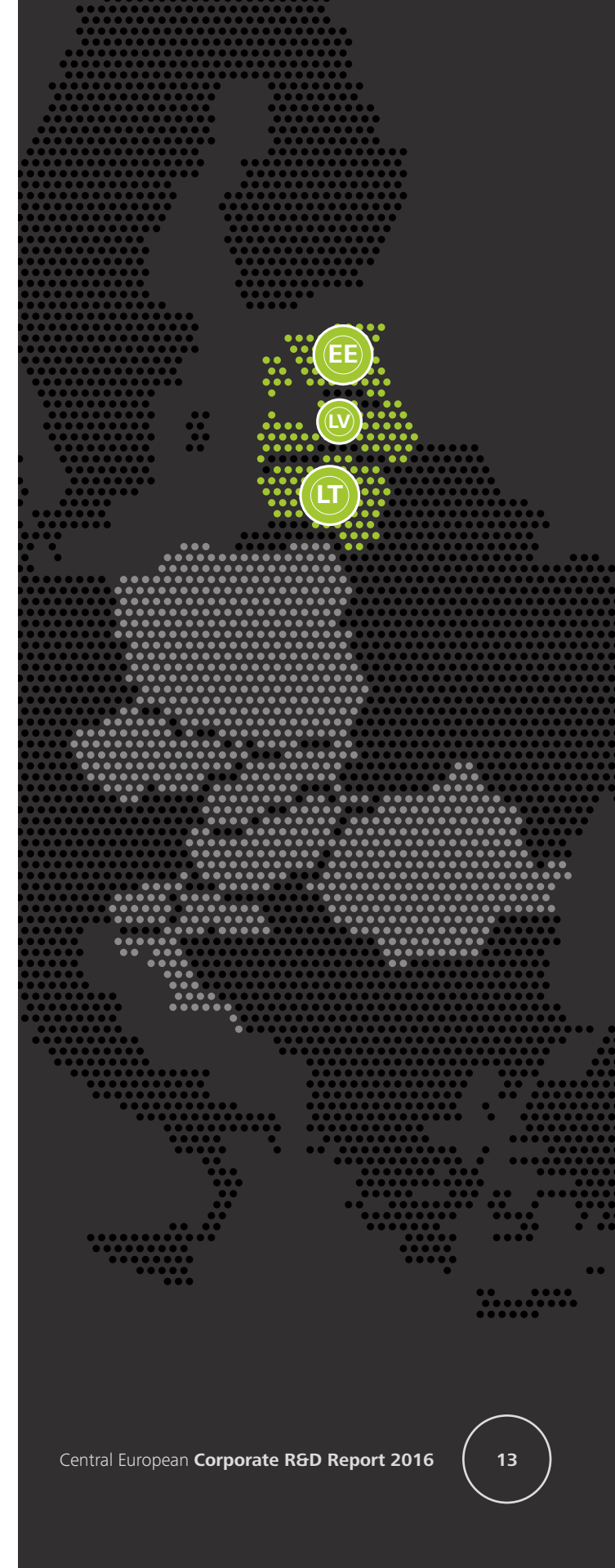
In addition, nearly half of Baltic companies plan to increase their R&D spending in the next one to two years, making Baltic companies' future expectations slightly more optimistic than CE as a whole. They are also more optimistic than in 2014, with the percentage expecting higher short-term R&D spending increasing from 30% to 48%. Similarly, the proportion expecting an increase in medium-term spending grew from 34% in 2014 to 48% in 2015.

External influences

The most important external factors influencing R&D spending are the same in the Baltics as across CE, with respondents evaluating the availability of skilled and experienced researchers and several types of benefit as the main drivers of additional R&D spending.

However, Baltic companies are less confident than the CE average about applying tax incentives. 30% have difficulty with classifying R&D projects (CE: 18%), 23% are uncertain about the approach of tax authorities (CE: 16%), and 15% are concerned about keeping track of costs (CE: 9%).

When conducting R&D projects, Baltic companies tend to collaborate more than the CE average with third parties (78% vs 71%). They do so mainly because it is necessary for the successful implementation of their R&D activities, not because of the formal requirements of state-aid programmes.



Latvia

Detailed rules for R&D grant programmes within the new EU programming period were developed to enable the first application calls to be launched at the beginning of 2016. The first results of the R&D tax incentive introduced in mid 2014 became known. In the first six months since the incentive became effective, almost 100 companies used tax benefits totalling EUR 3.4 million (while eligible R&D costs totalled over EUR 11 million).

The Latvian commission set up to evaluate R&D received its first 10 projects. In a popular move among businesses, the commission took the step of hiring external IT experts to help put effective processes in place for distinguishing between what are and what are not R&D activities.

Lithuania

From 2013 to 2014, companies' spending on R&D increased by 28.3%, while government R&D spending rose by just 8.5%. The largest investors in Lithuanian R&D projects were foreign capital companies.

The process of establishing science and technology parks is actively progressing in Lithuania. The Ministry of Economy allocated over EUR 28 million to implement infrastructure projects in the Lithuanian Valley under the Inogeb LT-2 measure of the EU Structural Funds.

Following the receipt of EUR 60 million in funding from EU Structural Funds, the government and local businesses, over the last five years 188 new R&D companies have been created, 1,833 agreements signed between companies and science institutions, 708 jobs created and 264 new technologies, services and products developed.

Estonia

In 2014, Estonia's R&D expenditure totalled EUR 287 million, 12% less than in 2013. It was anticipated that R&D spending would remain on a downward trend in 2014, following large investments made in 2010-2012 that caused an exponential increase in expenditure.

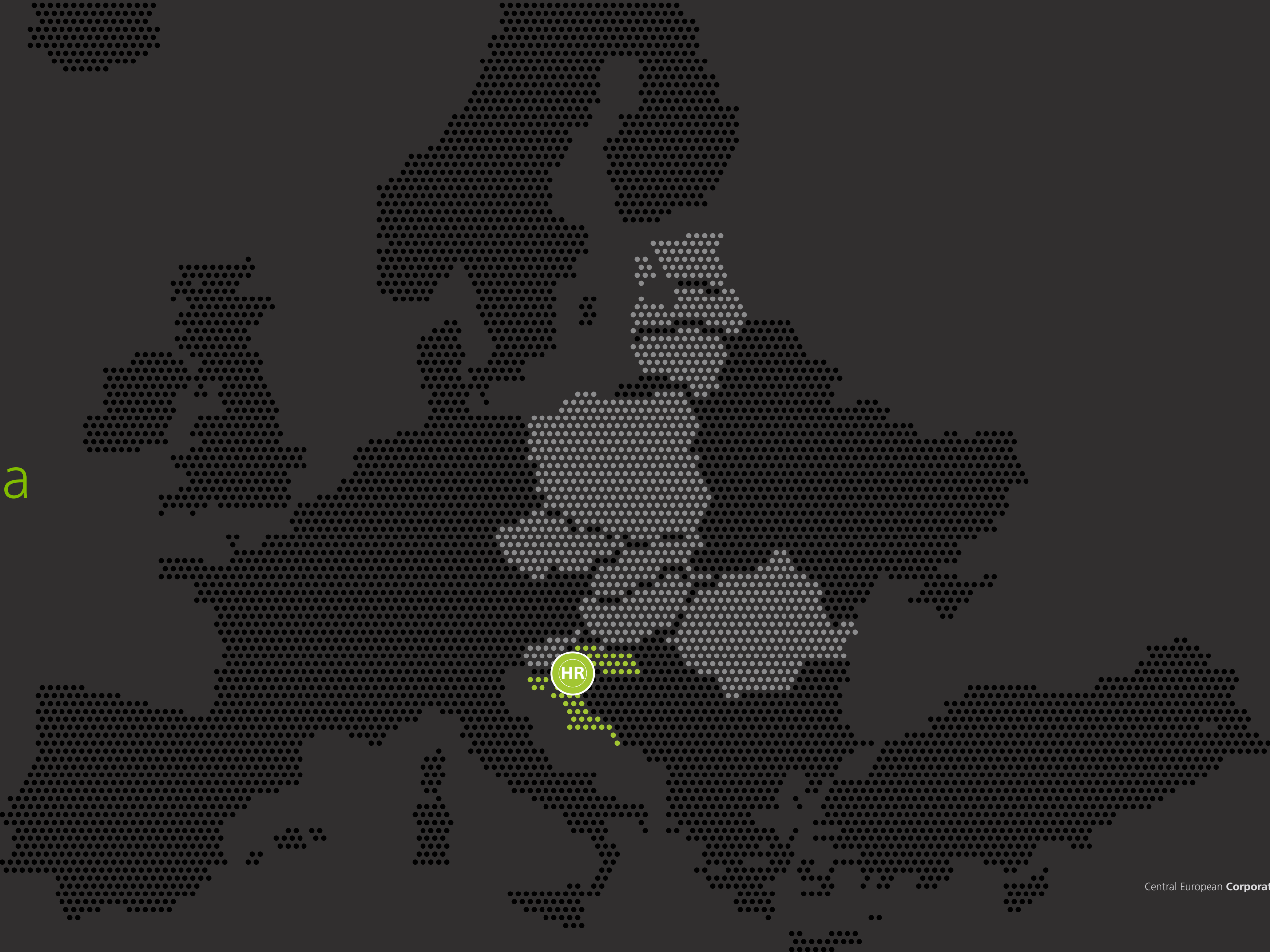
However, the proportion of turnover invested by Estonian companies in R&D has increased, and companies expect investments to increase further in future.

Several programmes were launched to support R&D activities. The Ministry of Economic Affairs financed R&D programmes involving product development, collaboration and technology programmes for priority areas. The Estonian Investment Agency launched a EUR 2 million programme to support service and R&D centres.

More than 10 new Centres of Excellence in Research were opened during the year.



Croatia



Slow progress

2015 did not see much change in the Croatian R&D sector. It was in early 2016 that Croatia finalised and approved the Smart Specialisation Strategy. As a result, EUR 665 million is now available to private and public sector organisations for R&D and innovation under the 'Strengthening research, technological development and innovation' objective of the Competitiveness and Cohesion Operational Programme (OPCC) 2014 - 2020. However, calls for proposals have been constantly delayed, hampering investment in R&D activities and innovation, and slowing Croatia's development.

Moreover, the Croatian government's R&D regime, under which tax credits were available for enterprises, was closed in late 2014 with no further extension currently under consideration.

During 2015, Croatian companies also had access to national R&D grants from the Croatian Agency for SMEs (HAMAG-BICRO) and from centrally-financed EU framework programmes such as Horizon 2020 and Eurostars.

Financial facts

This year's R&D survey shows that 30% of respondent companies claim to spend more than 10% of their turnover on R&D. In fact, the general percentage of reported turnover spent on R&D activities is very similar to last year. Just 3% of respondents say they do not know how much they invest in R&D, much lower than last year when 13% were unable to quantify the amount spent. This suggests that Croatian companies are having less difficulty in identifying which of their activities qualify as R&D.

The majority of respondents are planning to increase their R&D investments over both the short (48%) and longer (68%) terms. Compared with the previous year, there is also a marginal upward trend in short and long-term spending on R&D.

According to our respondents, Croatia's Intellectual Property landscape is little changed since last year. A significant majority of companies (75%) still use a company secrets policy to protect their IP and know-how.

Influential factors

The most frequently mentioned external factors that drive increased R&D spending have been consistent over the years. The most frequently mentioned of all is the availability of more types of benefit. The next most relevant factor that respondents highlight is a need for greater emphasis on R&D cash grants than on tax incentives.

The need for information

While 43% of respondents tell us they are familiar with tax incentives, precisely a third say they are fully aware and of R&D grants and make use of them. These percentages are still low, suggesting that businesses are suffering from a lack of information.

They also lack the resources to properly identify those activities that meet the eligibility criteria for R&D subsidies or tax credits (30%) and find the rules for assessing subsidies unclear (28%). In addition, it was no surprise to find that the largest proportion of companies (58%) say they need more financial support.

A comparison with last year's survey results shows no significant difference between the results for 2015 and 2016, meaning the 2016 survey confirms a clear year-on-year trend in line with our findings in both 2014 and 2015. These findings reflect the current situation in Croatia, following the abandonment in late 2014 of the government's tax incentive regime. While new EU R&D grant calls are under preparation, no R&D tax incentive or grant system is currently in place.

However, Croatia's development in the R&D space is likely to change for the better once OPCC 2014 - 2020 enters the implementation phase. The success of the programme in terms of R&D will depend on ensuring that Croatian enterprises are informed about the opportunities available to them through EU funds, and that they are committed to playing a critical role in the regional development of R&D.

Czech Republic



The big picture

Companies in the Czech Republic are able to use different kinds of benefits for their R&D activities, namely EU subsidies and national subsidies or tax deductions. Subsidies underwent particularly significant changes in 2015 and early 2016. The first calls from EU structural funds for the new programming period of 2014 -2020 were announced in the summer of 2015. Czech companies may also continue to use the centrally-financed European programmes such as Horizon 2020 and EUROSTARS 2.

In 2016, the highest-ever nationally funded R&D budget (CZK 28.6 billion) was approved. The Technology Agency of the Czech Republic launched the GAMA applied research, experimental development and innovation subsidy programme. And the Czech government approved a national policy document for 2016-2020 identifying applied research as a key area for support.

Deloitte's survey confirms that the availability of more types of benefits (grants, tax deduction etc.) is the most influential factor in increasing companies' R&D investments and it is more crucial for making decision than the total amount of cash grant despite the amount being also important.

A new methodology of R&D eligibility

There were no legislative changes covering R&D tax deductions. And while the number of companies using tax deductions is increasing every year, this is driving a number of controversial cases in some regions that are publicised by the media. Some companies finding themselves in a difficult situation use the law to appeal against the tax authorities' negative decisions, demonstrating their disagreement with the view that the activities in question do not qualify as R&D. Such disputes show there is no unified methodology for assessing tax deductions, particularly covering the technical aspects of a project. The Technology Agency of the Czech Republic has therefore designed a methodology for assessing R&D projects. While not legally binding, this should aid tax authorities in assessing a project's eligibility.

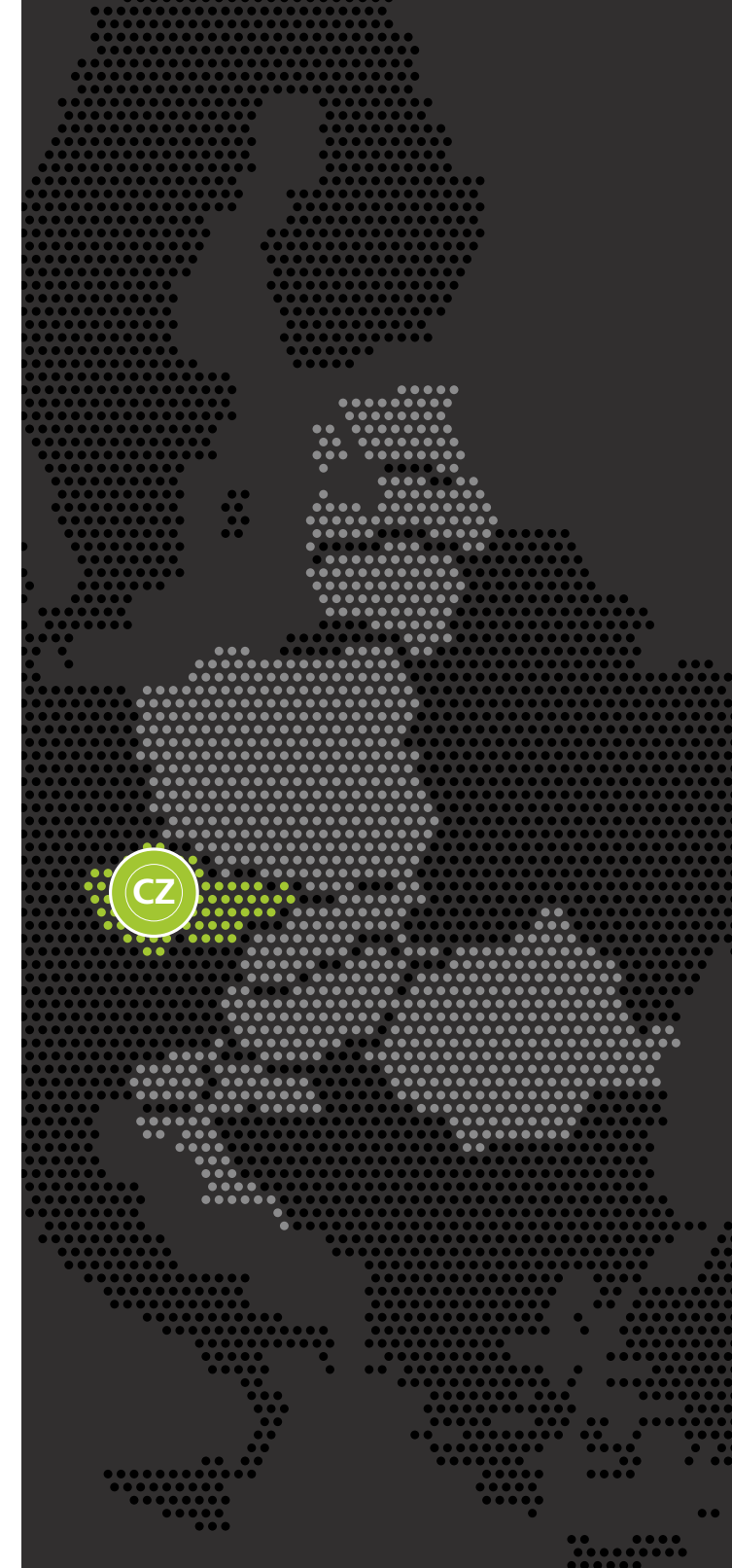
The main challenges

As in previous years, this year's survey also highlighted the difficulty companies can face in assessing projects. Like last year, uncertainty when the tax or other authorities assess subsidies or deductions is the most serious problem respondents face (39%). There is a related concern about whether they can correctly identify which R&D activities meet the criteria for the award of subsidies or tax deductions (20%). Although there were no major legislative changes to implementation directions in 2015, only 16% of respondents see them as the most serious problem, 5% lower than last year.

However, the good news is that companies are planning either to increase their R&D investment in the next three to five years (45%) or to spend the same amount as the previous year (36%, the same proportion as in 2015). In the area of IP and knowledge protection, 64% favour the company secrets policy (again the same as last year). The patent/utility model is preferred by 54%, 5% up on 2015.

The need to collaborate

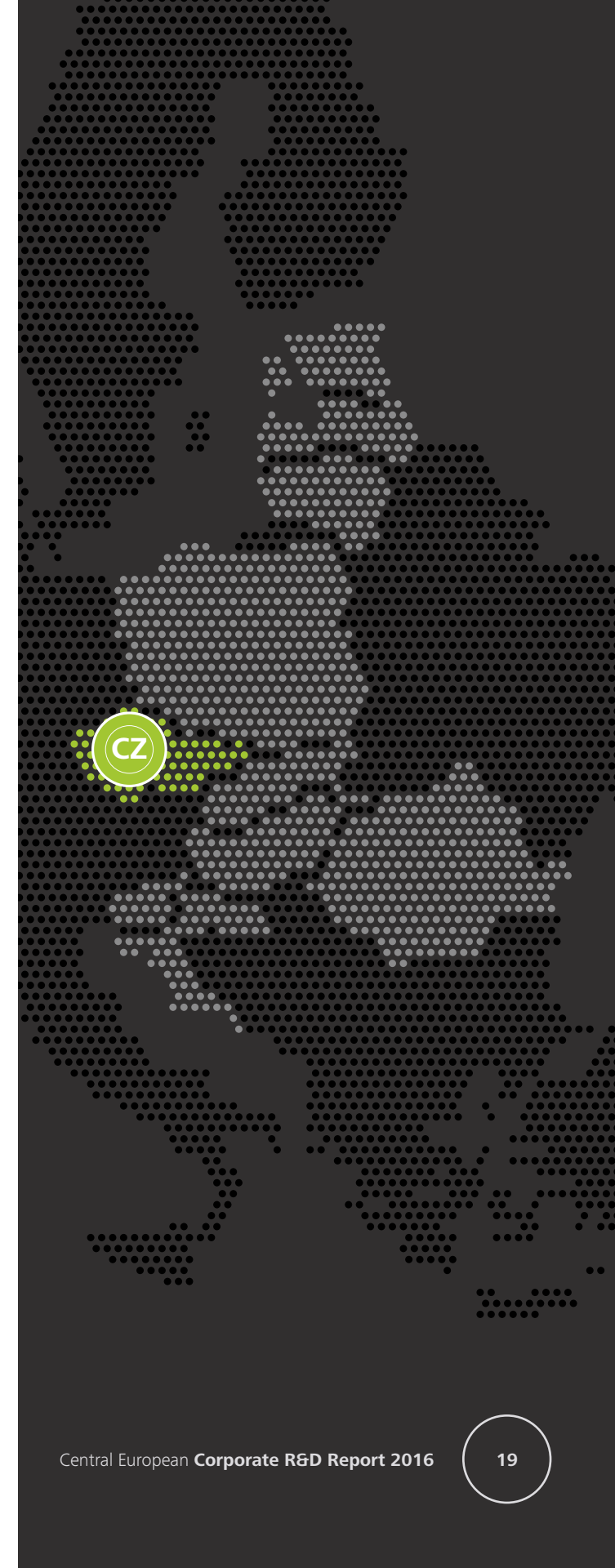
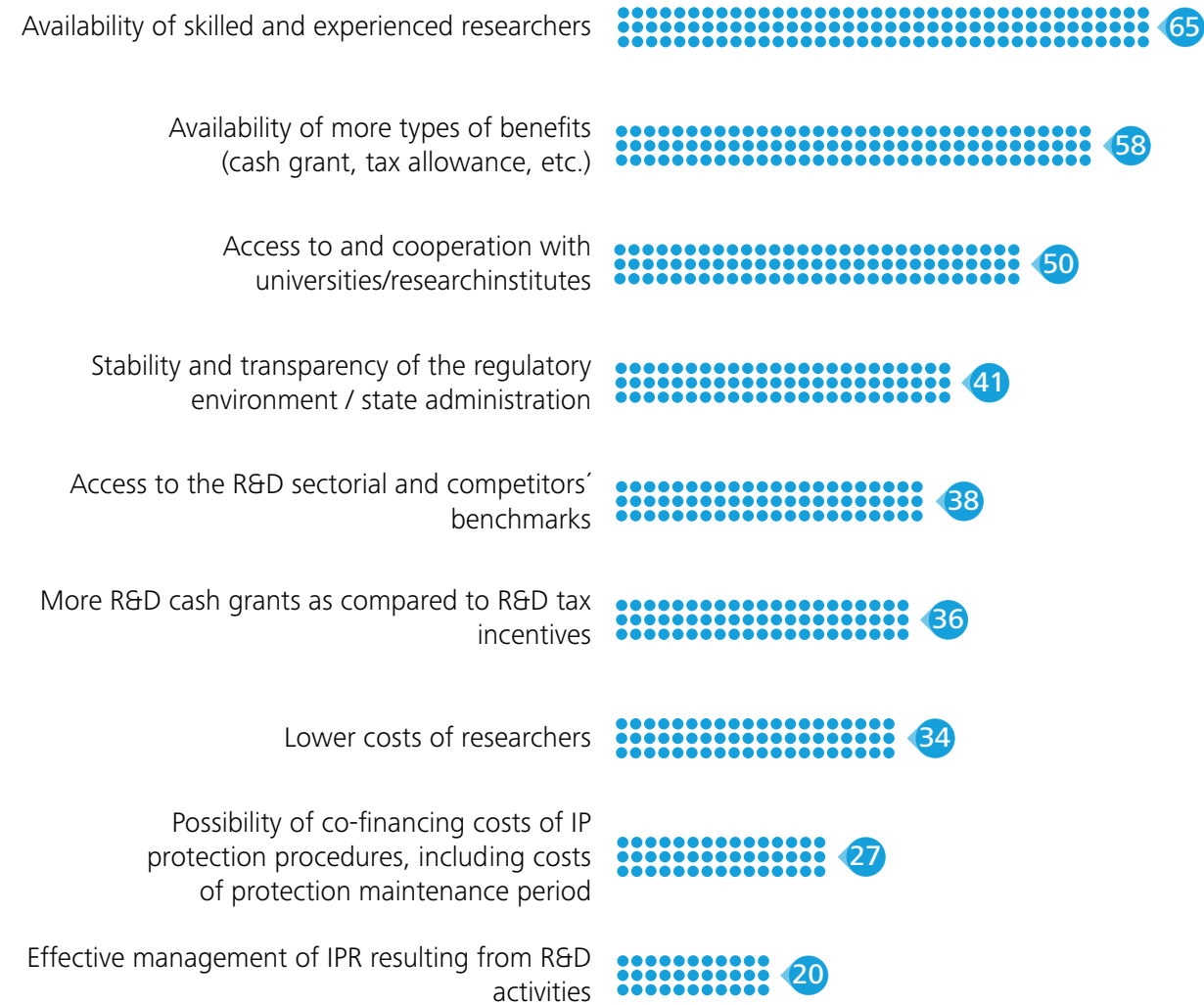
The survey also shows that companies would increase their R&D investments if they had enough skilled and experienced researchers, including university graduates. Unfortunately, there is a scarcity of such personnel, even though companies do not see the size of their salaries as a major factor. It is therefore becoming increasingly important for companies to collaborate with universities and research institutes -82% of respondents do so, up by 7% on 2015.



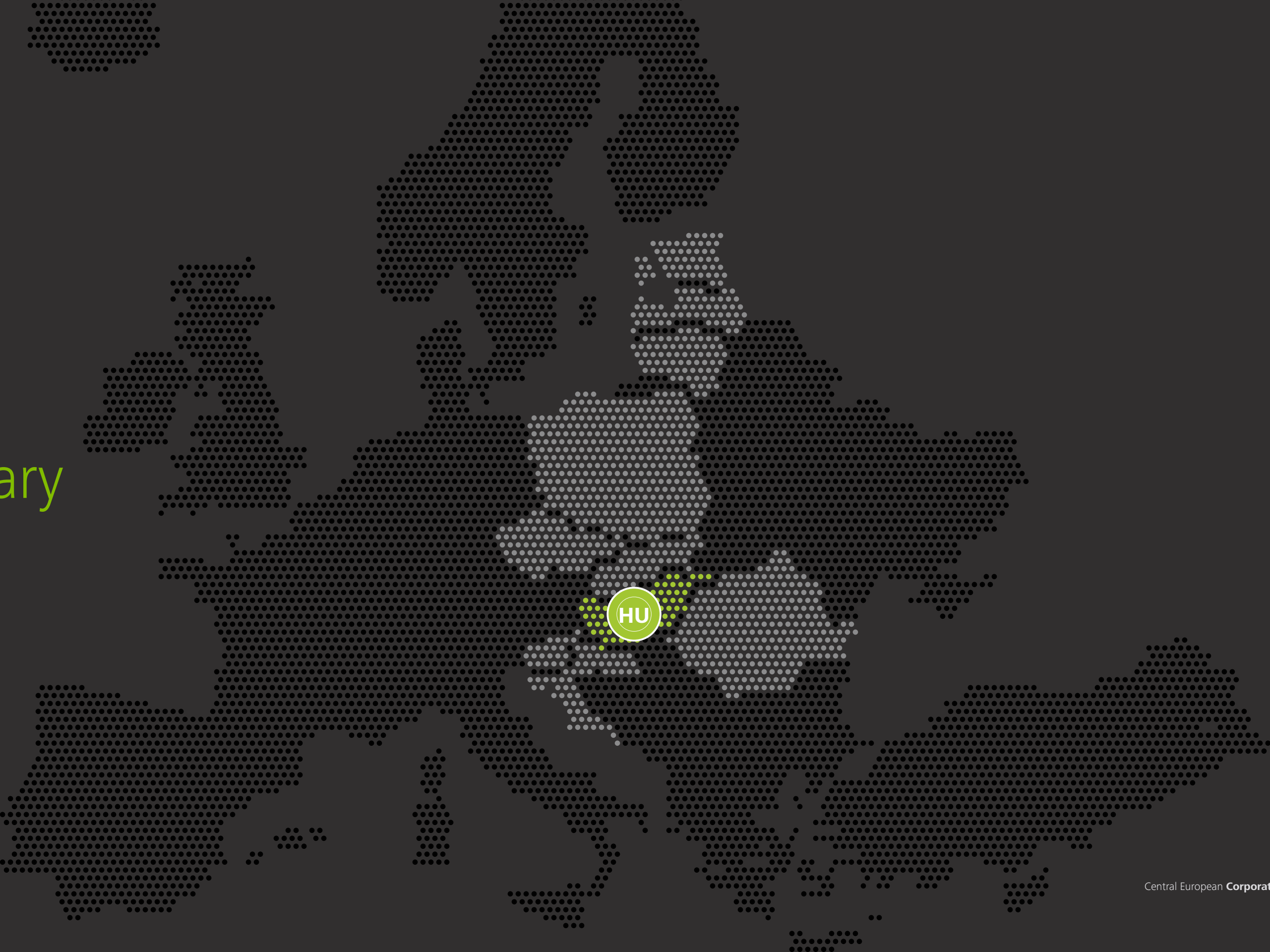
Key concerns

The results of this year's survey are consistent with the results from previous years. The available forms of benefit succeed in motivating companies to invest in R&D and increase their competitiveness. However, a unified assessment methodology needs to be developed for use by tax and audit authorities, and the issue of how to achieve sufficient numbers of skilled and experienced researchers needs to be resolved.

To what extent would the external factors mentioned below influence the increase of your R&D spending? (%)



Hungary



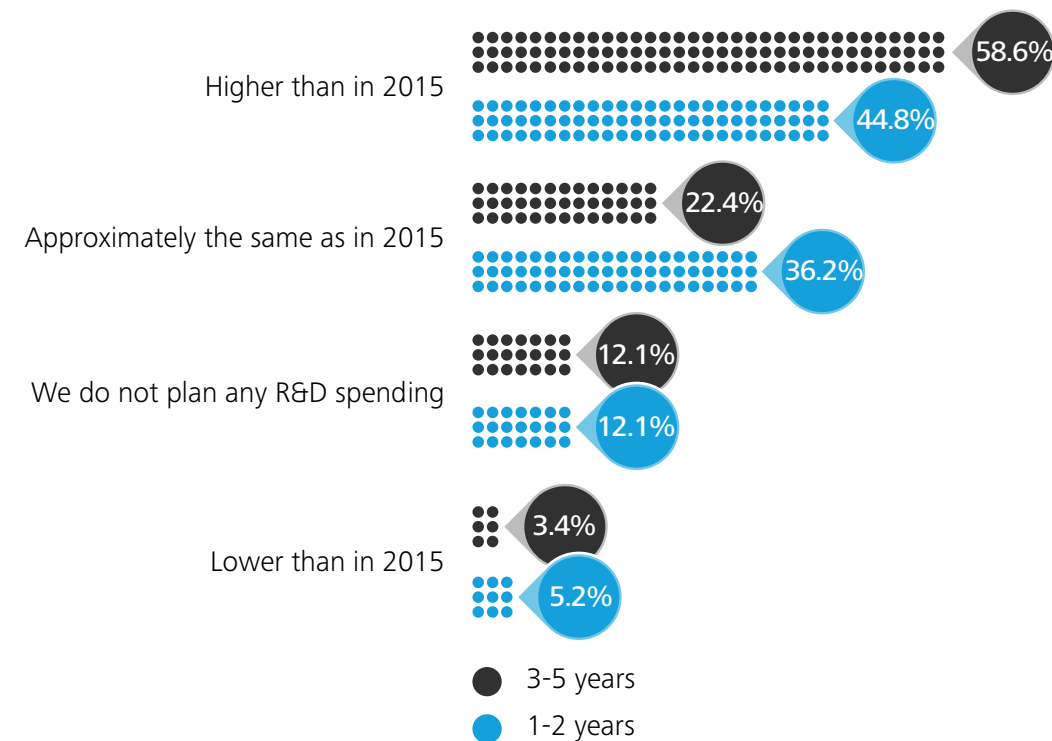
Spending patterns

In 2016, a higher percentage of respondents than for the past three years said they expect R&D spending in Hungary to increase over the next one to two years. And, for the first time in six years, more respondents are planning to increase their R&D spending during the next one to two years than are expecting to keep it unchanged. Similar to the last survey, nearly 60% of respondents are planning to increase their R&D spend from the 2015 level over the next three to five years.

Influential factors

In 2016, respondents told us they consider access to a range of different types of benefits to be the most critical factor in helping to increase short-term R&D expenditure, followed by the availability of skilled and experienced researchers. Unlike in previous years, access to and co-operation with universities and research institutions have also become crucial factors – but often not necessarily for the right reasons. As we've seen, the availability of different benefit types is the most influential factor in increasing companies' R&D spending in the short term. It therefore follows that if the proportion of (non-refundable) grants should be reduced for large enterprises, and if conditions for so-called financial instruments were unsuitable for beneficiaries, then most influential factor will suffer. Consequently, the relative abundance of funds will not necessarily translate into a proportional increase in corporate R&D spending. As in previous years, the factors with least influence on short-term R&D spending include the funding and efficient management of IP, access to data on competitor R&D activity and lower wage costs for R&D staff.

To what extent would the external factors mentioned below influence the increase of your R&D spending?



Intellectual property

A significant change from the last two years is that only 5.5% of survey participants would now take no action to protect their IP or know-how, down from 25% last year. This positive development suggests that companies are more conscious of the need to protect their intellectual properties. Looking at the various IPR-protection tools available, the most significant increase was recorded in the use of a company secrets policy (72.7% in 2016 compared to 66.1% in 2015), patents (up to 52.7% from 33.9%) and copyright (up from 26.8% to 32.7%).

Taxing concerns

Similarly to 2015, over 40% of respondents have yet to face an audit of their R&D tax incentives. However, those who have been inspected report no change in the tax authority's approach.

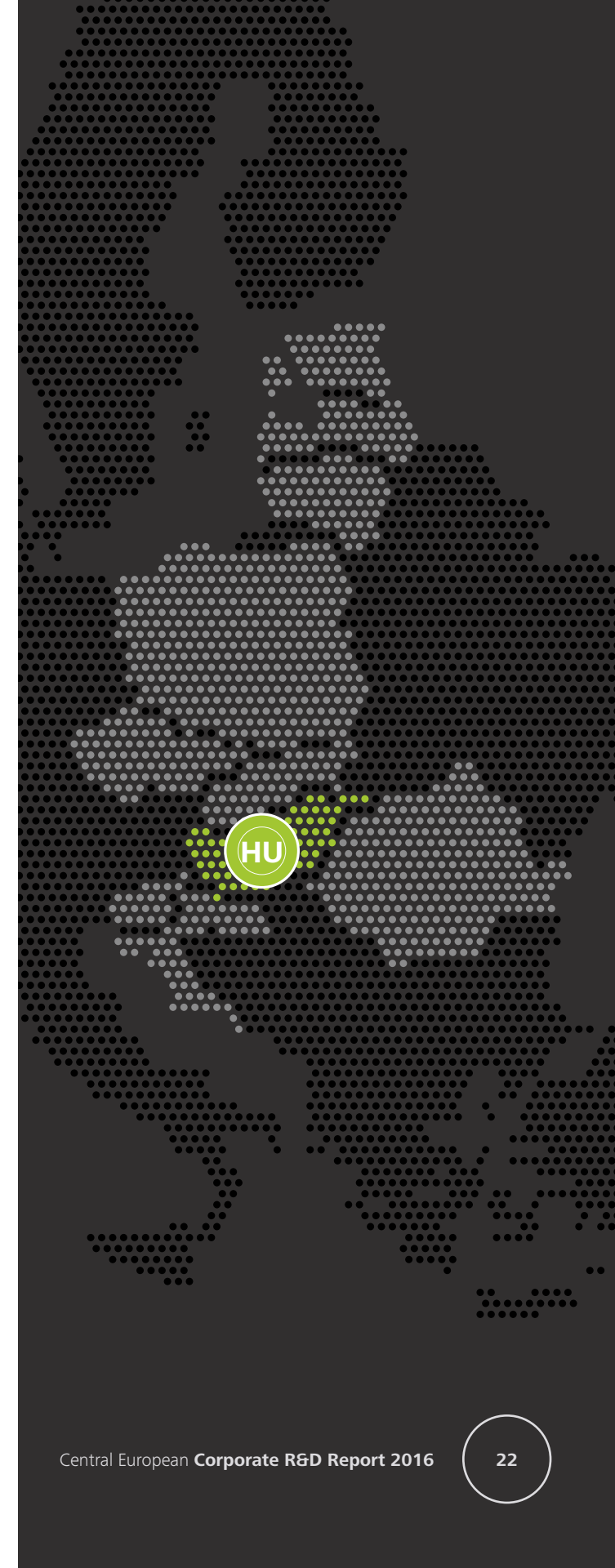
The greatest relevant risk for respondents whose companies are eligible for R&D tax incentives is a lack of clarity in the underlying tax regulations (23.9%). This is closely followed by uncertainties surrounding the tax authority's approach to R&D tax incentives (19.6%) and implementing internal systems that record expenses relating to R&D activities (17.4%).

The percentage of respondents whose R&D expense records were reviewed in greater detail by the tax authority rose in 2016. Another clear tendency was that, when reviewing expense records, the tax authority seems only accept data to support personnel costs that is extracted from closed time sheet systems.

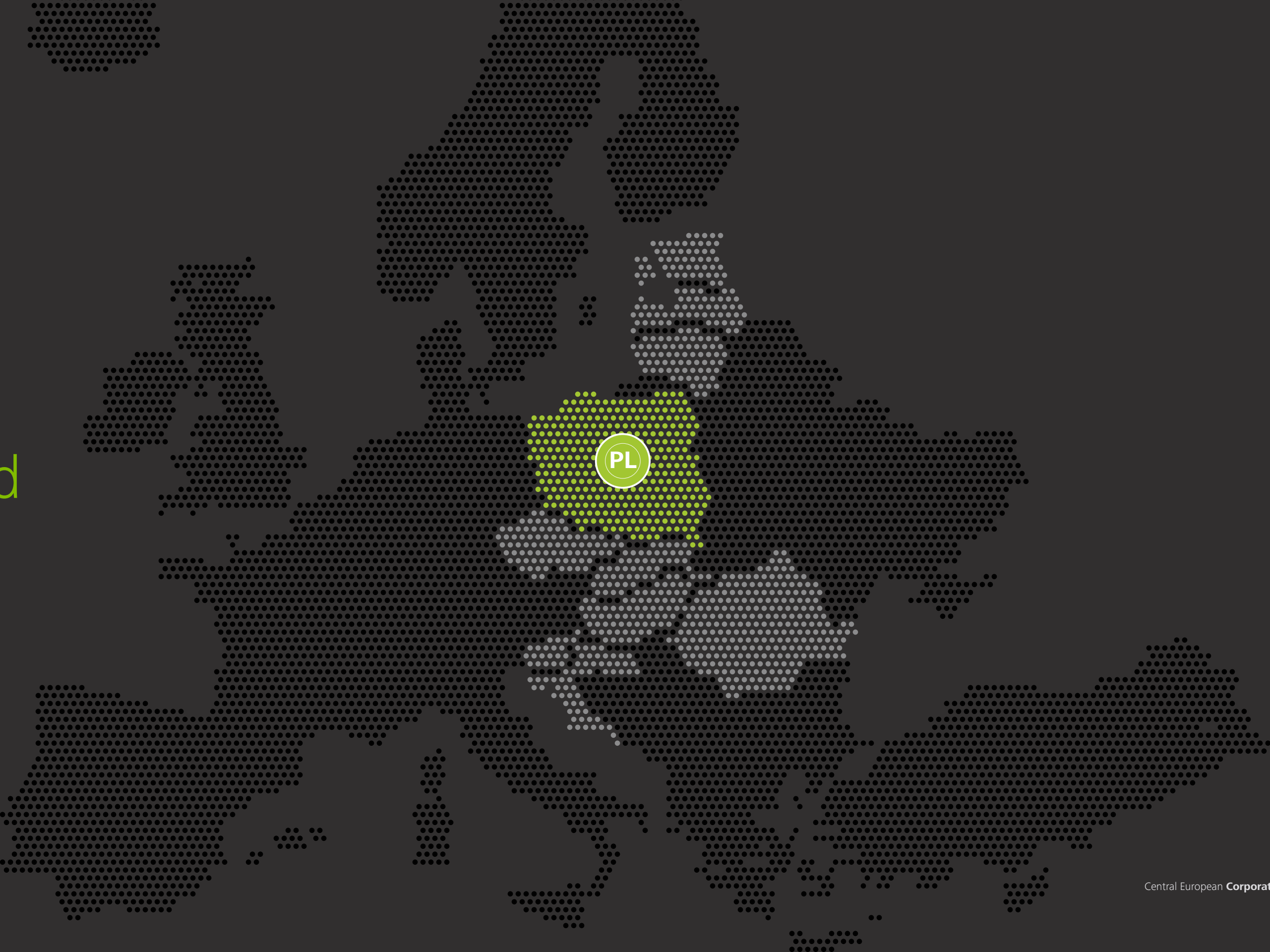
Questions of collaboration

Nearly half of those respondents who do not collaborate with third parties in R&D projects claimed this was because such co-operation was not required or reasonable from a business perspective. This is particularly true for companies with a dedicated R&D centre.

There has been a noticeable increase in the number of respondents who would apply for R&D grants, but cannot enter a consortium due to the nature of their R&D projects or business interests. This confirms previously reported concerns that artificially forcing companies to enter consortia does not help to increase R&D spending.



Poland



Regulatory change

The regulatory environment governing R&D in Poland has changed over the last year. First, a law introducing new R&D tax incentives was adopted in November 2015. From January 2016, this enables a cut in the corporate income tax base by allowing qualifying R&D expenses to be deducted, amounting to a maximum 130%.

The year also saw the launch of a number of EU cash grant programmes to finance corporate R&D activities (worth more than EUR 8 billion over the next three years). These can cover up to 80% of the R&D costs incurred by large, medium-sized and small companies.

Unfortunately, because these changes only occurred in the fourth quarter of 2015, their potential impact on the dynamics of Poland's R&D activities will not be observable until 2016/2017. They should, however, enable Poland to improve the tax treatment of R&D activities (rated B- by OECD).

Spending statistics

The country's R&D spend is constantly rising. Gross Domestic Expenditure on R&D as a percentage of GDP (GERD per GDP) rose from 0.87 in 2013 to 0.94 in 2014, while Business Enterprise Expenditure on R&D as a percentage of GDP (BERD per GDP) rose from 0.38 to 0.4. However, Poland is still well below the European average of around 2.0 in GERD and 1.3 in BERD per GDP.

Public policy aims to improve growth. This is particularly relevant in Poland, where the survey shows a sharp decline (from 6% to 2%) in companies' intention to conduct R&D activities in the year to come. This is counter to the trend across Central Europe, where this indicator doubled. Political and regulatory uncertainty may prevent Polish companies from making additional investments.

Despite a consistent increase in the number of companies claiming to grow their R&D expenditure by more than 10% of turnover (up to 17% in 2016 from 12.5% the previous year), the 2016 survey results for Poland are generally less positive than last year.

In 2015, 47% of companies claimed that their previous year's spend on R&D exceeded 3% of turnover. In 2016, this figure fell to 34%. In addition, more companies (10%) than last year are planning to cut their short-term R&D spending. The same proportion is also planning to cut their R&D expenditure over the next three to five years.

IPR issues

Regardless of the fact that BERD is constantly growing, Polish companies tend to pay less attention than those from elsewhere in CE to protecting IPR. This is also reflected in official statistics, where Polish companies are ranked lower in terms of patent submission than those from other CE countries (in 2015, Polish companies submitted 842 of the total 86,414 patent filings from 28 EU countries; without Poland, the average number submitted per country was 3,169).

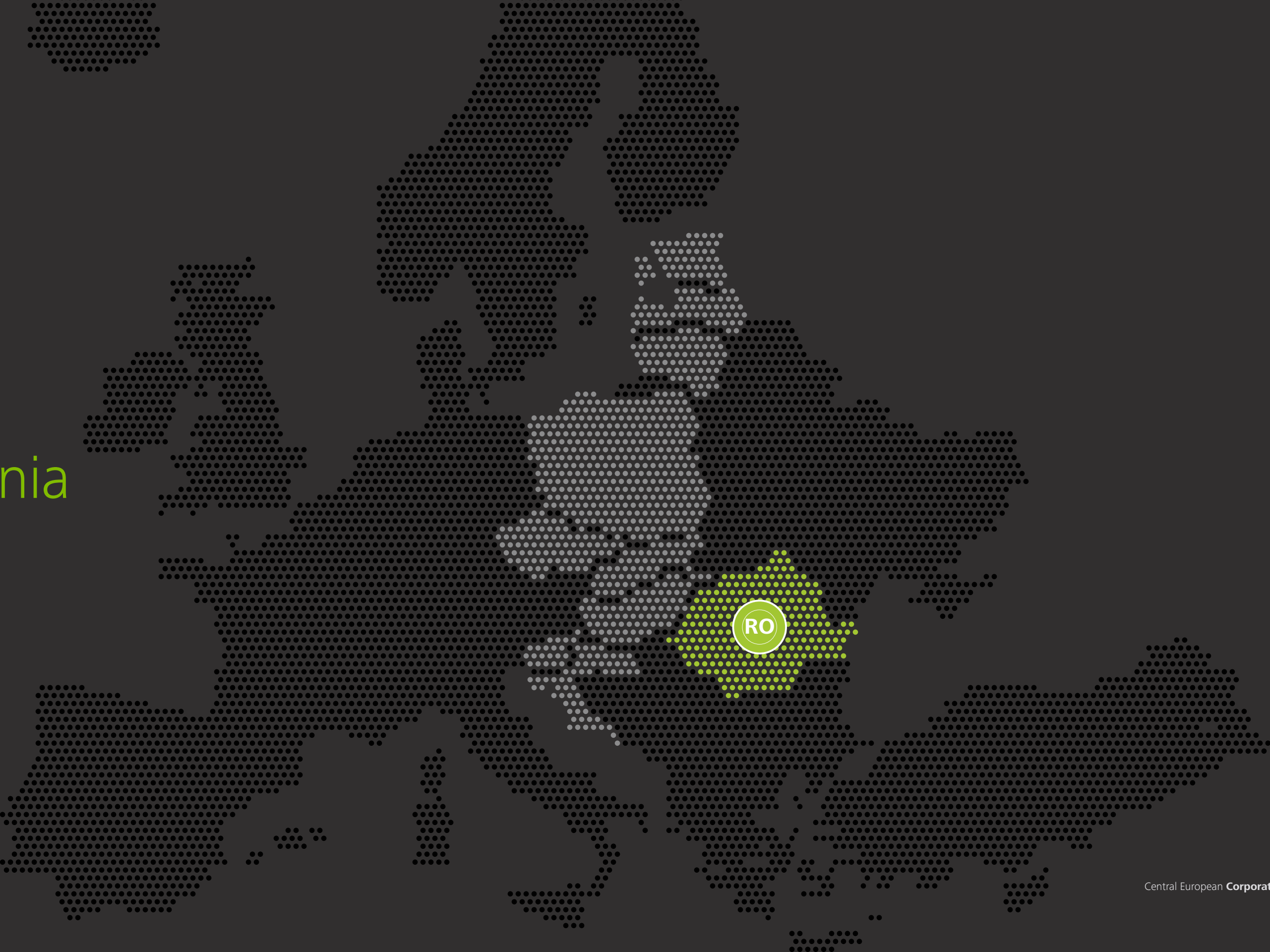
The impact of incentives

Incentives may have a positive future impact on these trends. For example, a planned increase in the scale of the newly introduced R&D tax relief up to 150% is currently in consultation, and R&D cash grants are set to become more widely available. So, for the first time, the 2016 results underline how important it is to have a stable system and legislative framework as well as a range of incentives.

The proportion of companies that understand the rules governing funding programmes increased significantly, by 13% to 51%. Despite this, 38% of companies still do not use grants to support their R&D activities. While these results were heavily impacted by the limited availability of incentives and by stricter eligibility rules around who can receive funding, they also reflect more limited interest in carrying out R&D projects.



Romania



An encouraging picture

Rising interest in research and development is leading to greater support for R&D activities in Romania. Not only is the number of companies investing in R&D increasing – the Romanian Government has also started to implement incentives to stimulate R&D spending, including a 150% super deduction.

The overall picture is encouraging. A significant percentage of respondents plan to invest more in R&D activities than the previous year: 51% are planning to spend more in the next one to two years, and 63% to do so in the following three to five years. However, these percentages are slightly lower than in the 2015 survey.

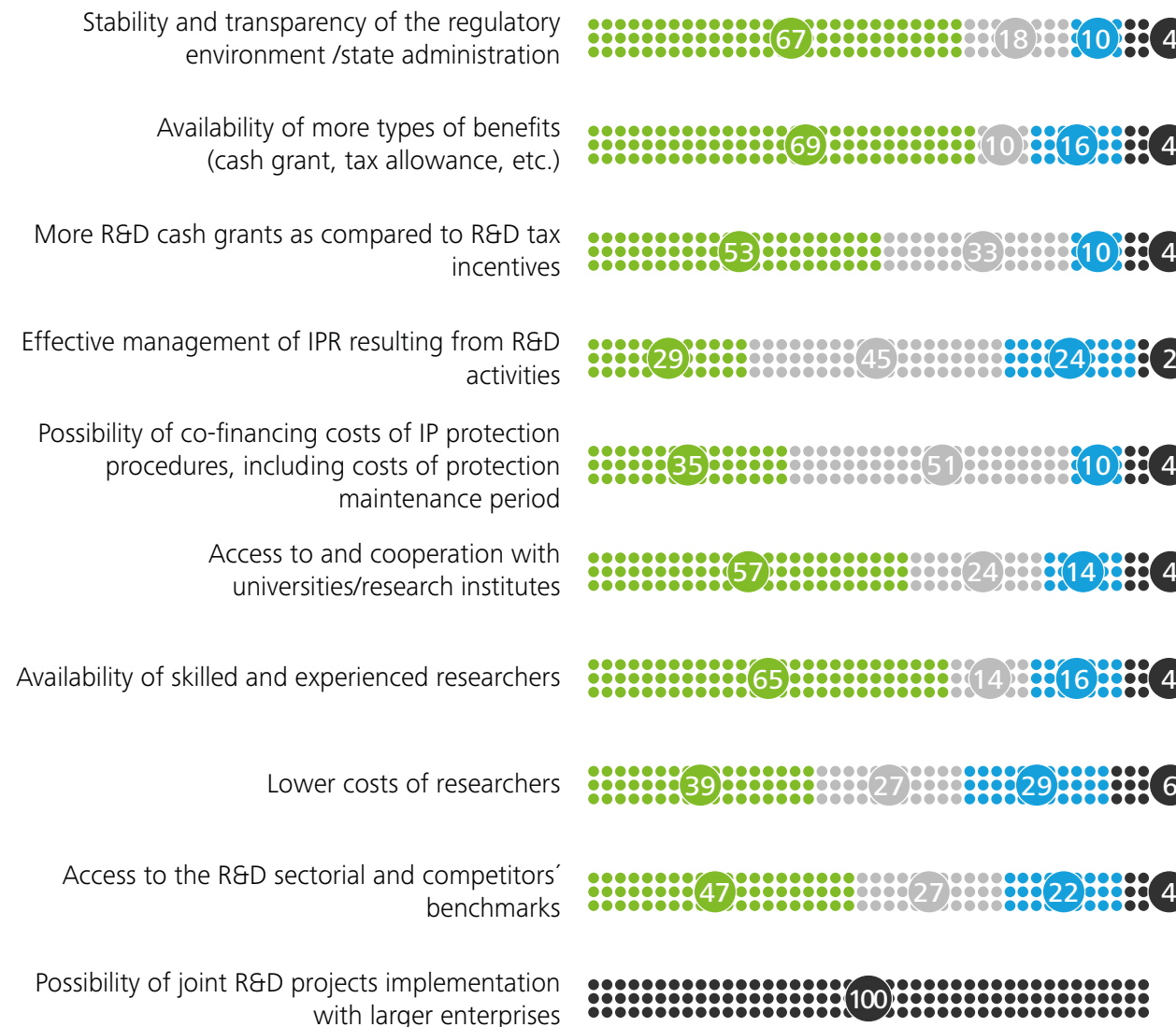
Promisingly, while 37% of respondents spent between 1% and 5% of their turnover on R&D in 2015, 22% spent over 5%. In addition, the percentage reporting they spent nothing on R&D in the previous year has fallen from 29% in 2014 to 16% in 2015.

It is encouraging that 73% believe that their R&D spend increases the competitiveness of their products or services. This is similar to last year's 74%, underlining the importance of spending on R&D to stimulate company growth.

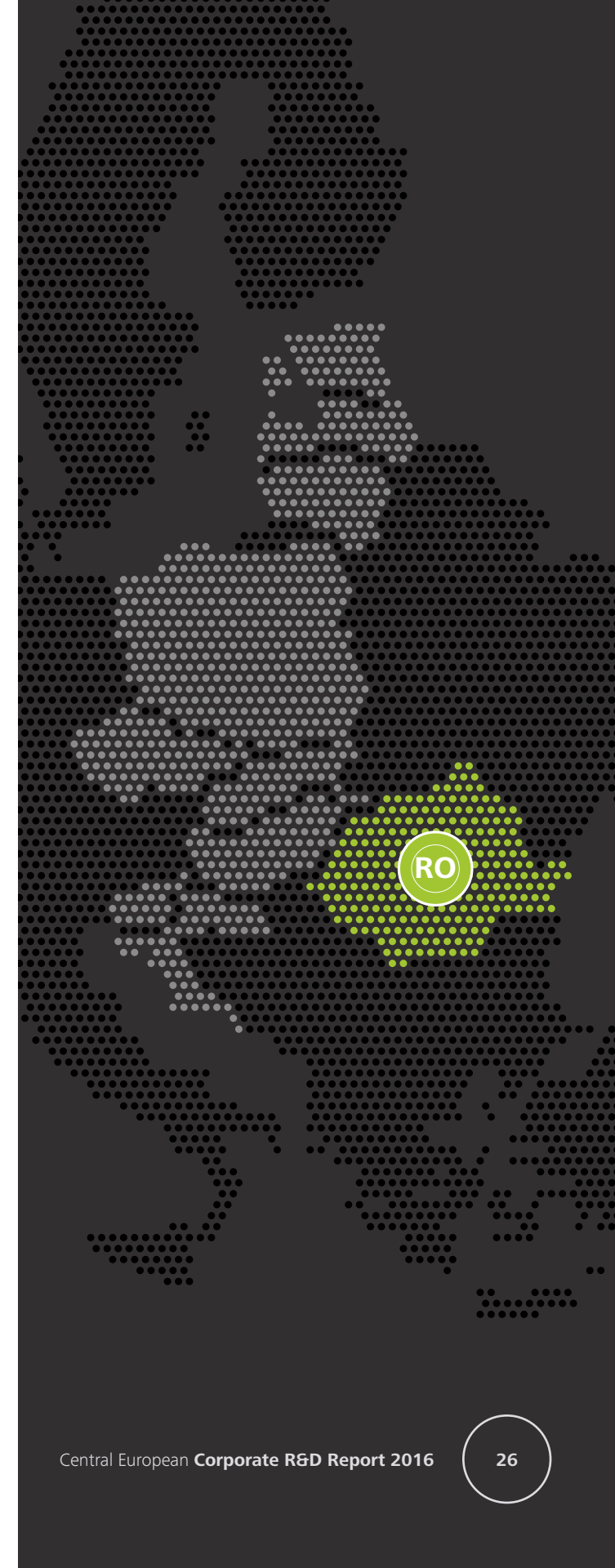
Influential factors

Two types of factors govern the R&D activities of Romanian companies – one associated with economics, the other with internal management. External factors reflect the organisation's overall environment, be it the regulatory landscape or access to funding and other resources (such as researchers and institutions). Our survey shows that external factors have a considerable influence on the increase of R&D spending: on a scale from 1 (indicating zero influence) to 5 (the most important factor), the majority of respondents rated these as 'important' or the 'most important' factors.

External factors that influence the increase of R&D spending (%)



- Important
- Neutral
- Less important
- NA



Other factors influencing any or an increase in R&D spending over the next one to two years include the extent of knowledge, experience and research expertise that's available in an organisation's surrounding area. Other key influencers include the scale of national and EU funding for R&D in the organisation's sector, legislative measures for supporting Romanian brands and the opportunity to develop R&D partnerships with national institutions. Respondents also highlighted the fact that grant support for applying the research is more important than support for the research itself.

IPR and tax incentives

In terms of protecting knowledge, respondents choose to use a company secrets policy (65%), patents / utility design (41%), trademarks (37%), copyright (27%), and industrial design (12%). Almost half of our respondents are unfamiliar with R&D tax incentives (45%) and grants (43%). However, the biggest perceived problem in the current R&D support system is the lack of clarity in how tax and other authorities assess subsidies or tax deductions (35%). Unclear guidelines on eligibility and how it is calculated come next (27%), followed by how to identify activities that qualify for a subsidy or tax deduction (20%).

Third-party collaboration

Over two-thirds (69%) of respondents collaborate with third parties on R&D projects. The other third (31%) either has an R&D centre located in Romania or has access to a group-owned centre abroad.

Over two thirds (71%) collaborate because doing so is necessary for conducting research projects, 38% because it is required to apply for a grant, and 12% because it enables them to qualify for a higher cash grant.

I believe that my company does not carry out any R&D activities / projects that would be eligible for R&D tax incentives



My company is familiar with R&D tax incentives but uncertain about which activity could be classified as R&D and aware of risks how to prove that its activities are R&D



My company is familiar with how to prove that its activities are R&D but the company's reporting/cost tracking/time sheet / etc. systems are not capable of appropriate recording/proof of related costs



My company is uncertain about the approach of the tax authority with respect to R&D costs; therefore I find the use of these tax incentives risky



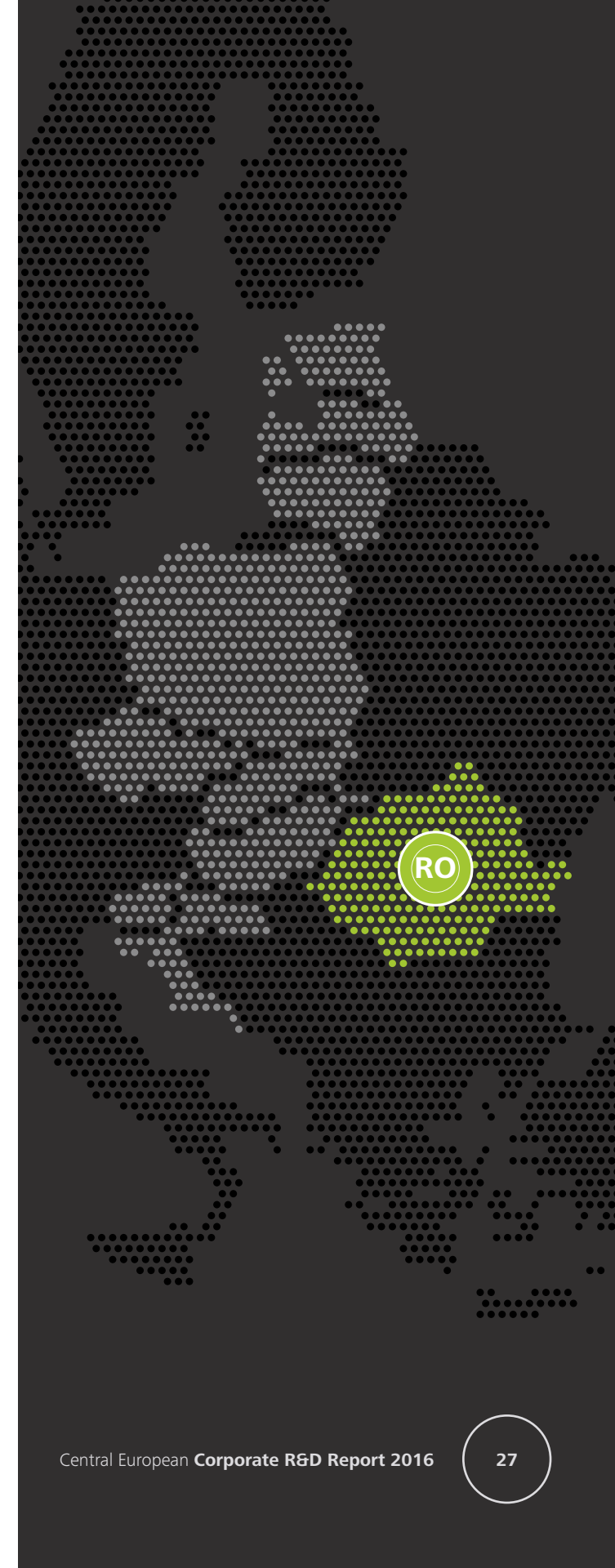
R&D tax regulations are not clear and are presenting too many risks for the company



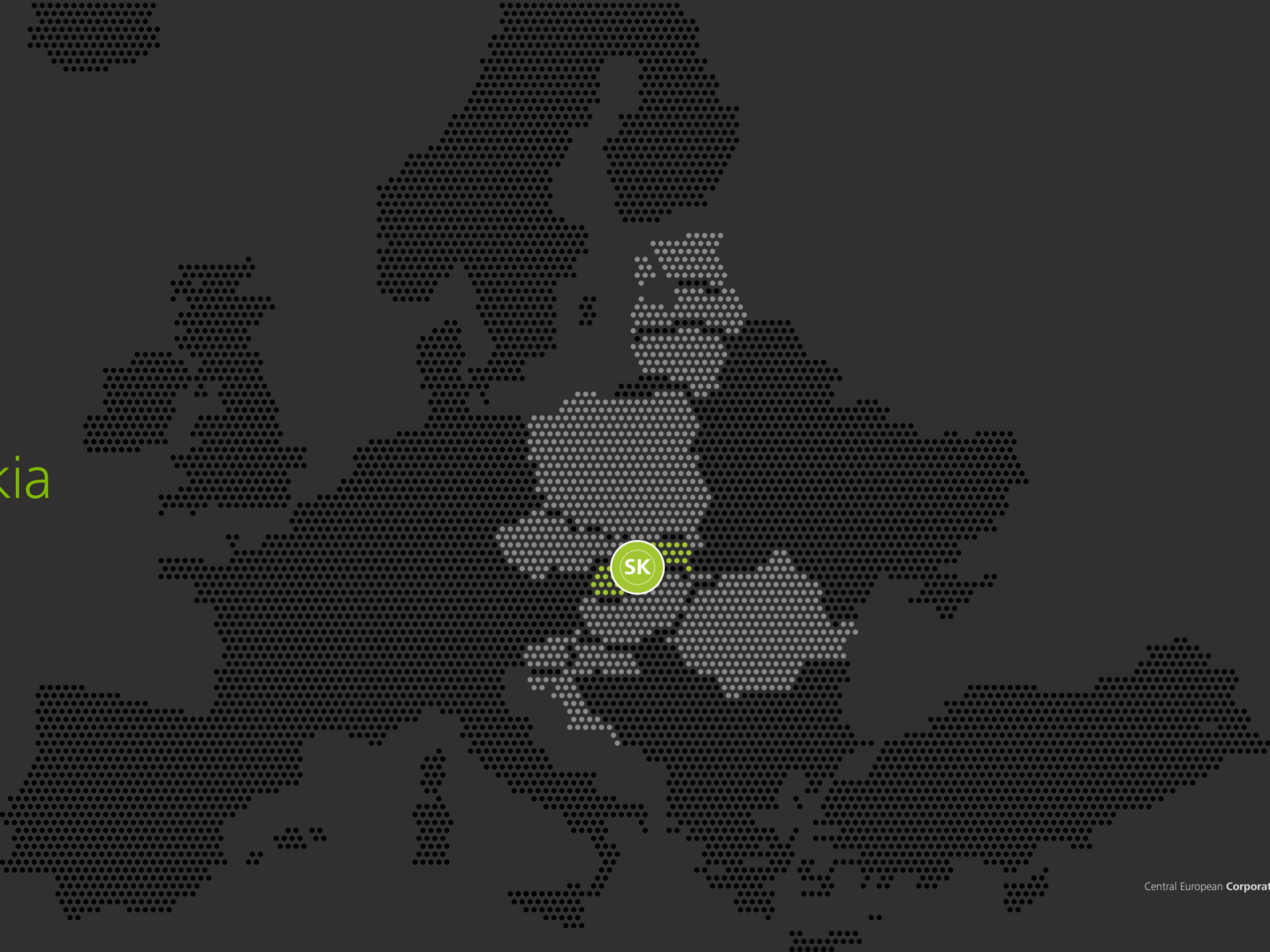
My company is fully familiar with R&D incentives



We do have slightly knowledge about R&D incentives but we did recommend to several investors



Slovakia



Government and EU support

In a key move, Slovakia has introduced a tax super deduction for R&D, which is effective for tax years beginning on or after 1 January 2015. Deductible from the tax base, this amounts to 125% of qualifying costs incurred during an R&D project. An additional super deduction of 150% is also available for the current year's qualifying R&D expenditure that exceeds that of the previous year.

Almost two thirds of respondents are planning to use the super deduction this year.

Slovakia also reduced the requirements for receiving regional investment aid, and has extended the options of direct cash support for new and expanding R&D/technology centres.

In 2015, Slovakia launched the 'Research and Innovation' Operational Programme, co-financed by the EU with a budget of EUR 2.27 billion. The programme aims to support the completion of research infrastructure and create long-term research consortia between businesses and universities in defined areas of research, including new materials, nanotechnology, ICT, biomedicine and automotive.

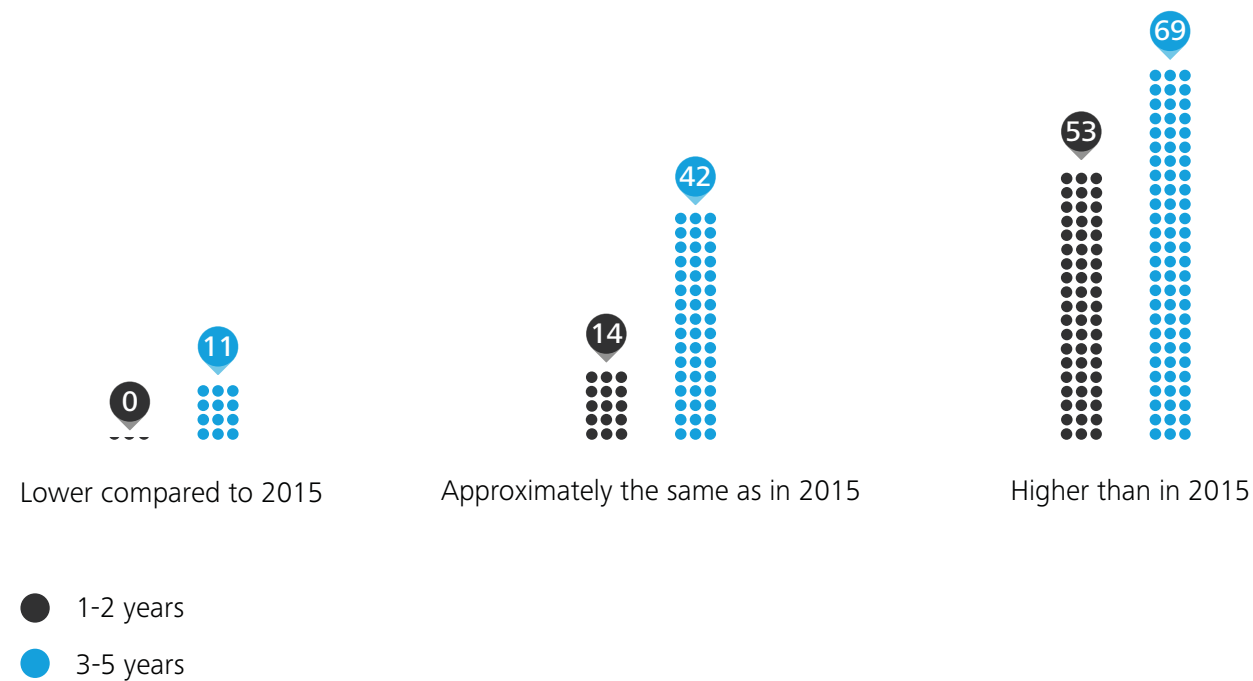
The aim is to use such funds for long-term end-to-end projects, with mandatory co-operation between business and academe. A key challenge will be to ensure these significant funds are used to support the best and most promising R&D activities.

We therefore we expect that corporate R&D spending will grow considerably, driving a number of purely Slovak R&D success stories and closing the spending gap between Slovakia and countries in both Western Europe and CE. However, the participation of Slovak entities in joint Europe-wide projects financed by Horizon 2020 continues to be low. This is due to a low success rate and the lack of experience of Slovak entrepreneurs. However, there may be some individual exceptions.

R&D spend

Last year, approximately one third of Slovak companies spent more than 10% of their turnover on R&D. The second most commonly cited proportion was less than 1%, reflecting considerable diversity in company results and the effectiveness of their R&D expenditure. Future prospects are more positive, as companies expect to incur more – or at least the same – R&D costs as in the previous year.

How do you foresee your company's R&D spend over 1-2 and 3-5 years? (%)



Influential factors

Respondents see the limited availability of qualified and experienced researchers as a key factor. Collaboration between universities and businesses, supported by the Research and Innovation Operational Programme, could help in this area, and the transformation of the Slovak Academy of Sciences and its financing is underway.

Universities are beginning to realise the possibilities of joint projects with businesses, and are using their capabilities in better compliance with the rules surrounding state aid. However, the simple legislative change that businesses would most appreciate is an increase of at least 100% in the R&D super deduction from the tax base.

Businesses also want guidance on the correct application of the R&D super deduction, which would make them more confident in applying R&D deductions.

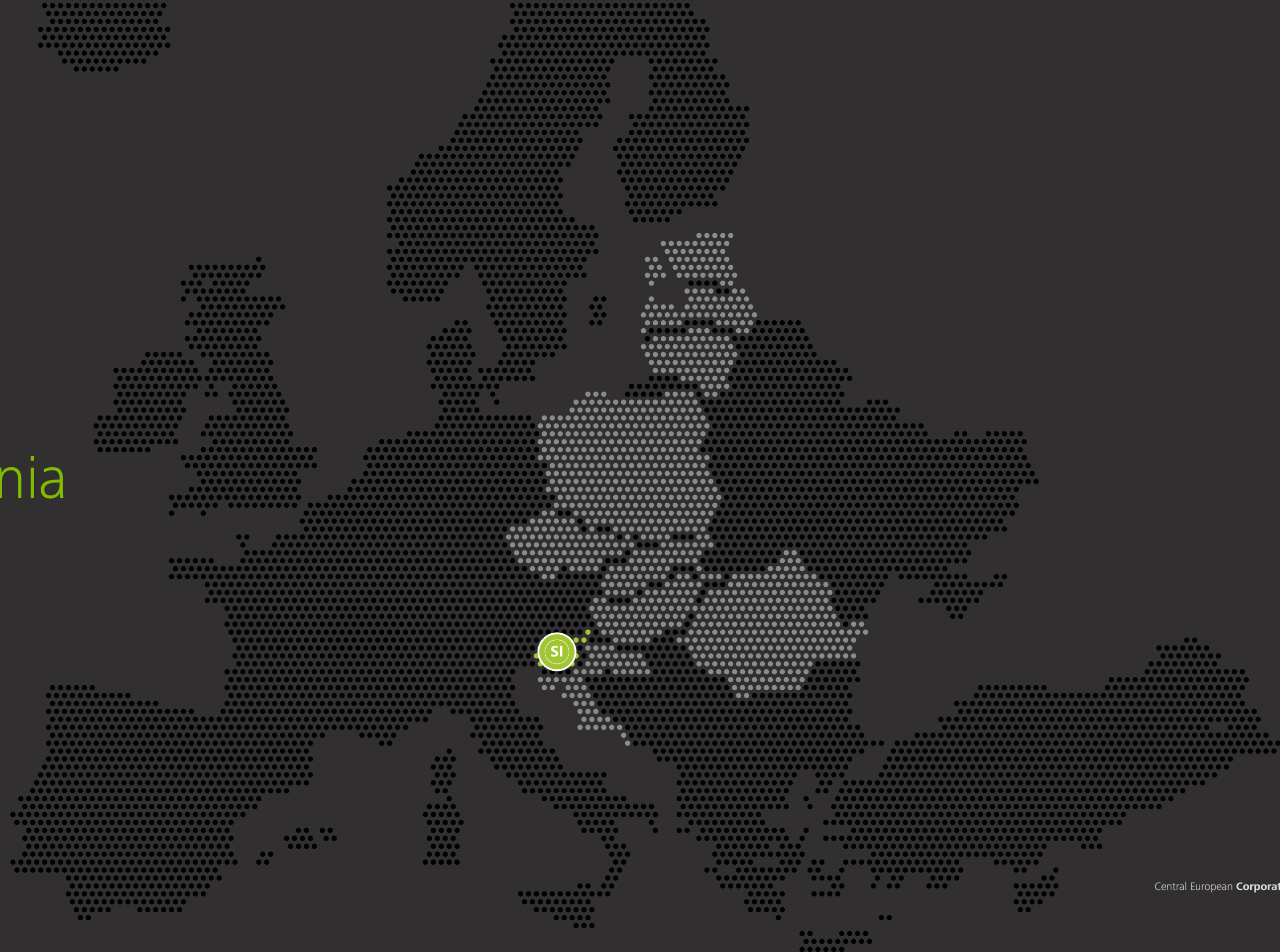
Spending patterns

As in previous years, companies are planning to spend more on R&D this year. Foreign investors have realised that, as well as creating a competitive production environment, they can also cost-effectively conduct R&D in Slovakia. The trend towards improved competence in R&D is expected to continue, while the principal requirement for the Slovakian school system will be to prepare skilled labour.

However, a number of unfavourable external factors are at play. These include the current lack of information on how to correctly apply the R&D super deduction and a significantly lower excess VAT deduction rate than in other developed countries. It is essential that support finance is better targeted and that the need for R&D spending is promoted.



Slovenia



Tax dispute

In November 2015, Slovenia's Ministry of Finance proposed an amendment to the Corporate Income Tax Act, to reduce the tax allowance for R&D. Currently the tax base can be decreased by 100% of eligible expenditure on R&D; according to the proposed amendment, this would fall to just 50%. The proposal received negative public feedback and was subsequently withdrawn.

Rising private-sector spend

According to the most recent data from the national statistical office, Slovenia spent EUR 890.2 million on R&D activities in 2014, representing 2.39% of that year's national GDP. This is approximately EUR 45 million less than in the previous year (or 0.2% less as a proportion of national GDP). EUR 688.5 of this was provided by the private sector, representing 77% of all investment in R&D (an increase from EUR 597 million in 2013). This R&D expenditure made by companies continues to be the largest driver of R&D investment in Slovenia. This most recent data shows that it has replaced part of the public R&D spend.

A stable outlook

Looking ahead, the outlook for the level of future R&D spending looks relatively stable: respondents generally expect that R&D expenditure over both the short and longer terms will be approximately the same as in 2015. Last year, when asked about the expected level of longer-term R&D spending, more than half of participants (53%) answered that it would increase from the level of 2014; a little under half of them (47%) believed it would remain the same.

Trademarks on top

The most usual ways of protecting Intellectual Property/know-how in Slovenia is by using trademarks (33%) and patents/utility design (also 33%), followed by a company secrets policy (28%). Responses were similar to last year, when these three types of protection were also selected as the most commonly used. More than one answer to this question was possible. Again as last year, copyright was reportedly the least-used option (11%), which is lower than the average responses on copyright use by participants in other EU countries (26%).

Influential factors

Respondents identified the key external factors with the most influence on future R&D spending as the opportunity to receive more types of benefits (cash grant, tax allowance) and the availability of skilled and experienced researchers. The stability and transparency of the regulatory environment/state administration and the lower costs of research also ranked highly. These factors were similar to those identified last year, when the availability of skilled and experienced researchers and the costs of research were the two highest-ranked factors.

The most pressing problem affecting R&D spending continues to be difficulty in identifying the activities that meet the eligibility requirements for being classified as R&D.

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