



# Mutual Learning Exercise Administration and Monitoring of R&D tax incentives

Horizon 2020 Policy Support Facility



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Innovation

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# **Mutual Learning Exercise**

# **Administration and Monitoring**

# **of R&D tax incentives**

## ***Horizon 2020 Policy Support Facility***

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## PREFACE

In 2015 the European Commission decided to introduce a new tool for policy learning within the framework of Horizon 2020 Policy Support Facility, Mutual Learning Exercises. Following an earlier Workshop on R&D tax incentives, Member States expressed a wish that tax incentives for business R&D should be one of the themes for such an exercise.

The experts of the Mutual Learning Exercise (MLE) group on tax incentives for business R&D hereby submit the final report. The main focus of the MLE and the discussions in the Group were related to the administration and monitoring of tax incentive schemes for business R&D.

Earlier EU studies have focused on the design and evaluation of tax incentives and policy matters. How well the schemes meet policy objectives, how widely they are taken up, the administrative costs and their political legitimacy are however not only dependent on the design of the schemes, but also on how they are administered and monitored.

The report illustrates the ways the participating countries (Belgium, France, Latvia, the Netherlands, Norway and Portugal<sup>1</sup>), and the United Kingdom and Canada administer their tax incentive schemes. Interesting practices are highlighted and the Group's learnings are presented. In an Annex to the report the members of the Group have presented the main features of their national R&D tax incentive schemes and the administration thereof.

Due to the limited time and resources available, the report does not intend to present the exhaustive list of good or best practice in the administration and monitoring of R&D tax incentives, and does not give recommendations or policy advice. Despite this, by illustrating the wide range of how tax incentives are administered, the report aims to stimulate a discussion among EU Member States and help countries reviewing their own practices to learn from others.

The Group's report is based on a shared experience of the MLE participants and their mutual discussions. In addition, the Group has received valuable input from authorities in the United Kingdom and Canada, who were not members of the MLE Group. Thus HM Revenue & Customs generously arranged a whole-day meeting in London and gave a number of valuable presentations, and followed the rest of the MLE meetings and discussions. The Canadian authorities responsible for administration of the federal Canadian R&D tax incentive scheme participated in a videoconference with the MLE Group and gave insights on their practice.

The MLE participants have expressed their satisfaction with the MLE process. The participants have obtained new insight in the administration of tax incentives that they will bring home to their organisations. The participants contributed to the discussions by giving well prepared presentations and by participating in open discussions which progressed at a pace giving room for reflections. Bringing together a group of knowledgeable and motivated practitioners ensured that the discussions were very detailed and down to earth.

Although the discussions in the MLE Group have been very stimulating, the MLE participants expressed a wish for further more detailed discussions on some technical aspects of implementing R&D tax incentives which were not extensively covered in the MLE, due to the limited time and resources available. The MLE participants expressed an interest to learn more from each other and keep the network active for further collaboration and exchange of experience. This could be done in appropriate workshops or similar events organized by the EU Commission.

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<sup>1</sup> The original group included also Croatia who dropped in the course of the MLE while the Netherlands joined in and the UK took an active role in the works of the MLE in its second half.

The present report is written by the undersigned who have been engaged by the European Commission as experts to assist the MLE on Administration and Monitoring of R&D tax incentives. The authors are responsible for the content and for any factual mistakes that may be found in the report. The Member States participating in the exercise have been consulted and they have largely endorsed the content of the report, without giving their explicit approval to all of the details presented in the report.

**David Uhlíř**

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## **THE PSF MLE EXPERT PANEL**

### **David Uhlíř** -Chair (Czech Republic)

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### **Christian Hambro** (Norway)

Christian Hambro provides legal assistance particularly in administrative law, EEA law, public procurements, including state subsidy rules, corporate law, tax law and labour law. He also works with tax issues relating to research and development. In 2012 he published the book "FoU og Skatt". Christian Hambro has wide operational experience. He has been Director General for The Environmental Supervision Authority, Director General for The Governmental Agency for public administration, Divisional Manager for Saga Petroleum and Director General for the Norwegian Research Council.

## EXECUTIVE SUMMARY

During the last two decades, most European countries have introduced tax incentives for business R&D. The recession following the financial crisis has raised the interest in R&D tax incentives even further. However, the focus of this attention so far has been to a large extent on the impact of R&D tax incentives and on their design. Little attention has been paid to the finer details of the schemes and their administration, although these aspects may have considerable influence on the impact of the schemes. The MLE group on Administration and Monitoring of R&D tax incentives was established to fill this gap.

The MLE group decided to deal with three main issues: (1) The definition of R&D in tax-incentive schemes; (2) The eligibility of costs; and (3) The administration and control of the R&D tax incentives. The Group also decided to limit its deliberations to the dominant tax incentives in participating countries, and thus did not deal with specific forms of incentives such as “patent boxes” or those targeting young innovative enterprises.

The main findings of the MLE group were that the R&D definitions in countries seem to converge in content, but that the borderline between R&D and other innovation activities is drawn differently. There are considerable differences between countries with regard to which costs are regarded as eligible under the R&D tax incentive schemes. There are also considerable differences in the administration of the schemes. All in all, there are ample possibilities for countries to learn from each other.

The **definition of R&D** in tax-incentive systems is a core issue. All participants face the challenge of sharply explaining to firms the difference between R&D and other innovation activities. To overcome this difficulty, most countries developed different types of guidance for applicants, in some cases also supported by pre-application checks. How this is done in practice varies considerably from country to country. The MLE served the purpose of exchanging information about these different approaches.

The MLE participants observed that **the definition of eligible costs** in some countries seems to be rather complicated, and might be an administrative burden to handle in practice. Among other policy exchanges, carrying out regular customer surveys in order to find out whether the eligibility rules are perceived as overly complicated was considered useful.

The participants acknowledged that the **administration rules and practices** of R&D tax incentive schemes must be understandable and user friendly if they are to induce businesses to undertake more R&D. An otherwise useful scheme could be ineffective if badly administered. This issue was examined in detail throughout the MLE.

The R&D definitions in countries vary, but are usually based on the OECD definition in the Frascati Manual or the EU definition of R&D in the state aid regulation. The main difference between countries is how they distinguish between experimental development, which falls under the R&D definition, and other innovation activities, that are not regarded as R&D. Most countries require that experimental development must have the objective to create knowledge or skills that are new in comparison with the existing stock of knowledge in the industry – in line with the 2015 version of the Frascati Manual<sup>2</sup>. Without this requirement, an R&D tax incentive scheme would give support to a wider set of innovative activities that do not create additional knowledge, which can translate into spillovers for the wider economy.

All MLE participants face the challenge of explaining to companies the difference between R&D and other innovation activities. To overcome this difficulty, most countries have developed different types of guidance for applicants, in some cases also supported by pre-application check. How this is done in practice varies considerably from country to country.

**Eligible costs** under a tax incentive scheme are the costs that will be accepted as a basis for calculating the tax allowance or the tax credit given for the R&D activities. Which costs are accepted, influences how generous the tax incentive is, and how costly it is for the government purse. If the rules pertaining to eligible costs are complicated, this will increase the administrative burden of the scheme.

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<sup>2</sup> OECD (2015): Frascati Manual - Guidelines for Collecting and Reporting Data on Research and Experimental Development, p. 46.

Countries have different rules related to whether all R&D wage costs are eligible, or only certain categories of personnel and how the wage cost is computed; whether only operating costs may be included, or also capital costs; whether only in-house activities are eligible or also procured R&D; to which degree and how the tax incentive may be combined with public grants and whether an overhead cost may be added to the direct costs.

The MLE participants were not aware - prior to the MLE discussions - of the considerable differences between countries as to which costs are regarded as eligible. The group observed that the definition of eligible costs in some countries seems to be rather complicated, and might be an administrative burden to handle in practice. Carrying out regular customer surveys in order to find out whether the eligibility rules are perceived as overly complicated was considered useful.

The **administration rules and practices** of R&D tax incentive schemes must be understandable and user friendly if they are to induce businesses to undertake more R&D. An otherwise useful scheme could be ineffective if badly administered. There is also a trade-off to be made here. On the one hand, total administrative costs must be kept down because such costs may reduce the value of the R&D tax incentives scheme for businesses and may increase the burden to the public purse. On the other hand, the administration also influences how targeted the scheme is in practice and how much it is prone to abuse.

The outreach efforts made by the public bodies responsible for administering the R&D tax incentives schemes in individual countries vary considerably both in intensity and methods used. Some administrations meet companies face to face, some give special assistance to first time applicants, and some have websites with considerable guiding material, including webinars. Also here a balance needs to be found between a wide uptake of the scheme and the costs of public administration.

Due to the increased use of R&D tax incentives by businesses, a market for consultants assisting companies in making claims for R&D tax incentives has developed. The activities and quality of the consultants' contributions vary from consultant to consultant and from country to country. In some cases, consultants may help to spread awareness about the R&D tax incentives among firms and reduce the administrative burden for firms, while in other cases consultants might help firms to find the weak spots in the administration of the tax incentives scheme. MLE members regarded the use of consultants in their countries more as a problem and an unnecessary cost than a value-adding contribution. The MLE participants discussed existing and possible new measures to curtail unhealthy consulting practices.

The MLE Group looked closely at the assessment of claims for R&D tax incentives. There is a considerable variation between countries with regard to which administrative body makes the assessment, and who the assessors are. Most countries aim at having assessors with professional expertise in the subject and a relevant business experience. The impartiality and absence of conflict of interest of assessors are considered of crucial importance. Combining all these requirements represents a challenge.

Some countries assess whether a project can be regarded as R&D before the project has started (ex-ante) while others only verify R&D activities afterwards (ex-post). The ex-ante approach will increase the predictability for businesses in relation to whether the tax benefit will actually be given. Such solutions could reduce possible tension between the company in question and the public authorities, because a ruling will be made before the R&D costs have been incurred. If the projects have been pre-reviewed, there would not be a need, at a later stage, for controlling whether the project actually constitutes R&D, thus limiting the need for eligibility control.

All MLE participating countries took measures to avoid misuse of the R&D tax incentives scheme and to prevent abuse of the system. Most countries provide clear requirements to claimants before the firm submits an application (e.g. the need to keep records of the R&D projects in a pre-defined manner). The approaches used in controlling vary among countries but the use of a risk-based approach to controls is in most countries either fairly recent or still only being considered for implementation. The MLE group was of the opinion that the balance between resources used to prevent mistakes and abuse, on the one hand, and controls, on the other hand, should be the result of systematic analyses optimizing the use of administrative resources.

# 1. INTRODUCTION

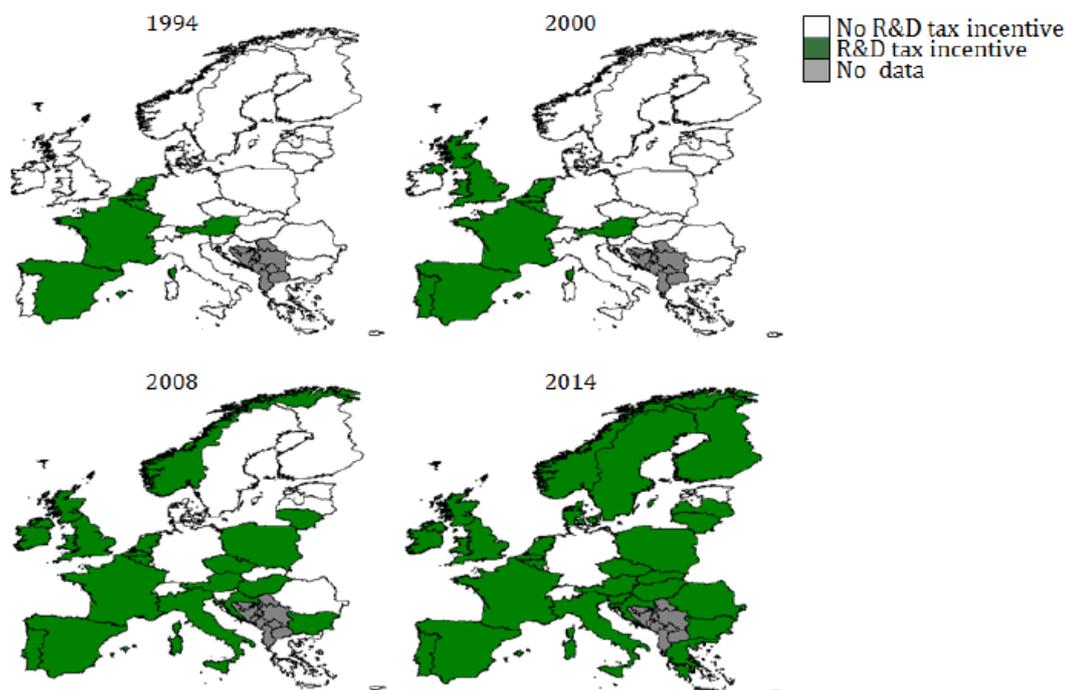
## 1.1 The growth of R&D tax incentives

Over the last two decades, most Member States of the European Union have introduced R&D tax incentives for business R&D. Figure 1 shows that in 1994 only five member states had an R&D tax credit, while in 2014 only Germany and Estonia did not have such a policy instrument in place, although it should be noted that Finland discontinued its tax incentive recently. Tax incentives have gained popularity relative to direct subsidies because they are easier to administer, leave the allocation of public funds to markets rather than to the government and are usually not considered as State Aid.

The recession following the financial crisis raised the interest in R&D tax incentives even further. Figure 2 shows that most industrialized countries substantially increased their expenditure on R&D tax incentives in the period between 2006 and 2013. R&D tax incentives were used as an instrument to protect innovative activity during economically challenging times as innovative activities are considered an effective means to increase productivity and restore economic growth.<sup>3</sup>

In recent years, large government budget deficits have triggered a re-examination of innovation policies associated with large amounts of foregone tax revenue. According to OECD statistics, total foregone tax revenue in industrialized countries due to tax incentives for business R&D was 48 billion dollar in 2013.<sup>4</sup> The tension between promoting growth and reducing deficits has led to a call for 'smart consolidation' whereby growth-enhancing policies (e.g. those promoting research and innovation) should be protected from budget cuts.<sup>5</sup>

**Figure 1. Adoption of R&D tax credit schemes in the Europe Union, 1994-2014**



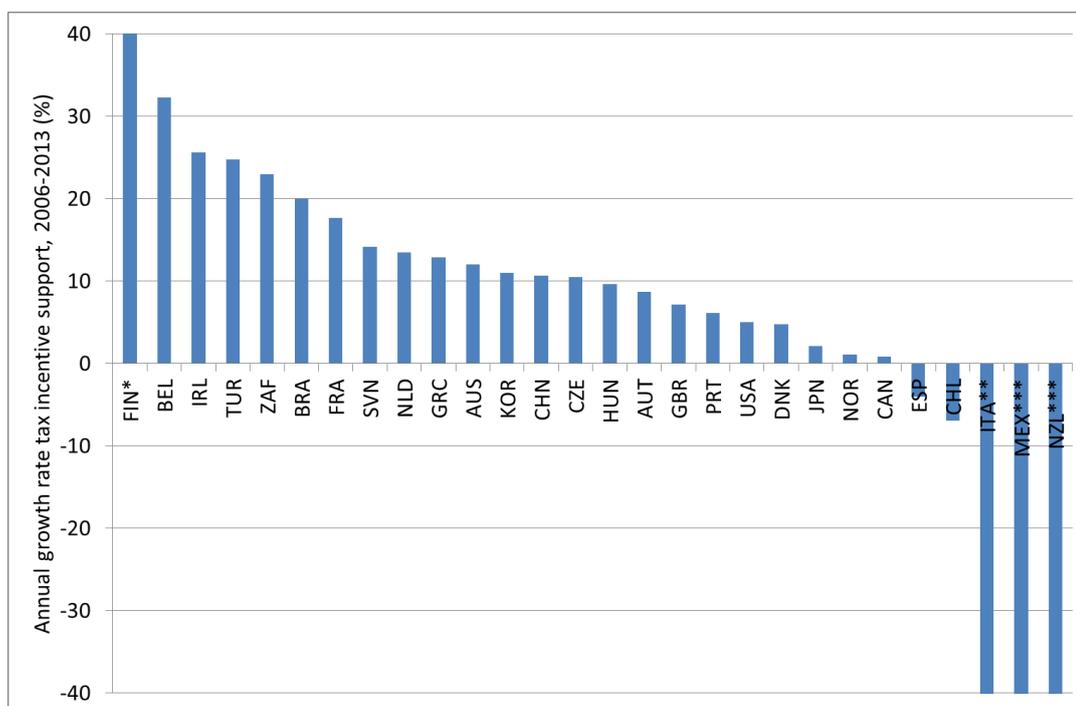
Source: Gaillard and Straathof (2015), *R&D tax incentives: New evidence on trends and effectiveness*, VoXEU, 20 January 2015.

<sup>3</sup> See Chapter 2 of IMF (2016) *Fiscal Monitor: Acting Now, Acting Together*. Washington, April.

<sup>4</sup> Own calculations based on data from the OECD Science, Technology and Industry Scoreboard 2015..

<sup>5</sup> See Veugelers, R. (2014), "Undercutting the future? European research spending in times of fiscal consolidation", Bruegel Policy Contribution Issue 2014/06.

**Figure 2. Growth of expenditure on R&D tax incentives, 2006-2013**



Source: OECD Science, Technology and Industry Scoreboard 2015. Notes: Finland introduced an R&D tax incentive in 2013 and abolished it again afterwards. Annual growth for Italy is -51.4 percent. Mexico and New Zealand abolished their tax incentive between 2006 and 2013.

## 1.2 Economic rationale for R&D tax incentives

In order to innovate, firms often need to invest in R&D. Some of the new knowledge obtained, will spill over to society and the wider economy, where it can be used for free. An R&D performing company therefore cannot appropriate all the positive spillover effects when deciding how much it will invest in R&D. The company will therefore invest less in R&D than what is beneficial for society. Inducing businesses to perform more R&D than they otherwise would have done, for the benefit of society and the wider economy, is the rationale for public support to private R&D activities, including tax incentives for business R&D.

Most countries support business R&D through both tax incentives and grants. These are not interchangeable measures, but different policy instruments serving different purposes. Grants are typically used when government sees a need for R&D that a tax incentive alone will not incentivise, for example when R&D has characteristics of a public good or when it aims to resolve societal challenges.<sup>6</sup> Tax incentives are used for general support to business R&D, are predictable and easier to administer than direct grants. Whereas grants will usually be regarded as State Aid, tax incentives will usually fall outside the realm of the EU State Aid legislation, and give the country considerable freedom to design its tax incentive as it pleases.<sup>7</sup>

<sup>6</sup> Horizon 2020, for example, defines seven societal challenges <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/societal-challenges>

<sup>7</sup> The EU Treaty forbids state aid unless the Treaty itself or secondary legislation decides otherwise. The EU Treaty does not cover the EU member's tax legislation, as long as the legislation is in line with the Treaty's fundamental principles. Offering R&D support to businesses through the tax system gives the countries considerable freedom in designing their tax incentive schemes. Tax incentives for business R&D will generally not be regarded as state aid, as they usually are of a general nature, offering the incentive to all types of businesses and in all sectors. If the tax incentive is "selective", it could be regarded as state aid. A communication from the Commission, Commission Notice on the notion of State aid as referred to in art 107(1) TFEU ([http://ec.europa.eu/competition/state\\_aid/modernisation/notice\\_of\\_aid\\_en.pdf](http://ec.europa.eu/competition/state_aid/modernisation/notice_of_aid_en.pdf)) explains more in detail what "selectivity" means. The fact that a tax relief requires prior administrative authorization does not automatically mean it constitutes a selective measure, as long as it is based on objective, non – discriminatory criteria known in advance (see the Commission Notice para. 125). Whether differentiating the generosity of a tax incentive for business R&D would imply that the scheme is regarded as selective, and thus state aid, would have to be assessed on a case by case basis. Well known types of differentiation (e.g. according to the size of the firm or the age of the firm, and also the use of thresholds and caps) will not automatically be regarded as selective in nature. This issue is dealt with in the Commission Notice para 127-129.

### 1.3 The Mutual Learning Exercise on R&D tax incentives

Earlier international studies on R&D tax incentives focused on their effectiveness and design<sup>8</sup> (e.g. OECD 2014, 2015; CPB et al. 2015), but did not cover how these tax incentives are administered in practice. Data on the administration of R&D tax incentives is not readily accessible and often involves tacitly shared information that is often privy to the country in question.

Sharing country experiences in delivering and monitoring these programmes in different contexts can contribute to more efficient administration of the incentives and to delivering more impact. More accurate knowledge and sharing of experience will further help participating countries – and a wider group of non-participating Member States – to design their own implementation systems in a more effective way.

The MLE group on tax incentives focused on three main issues:

- (1) The definition of R&D in tax-incentive systems;
- (2) The eligibility of costs; and
- (3) The administration of tax incentives.

The Group also decided to limit its deliberations to traditional tax incentives, and thus did not deal with “patent boxes” or other specific types of R&D tax breaks (e.g. those targeting young innovative enterprises).

The **definition** of R&D in tax-incentive systems is a core issue. The reason for subsidizing business R&D is to induce businesses to perform more R&D than they otherwise would have done, as they are not able to appropriate all the positive spillovers from their R&D. A too broad definition of R&D would result in government supporting activities even if there is no market failure to be addressed. A too narrow definition of R&D may lead to a loss of R&D that would have been beneficial to society. The definition of R&D, how it is employed and communicated, also has an impact on how widely the tax incentive is used and the administrative costs both for businesses and public administration. These costs may affect how attractive and generous the schemes truly are, and thereby how much more additional business R&D they will generate.

The generosity of a tax incentive scheme is not only decided by the level of the tax credit, but also by the cost categories that are accepted under the **eligibility rules** of a scheme. Eligible costs are those that are taken into account when computing the tax allowance or credit. How the eligible costs are defined can also have a considerable impact on the attractiveness and the cost of administering the tax incentive.

The **administration and control** of tax incentives influences how many businesses use the scheme and the public and private administrative costs of the scheme. High administrative costs for businesses reduce the value of the tax incentive for them, and thus reduces the incentive effect. High administrative costs for the public bodies that deal with the schemes increase the costs of the scheme for the government. Some administrative costs are unavoidable to ensure that the schemes are used as intended, and to avoid abuse. Finding the right balance between administrative simplicity for all involved on the one hand, and the degree of administration and control to ensure the legitimacy and minimize abuse of the scheme on the other hand, is a common challenge for all countries.

The structure of this report corresponds to these three broad themes. These themes are interlinked, so it is not always obvious in which chapter a specific issue fits best. As a background for the discussions in the Group, the members provided a brief description of their tax incentive schemes with a special focus on their administration (see Annex 1).<sup>9</sup>

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<sup>8</sup> See for example, OECD (2014), “Tax incentives for R&D and innovation”, in OECD Science, Technology and Industry Outlook 2014 and CPB, CASE, ETLA, and IHS (2015), “A study on R&D tax incentives: Final report”, DG TAXUD Taxation Paper 52.

<sup>9</sup> A comprehensive presentation of tax incentive schemes in the OECD countries is given in the OECD report *Compendium of R&D Tax Incentive Schemes: OECD Countries and Selected Economies*. OECD, 2015. See <http://www.oecd.org/fr/sti/rd-tax-stats.htm>. This report, however, mainly deals with the design of the tax incentives and how generous they are, and less with administrative matters.

## 2. ON THE DEFINITION OF R&D

### 2.1 Introduction

What is regarded as R&D under a tax incentive scheme is one of the most important issues when designing and administering it. There are different aspects to this question. The first is the overall definition of R&D and how it is interpreted, including some specific types of R&D. The second aspect is how the assessment of the R&D content of a project actually takes place.

Common to all R&D tax incentives is that the tax benefit is linked to activities that meet the legal definition of R&D. The definition can be in the law itself, in a regulation, or in both, for instance when the basic definition is in the law, but further elaborated in a regulation. In some countries a double approach is chosen, in which the legal text first states what is regarded as R&D and subsequently says what is excluded from the definition<sup>10</sup>. In this respect the situation varies from country to country both in form and content.

When comparing definitions from one country to another, it is sometimes necessary also to take other elements of the schemes into consideration. If a country for example has concluded that the R&D tax scheme should not cover prototypes, this can be ensured either with a R&D definition that excludes prototypes, or alternatively by disregarding prototyping from what is regarded as an eligible cost.

### 2.2 The Frascati Manual and EU definitions of R&D

#### 2.2.1 The Frascati definitions

The OECD has developed a manual for the international classification of R&D activities, the Frascati Manual, named after the place of its first adoption in 1963. Although the Frascati Manual was developed for statistical purposes, most countries refer to it in one way or another in their R&D tax incentive schemes. The Frascati definition can therefore be considered to be the mother of all R&D definitions. The definitions used in Member States' legal texts are usually not just copies of the Frascati Manual definitions, but are rewritten. Sometimes no difference in substance is intended although the texts are not identical.

The Frascati Manual has been revised several times and the latest edition was published in 2015. This revision took into account the fact that the definitions are currently not only used for statistical purposes, but also as a model for legal definitions, i.e. in tax incentive schemes. The Frascati Manual distinguishes between basic research, applied research, and experimental development. With regard to R&D tax incentives, experimental development is the category that is most relevant and controversial.

The 2015 changes in the definition of R&D are to a large degree of a linguistic nature. However, the definition of experimental development now states clearly that the work must generate "additional knowledge". While the requirement of "additional knowledge" was already regarded as a common feature of all R&D, now it is stated explicitly.

#### Definitions of R&D per Frascati manual version 2015:<sup>11</sup>

**Research and development** comprises creative and systematic work undertaken in order to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge. (p. 44).

In the Business enterprise sector, the potential novelty of R&D projects has to be assessed by comparison with the existing **stock of knowledge in the industry**. The R&D activity within the project must result in findings that are new to the business and not already in use in the

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<sup>10</sup> The International Fiscal Association had «Tax incentives for Research and Development» as its subject at the 2015 congress. The report from this (vol 100 a) gives a comprehensive legal analysis of most tax incentives in place.

<sup>11</sup> OECD (2015): *Frascati Manual - Guidelines for Collecting and Reporting Data on Research and Experimental Development*, p. 46.

industry. Excluded from R&D are activities undertaken to copy, imitate or reverse engineer as a means of gaining knowledge, as this knowledge is not novel. (p. 46).

**Basic research** is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view (p. 45).

**Applied research** is original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective (p. 45).

**Experimental development** is systematic work, drawing on knowledge gained from research and practical experience and generating additional knowledge, which is directed to producing new products or process or to improving existing products or processes (p. 45).

### 2.2.2 The EU definition

Some countries (for example Belgium and Latvia) use the definition of R&D as it is included in the State Aid rules. It should be noted that tax incentives of a general nature are not regarded as State Aid in relation to EU definitions.<sup>12</sup> This is however no obstacle to using the EU definition in the national tax law.

#### Definition of R&D per EU regulation 651/2014 art. 2:<sup>13</sup>

**Fundamental research** means experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any direct commercial application or use in view;

**Industrial research** means the planned research or critical investigation aimed at the acquisition of new knowledge and skills for developing new products, processes or services or for bringing about a significant improvement in existing products, processes or services. It comprises the creation of components parts of complex systems, and may include the construction of prototypes in a laboratory environment or in an environment with simulated interfaces to existing systems as well as of pilot lines, when necessary for the industrial research and notably for generic technology validation;

**Experimental development** means acquiring, combining, shaping and using existing scientific, technological, business and other relevant knowledge and skills with the aim of developing new or improved products, processes or services. This may also include, for example, activities aiming at the conceptual definition, planning and documentation of new products, processes or services;

Experimental development may comprise prototyping, demonstrating, piloting, testing and validation of new or improved products, processes or services in environments representative of real life operating conditions where the primary objective is to make further technical improvements on products, processes or services that are not substantially set. This may include the development of a commercially usable prototype or pilot which is necessarily the final commercial product and which is too expensive to produce for it to be used only for demonstration and validation purposes.

Experimental development does not include routine or periodic changes made to existing products, production lines, manufacturing processes, services and other operations in progress, even if those changes may represent improvements.

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<sup>12</sup> See the Communication from the Commission, Commission Notice on the notion of State Aid as referred to in art 107(1) TFEU ([http://ec.europa.eu/competition/state\\_aid/modernisation/notice\\_of\\_aid\\_en.pdf](http://ec.europa.eu/competition/state_aid/modernisation/notice_of_aid_en.pdf)).

<sup>13</sup> [http://ec.europa.eu/competition/state\\_aid/modernisation/rdi\\_framework\\_en.pdf](http://ec.europa.eu/competition/state_aid/modernisation/rdi_framework_en.pdf)

### 2.3 General observations related to the Frascati and EU definitions

The MLE group was aware of the difference in definitions between the Frascati Manual 2002 version and the 2015 version. In the latter, the creation of new knowledge is included more explicitly in the wording of the definition of R&D than before. This is important in the definition of experimental development, because it draws the borderline between, on the one hand, R&D and, on the other hand, innovation without R&D. The rewording makes it explicit that the development of a *new* product, production process or service does not in itself constitute R&D. The process of creating new knowledge or experience, or showing that existing knowledge can be used in a new way is R&D.

When looking at the EU definition of experimental development there is no explicit requirement of creating new knowledge. However, the Commission at several occasions expressed that the definition is the same as the Frascati definition (of 2002)<sup>14</sup>, and from this it can be presumed that also the EU definition requires that experimental development must create some new knowledge<sup>15</sup>, even if it is based on "...acquiring, combining, shaping and using existing scientific, technological, business and other relevant knowledge and skills...".

The definition of basic research or applied research rarely causes problems in relation to business R&D, as the distinction usually does not have any importance from the point of view of R&D tax credits. The difficulty lies in drawing the borderline between experimental development and innovation activities that are not R&D. Indeed MLE participants agreed that drawing this borderline by translating the technological features of a real-life R&D project into the words used in the Frascati definition or the EU definition, and then assessing whether the facts meet the words in the definition, can be a difficult task. Moreover, this task has consequences for eligibility of expenditure (chapter 3), and for the administration and control of R&D tax incentives scheme as such (chapter 4).

The use of an assessment system based on the technology readiness level (TRL) of an innovation project was briefly discussed by the MLE as a possible way to assess whether a project meets the definitions. The advantage compared to Frascati and EU definitions is that the terminology used to characterize individual TRLs seems easier to relate to and to communicate to industrial R&D teams who are generally responsible for documenting and reporting the costs related to R&D tax incentives – at least in some sectors. On the other hand, R&D projects may consist of a number of activities that may be at different TRL maturity levels thus making it less straightforward to relate the whole project to one TRL.

The TRL scale does not yet have a legal basis in Member States, although its use is becoming more widespread, not least because it is being used in some Horizon 2020 calls. The usefulness of the TRL scale may be discussed in member countries in the future, and might find its place in legislation or formal administrative practice.

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<sup>14</sup> See for example Communication from the Commission on the Framework for State Aid for Research and Development and Innovation (C(2014) 3282) paragraph 75 and footnote 40.

<sup>15</sup> This understanding of the EU definition of R&D seems to be confirmed in the proposal for a council directive on a common corporate tax base (CCCTB) EU 2016/0337 art. 11 (11). The CCCTB proposal was submitted after the MLE group had concluded its work.

## 2.4 The national definitions

### 2.4.1 The legal approach

The national definitions of R&D in the MLE Group Member States are in line with each other. Overall they are the same as the Frascati definitions, but spelled out with slightly different words. As mentioned in 2.1, it is sometimes necessary to take into consideration both the law itself and different types of secondary legislation and guidelines to fully understand the national definition of R&D in the tax law. The French example below illustrates this well.

#### France

The definition of R&D in the French tax law is quite general. The Ministry of Finance has therefore developed an instruction<sup>16</sup> to the tax authorities on the definition of R&D. Over some 17 pages the instruction explains the basic terms of the law, well in line with the Frascati manual, and continues by giving examples of what may be regarded as R&D, and what not, in different sectors, and drawing the borderline between R&D and other innovation activities.

Fine-mincing the words in the definitions of R&D can be a bewildering experience. For practical purposes the French administration has distilled the R&D definition for tax purposes to a set of questions that were regarded as an interesting practice by the MLE members:<sup>17</sup>

- 1) Does the project contain an innovative element?
  - does it involve phenomena, structures or relations not previously known?
  - will it allow for an increase in the stock of knowledge?
  - do the conclusions or the results of the project have a general character that may be re-used in a different project or be of interest to another organisation?
- 2) Does the project use methods and techniques that are innovative which are not widespread in the given profession, or for which there is not yet sufficient know-how?
- 3) What was the scientific reasoning and the experimental approach followed?
- 4) Have the results been scientifically and quantitatively assessed and validated?
- 5) Is the qualification of personnel adequate for this project?
- 6) Are any PhD holders involved in the project?
- 7) Has the project been carried out as a part of a collaborative project funded by the European Commission, National Research Agency etc. making explicit reference to the research activities? If so, what was its role in the project?
- 8) Has the project been carried out as a part of a collaboration agreement with a public laboratory? Is it part of a thesis of a PhD. student?
- 9) Were there any publications or scientific presentations available at the end of the project? Has a patent application been filed?

In some countries the R&D definition is double edged, first stating what is meant by R&D and then stating what is not R&D or even excluding some types of R&D from the scheme.

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<sup>16</sup> See [http://circulaires.legifrance.gouv.fr/pdf/2012/02/cir\\_34687.pdf](http://circulaires.legifrance.gouv.fr/pdf/2012/02/cir_34687.pdf)

<sup>17</sup> Guide du crédit d'impôt recherche (2016), p. 6. See <http://www.enseignementsup-recherche.gouv.fr/cid87439/guide-credit-impot-recherche-2016.html>.

## Norway

The tax law offers a tax credit for business R&D,. According to the tax incentive proposal from the Government to Parliament, the term “research and development” should be understood as in the Frascati Manual. The R&D definition is elaborated more in detail in the tax law regulation. The fundamental requirements are that:

1. the project must have a clear objective and a defined scope;
2. the goal of the project must be to develop new knowledge, skills and capabilities;
3. and that the new knowledge or skills are presumed to be useful for the firm in the development of new or better goods, services or production methods.

The definition deals explicitly with prototypes, pilot plants and experimental production, and when they can be supported by the scheme.

The definition then continues by stating that ordinary commercial product development without the character of research is not covered by the definition and then enumerates 11 types of projects that are excluded from the R&D definition, as for example organizational development, market analyses, artistic activities, and the search for minerals or natural resources.

## The United Kingdom

In the UK, the BIS Guidelines define what constitutes R&D for tax purposes. These make it clear that qualifying R&D involves seeking an advance in science and technology. Such an advance means an advance in overall knowledge or capability in a field of science or technology, and not a company’s own state of knowledge or capability alone. This includes the adaptation of knowledge or capability from another field of science or technology in order to make such an advance where this adaptation was not readily deducible. If a particular advance in science or technology has already been made or attempted but details are not readily available (for example, if it is a trade secret), work to achieve such an advance can still be an advance in science or technology.

### 2.4.2 What is new knowledge?

A recurring question in the R&D definitions is what is meant by “new” knowledge. Does the law mean new to the firm, new to the industrial sector in question or new to the world? The interpretation of the law would of course be up to national authorities. In relation to the Frascati Manual definition, for business R&D it states that novelty has to be assessed in comparison with the existing stock of knowledge in the industry. From an economic perspective, there is little reason to support the search for existing knowledge that can be found more easily than by “reinventing the wheel”.

Although the principle of novelty is clear enough, it might in practice be difficult to find out what is really new and there are different ways to ascertain this. Nobody has a total overview of all existing knowledge and skills in the world. In practice tax authorities would commonly approach the assessment of novelty by involving scientific experts from the field. Complementary tools involve different types of searches and the use of databases. The MLE group did not discuss at any length the procedures followed when assessing the novelty of the knowledge in question, other than the profile of assessors and advantages and disadvantages of in-house versus external experts (see more in Chapter 4).

### **2.4.3 What is a new or improved product, service or process?**

The definition of experimental development requires that the aim of the project is to create new or improved products, services or production methods.

The first question is whether the novelty requirement here means new to the firm, or to the business sector or to the world. The second question is where the borderline lies between an improved product, service or production process and incremental modifications that can be developed without R&D.

It seems that most countries do not accept projects that aim at developing something that is new to the firm, but known in the business in question. This makes sense in relation to the rationale for government support for business R&D.

Most countries seemed to accept projects that could result in something new to the business sector in question, although known in other sectors. A condition for this would usually be that it is not obvious that what works in one sector can be applied to another sector. Or to put it differently: there must be some uncertainty present and an element of creativity in the project.

Drawing the line between improvements that can qualify a project as R&D on the one hand and incremental modifications that do not on the other hand, is not always an easy task. The decision depends on professional judgement based on knowledge of the area in question and the state of technology. The MLE group did not have time to discuss how this type of judgement should take place, or whether some countries were stricter than others when drawing the borderline.

### **2.4.4 Software development as R&D**

In most countries a large proportion of R&D projects under the tax incentive scheme are related to software. The application of the R&D definitions to such projects is therefore of considerable interest. Some years ago a few countries excluded software development from their R&D tax incentive schemes. This is not the case today.

The MLE group noted that the use of software when undertaking an R&D project usually did not cause problems in relation to the R&D definitions. Software would be an R&D cost similar to other costs. The same would be the case if it is necessary to further develop software for conducting the research project. The use of software as a component in a new or improved product or service, and even developing it for this use, also does not cause particular definition problems. The question discussed was the application of the R&D definition when the new software was the goal of the project.

Writing a computer programme always creates something new, in the same way as a book will contain sentences or combination of sentences not seen before. This however is not sufficient to qualify the activity as R&D. In addition to the basic elements in the R&D definition (see chapter 2.3 in particular) the software development must, to qualify as R&D, aim at the development of a new product, service or process, which is sufficiently different from what already exists.

The Frascati Manual (2015, chap. 2, p. 65-67) in contrast to the 2002 version, deals with computer software development in a slightly more comprehensive way than before and gives examples of types of activity that should and should not be regarded as R&D. Software development that should be regarded as R&D is the development of new operating systems or languages, the design of new search engines, solving conflicts within hardware and software based on reengineering, creation of new or more efficient algorithms based on new techniques and the creation of new and original encryption or security techniques. Software related activities that should be excluded from the R&D definition are the development of business application software and information systems using known methods and existing software tools, adding user functionality to existing application programmes, creation of websites or software using existing tools, using standard methods of encryption, customization of programmes, and routine debugging of existing systems.

In some countries only the work related to solving the uncertainty would be regarded as R&D, thus accepting only a part of the programming activity involved in the implementation of a project. For example, once a software problem is solved, the work giving the programme an attractive user interface, based on existing programmes and techniques, would not be regarded as R&D. On the other hand, although the project might result in software that can be distributed to customers without much extra effort, the project could still be regarded as R&D, even though this gets close to supporting production. If the project indeed does involve R&D, the fact that the programme can be easily distributed to customers, does not have as a consequence that the project is regarded as production falling outside the R&D definition

## Software in R&D projects as per Frascati Manual

For a software development project to be classified as R&D, its completion must be dependent on a scientific and/or technological advance, and the aim of the project must be the systematic resolution of a scientific and/or technological uncertainty.

In addition to the software that is part of an overall R&D project (to record and monitor its different stages, for instance), the R&D associated with software as an end product or software embedded in an end product could also be classified as R&D when the R&D criteria apply (p. 65).

## France

When determining whether a project can be regarded as R&D, French experts apply a practical set of control questions. These are not used solely in relation to software projects, and were used in addition to the set of questions listed earlier, but were regarded as an interesting practice by the MLE group members especially in the context of assessing software projects.

1. Did the development team face difficulties to undertake the project?
2. Did the team search in the state of the art for existing R&D result? Did they find one?
3. Is the R&D result that was arrived at:

A known result, well documented → no R&D

A known result, well documented but for a different problem → no R&D, unless the problem is not so close then maybe R&D

A proposal made based on a proof of concept → maybe R&D

No results were arrived at → maybe R&D

Gathering "big data" would not in itself be regarded as R&D. However the costs of gathering the data, when necessary for executing a R&D project, may, depending on the circumstances, be regarded as a part of a project fulfilling the R&D definition. Developing new ways of analysing, capturing, curating, searching, visualising etc. of very large amounts of data could be regarded as R&D if the results give new knowledge or a novel way of using the big data.

## Use of examples for guidance

A large proportion of the projects that benefit from R&D tax incentives are related one way or the other to computer programming. This being the case, it would intuitively be beneficial both for businesses and for the administration to have guidelines that explain both in theory and in examples, how the general R&D definitions are used in relation to programming. However, the experience of some countries with use of examples has been rather mixed. First, the development within software is rapid and examples therefore tend to become obsolete, thus leading to a need for frequent changes of the examples. Second, the use of examples may, in some cases at least, lead to claimants simply copying them and providing little additional relevant information on their projects.

## 2.4.5 Clinical trials as R&D

Clinical trials of new drugs, vaccines, devices and treatments are usually divided into four standard phases (in the United States the Food and Drug Administration also operates with a phase 0). Phases 1 to 3 of clinical trials leading to the approval of the drug will usually meet the definition of R&D. This does not imply that all costs prior to the approval will be regarded as eligible R&D costs. Marketing to the medical community or steps to prepare production would not be accepted as R&D activities

Phase 4 clinical studies entail a continued testing after the approval has been given and manufacturing has started. Usually such studies would not meet the R&D definition because they aim at gaining experience in the use of a new drug, and sometimes also includes awareness raising activities among doctors interested in using it. However, also a phase 4 of a clinical trial might bring about scientific or technical advance, and could therefore, if this is the case, be accepted as R&D in relation to a tax incentive scheme. Analytic or clinical epidemiological studies may be eligible if their purpose is scientific and if they bring new knowledge.

After its discussion related to clinical trials, the MLE group had the impression that such R&D did not seem to cause any particular problems in relation to the R&D definition.

## 2.4.6 Prototypes and pilot plants

Government support for R&D should in principle not be a production subsidy or investment aid for production equipment. On the other hand, making a prototype or a pilot plant may be necessary for gaining the new insight or knowledge that is the aim of the project, or necessary as proof of concept. The problem with prototypes and pilot plants is the fact that they may have commercial value after the R&D project is concluded, or that the R&D and testing may lead to a production with commercial value. The value of such prototypes or pilot plants may in some cases be substantial (e.g. a wind mill, or a batch of a test production of a newly developed product).

This dilemma has been dealt with in different ways in different countries. One approach is to exclude prototypes and pilot plants from the R&D definition, or to not accept them as eligible costs at all. This may naturally limit or even block certain types of projects, especially those requiring a very costly prototype or pilot line.

A second approach is to accept them as part of the R&D costs if they are necessary for gaining the new insight, experience or proof of concept that otherwise is accepted as R&D, but to have a "claw-back" rule, i.e. that the market value of the prototype or pilot is deducted from the eligible costs at the end of the project. This may be done either based on an assessment of the value, or the actual sales price. The third approach is to accept the prototype/pilot with no claw-back. This alternative could now be compatible with the EU state aid rules for R&D after they were revised in 2014.

### How prototypes are dealt with in the Netherlands (based on WBSO manual)

A prototype is the actualisation of an operating principle that can demonstrate whether a given choice of solution actually works. A prototype has commercial value if it can be employed for commercial purposes, or as part of a company's capital equipment. If this is the case, the hours devoted to the building of the prototype may not be counted as part of the R&D hours. This also means that no WBSO claim may be made against the costs or expenditures incurred by the building of such a prototype.

Development example: prototypes without and with end-user value

A pharmaceuticals manufacturer develops a sorting machine for its in-house production lines. The operating principle is tested using a prototype made from structural steel. As there is then a risk of the pharmaceutical products becoming contaminated with rust, this prototype is clearly not suitable for use in production lines and it therefore has no commercial value. The hours spent on the construction of this prototype are regarded as R&D hours. However, the hours the manufacturer spends on the construction of the definitive version from high-grade stainless steel are no longer regarded as R&D hours. The reason is that the first prototype only demonstrated the operating principle of the sorting machine, while this definitive version has actual commercial value.

#### Development example: prototype without commercial value

A manufacturer of central heating boilers is developing a new type of central heating boiler. This central heating boiler will ultimately be manufactured in mass production. A prototype being constructed by the applicant during the development process will be used to test the operating principle. Once the operating principle has been demonstrated, the prototype will be scrapped. The hours spent on the construction of this prototype are regarded as R&D hours.

The MLE group noted that prototypes can be dealt with in different ways in a tax incentive scheme. Whether there should be some kind of reduction in the tax incentive for the value of a prototype is a policy matter related both to the *raison d'être* for supporting R&D and how generous government wishes to be. If the value of a prototype is to be taken into consideration, it seems most practical to do so at once when the tax benefit is claimed, as in the Netherlands, and not readjust the benefit in later years as the income is earned.

#### **2.4.7 R&D as part of the innovation process**

The MLE group got the impression that applying the definitions of basic research and applied/industrial research rarely caused difficulties in relation to industry. Such research is covered by the definitions, and the distinction between various types of R&D is usually not very interesting under a tax incentive scheme. Most R&D in the business sector is experimental development, although some large firms also engage in basic research and industrial research. The problems that all grappled with, was the definition of experimental development and the borderline between such work and innovation that is not R&D, however useful it might be.

A company seeking to create a new product, service or production process on the basis of existing knowledge would usually not be interested in R&D as such, but just achieving the goal of innovation that the company has set. The innovation process would usually cover a number of different activities, from creating the initial idea for the new product, market surveys, customer surveys, experimentation, test production, advertising and marketing.

From an industrial point of view it is not very interesting to distinguish between R&D and the other innovation activities that are necessary to succeed. This is probably the reason why many companies find it difficult to understand why only part of their innovation activities should qualify as R&D and benefit from the tax incentive, while the rest may not. From a company perspective the innovation is the central theme, and the R&D is merely a tool amongst other in the innovation process.

Through the discussions in the MLE group it emerged that a number of countries had challenges in explaining to industry what the difference is between innovation and R&D. The lack of understanding in industry of the difference between R&D and other innovative activities probably leads to some frustration and some applications or claims that cannot be accepted, thus creating unnecessary work for both industry and the tax administration. The lack of clarity can result in project accounts that are not easy to use for tax credit purposes because the accounted costs are not related explicitly to the R&D versus the other activities. To obtain the tax credit, one would sometimes have to recreate the accounts retroactively, a task which is burdensome and which might not lead to satisfactory results.

Guidelines with examples can be useful when explaining to businesses what the difference is between R&D and other innovation activities. Making a project plan before the R&D project commences, split up into sub- projects, with milestones and budgets might help in distinguishing between R&D and other innovation activities

#### **Interpreting R&D definition - use of guidelines**

The MLE Group noted that the wording of the R&D definitions countries use differs quite substantially in form, but that in reality they are pretty close in content.

Most countries require that R&D must have the objective to create new knowledge or skills. Without this requirement, a tax incentive scheme would give support to a wider set of efforts than what is necessary to correct for market failure. The Frascati Manual 2015 explicitly requires

that a common qualification for all R&D is the generation of new knowledge. This does not follow from the wording of the present EU definition.

All countries struggle with the application of the definition of experimental development and with explaining to industry the difference between R&D and innovation. To overcome this difficulty, most countries have developed some sort of guidance for applicants, in some cases also supported by pre-application check. The French,<sup>18</sup> the UK<sup>19</sup> and the Canadian<sup>20</sup> guidelines illustrate interesting practices in this regard. Overall, the common learning of the MLE has been that all countries use some sort of guidelines and control questions and they are, to a large extent, similar.

### 3. ELIGIBLE COSTS

#### 3.1 Introduction and why the theme is of interest

In a tax incentive scheme R&D costs are given a more favourable tax treatment than other costs companies have. Such costs will first be deducted from the taxable income as other costs. They will in addition either entitle the company to a higher deduction than hundred percent, or be used to calculate a tax credit that reduces the tax bill the company will get. The question is which costs are to be regarded as eligible for this favoured treatment.

The generosity of a scheme depends on a number of factors, but also of course on the nominal level of the support. This varies from 12 percent up to 40 percent<sup>21</sup>. Some schemes are designed as tax credits (linked to the payable tax) and some offer super deduction/allowances for R&D costs from the taxable income. Most schemes are related to the volume of the R&D, but some also have incremental elements, in the sense that the incentive is linked to an increase in R&D activity. Some schemes only offer relief to companies in a tax position, but many schemes now also offer tax refunds and carry-over of losses to companies that are not yet profitable.

The question of eligible costs is important for several reasons<sup>22</sup>. Which costs are accepted influences how generous the tax incentive actually is, and how costly it is for the government's purse. A scheme that only accepts wage costs will for example naturally be less generous than one that accepts all operating costs, all other circumstances being equal.

When comparing the systems in different countries, the MLE group noted that there was a considerable variation in relation to which costs are regarded as eligible. This is not surprising as

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<sup>18</sup> See <http://www.enseignementsup-recherche.gouv.fr/cid87439/guide-credit-impot-recherche-2016.htm>

<sup>19</sup> See [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/71260/bis-10-1393-rd-tax-purposes.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/71260/bis-10-1393-rd-tax-purposes.pdf)

<sup>20</sup> <http://www.cra-arc.gc.ca/txcrdt/sred-rsde/slt-eng.html>

<sup>21</sup> An overview of the different R&D tax incentives in different states is presented in the OECD report "R&D Tax Incentives: Design And Evidence" (DSTI/IND/STP(2016)1) and in reports presented by Ernst & Young<sup>21</sup> and Deloitte<sup>21</sup>. Annex 2 to this report presents the tax incentives in the countries partaking in the MLE exercise, including an overview of eligible costs in each scheme.

<sup>22</sup> According to COMMISSION REGULATION (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty, states may under certain condition give aid to businesses for R&D. The aid must be under the specified support level, and support can only be given for covering eligible costs. A country giving state aid, may exclude some types of eligible costs from the support scheme, but may not add any other costs than those enumerated in the regulation. A tax incentive scheme for business R&D that falls outside the realm of state aid, may lay down the eligible costs under the scheme, disregarding the state aid rules in this respect. According to the regulation's art. 25, the following costs are regarded as eligible:

(a) personnel costs: researchers, technicians and other supporting staff to the extent employed on the project;

(b) costs of instruments and equipment to the extent and for the period used for the project. Where such instruments and equipment are not used for their full life for the project, only the depreciation costs corresponding to the life of the project, as calculated on the basis of generally accepted accounting principles are considered as eligible.

(c) costs for of buildings and land, to the extent and for the duration period used for the project. With regard to buildings, only the depreciation costs corresponding to the life of the project, as calculated on the basis of generally accepted accounting principles are considered as eligible. For land, costs of commercial transfer or actually incurred capital costs are eligible.

(d) costs of contractual research, knowledge and patents bought or licensed from outside sources at arm's length conditions, as well as costs of consultancy and equivalent services used exclusively for the project;

(e) additional overheads and other operating expenses, including costs of materials, supplies and similar products, incurred directly as a result of the project.

countries have developed their tax incentives over time and tailored to national objectives, conditions and traditions. If, for example, the main objective is to stimulate businesses to employ people with a PhD, it could make sense only to accept (or favour in some way) the wages to them as an eligible cost under a R&D tax incentive scheme. In some countries only in-house R&D costs are eligible, whereas in most countries also procured R&D services are regarded as eligible costs. In some states a tax incentive may be combined with a direct government R&D grant, whereas in a few countries a government grant is deducted from the tax credit.

The main *raison d'être* for government support of business R&D are the positive spillovers of new knowledge. Production and investment in production facilities do not generate knowledge spillovers, and the related costs should therefore not be accepted as eligible under a tax incentive scheme.

The rules regarding eligible costs can furthermore have an impact on the administrative burden of the scheme. If the rules are difficult to understand and lead to a lot of discussion, this will raise the cost of the scheme and might negatively affect its uptake.

### **3.2 In-house R&D**

The objective of most tax incentive schemes for business R&D is to increase the volume of R&D undertaken by businesses. It therefore makes sense to accept most in-house R&D costs as eligible. The main R&D costs are usually wages for the people working directly on the project. All countries accept wages of people involved in R&D activity, although in some countries a proof of a certain level of experience of the staff is required (e.g. Latvia accepts wages of both research personnel and technical support personnel involved in a project; while for the research personnel a formal requirement of a university degree is in place, no formal educational requirement is set for technical support personnel but a relevant experience may be a qualifying criterion). In Belgium only the costs of staff with a minimum of master degree are accepted for companies above the age of five years.<sup>23</sup>

Some countries only accept the wages paid directly, other countries (e.g. Latvia) include also other types of related costs (social security and pensions contributions). Commonly, different types of caps apply, be it to the maximum amount of deductible R&D expenditure per company, or to the maximum permissible wage level that may be claimed (e.g. Norway only accepts an hourly cost for in-house personnel up to NOK 600 per hour, approx. EUR 65, in its tax credit scheme). Most countries do not accept an addition of general overhead cost related to the direct personnel costs.

Apart from wages a majority of countries also accept other direct costs. These costs can be consumables taken from in-house stock or purchased for the R&D project, including services, or the depreciation value of capital equipment used in the project, and the rent for buildings. Some countries (e.g. the Netherlands, Portugal) accept capital costs related to the project, whereas such costs are not regarded as eligible in other countries, although some have a distinct scheme for accelerated depreciation of R&D assets (e.g. the United Kingdom) or a general allowance for capital expenditure (e.g. Latvia). In some countries testing and certification costs related to the introduction of a newly developed product are eligible (e.g. Belgium, France for part of those costs), as well as R&D-related scientific and technological information activities (e.g. Belgium or Latvia) while in most countries such costs would not be regarded as eligible.

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<sup>23</sup> There is a separate scheme for innovative startups.

### 3.3 Procurement of R&D

A company might wish to outsource its R&D. This could be for a complete project, or for parts of it. Whether such contracted R&D is an eligible cost varies significantly between countries, depending on a number of considerations.

#### Eligibility of procured R&D

In the Dutch scheme, contracted research is not an eligible cost. The main rationale for this being the simplicity of the scheme, which is a payroll withholding tax credit, and the additional cost of controlling such expenditure.

In France contract research is an eligible cost provided the sub-contractor has been certified by the administration as being able to conduct R&D projects. In addition, when procured from a public research institution, the rate of the tax credit is double (60 percent). Similarly, in Norway contract research is an eligible cost, but the contractor may not apply for the tax credit. In case the supplier is an approved research organization, the cap applied to deductible R&D is doubled to NOK 40 mil. (approx. 4.2 mil. Euro). In Latvia subcontracting is eligible if contracted only from a registered research organization (public or private in any EU or EEA country) at the cost of the contract, in Portugal this concerns research organisations and formally recognised suppliers.

In the UK, under its SME scheme, contract R&D is eligible, but only 65 percent of the value of the contract is accepted. The rationale for this is that the scheme should not subsidise the profit margin of the supplier who is not taking the risk and facing the uncertainty of result of R&D activity.

The reason for excluding contract research is usually because the idea behind the scheme is to develop competence in the company seeking the relief, and it then makes sense to limit the tax incentive to in-house R&D. On the other hand, it is easy to imagine that an SME might need external R&D to succeed in its innovation attempts. The approach in most countries has been that businesses should organize their R&D projects as they judge best, and that it is more important that R&D takes place, than where it is conducted.

Interestingly, given the diversity of approaches to subcontracting, the MLE identified a potential risk of double subsidizing in the case where the contractor and supplier reside in different countries. It seems that in a hypothetical case in some countries the subcontractor can deduct the cost of outsourced R&D while the contractor in another country may also deduct the amount that has been outsourced. However, the MLE did not have sufficient capacity to explore this issue further or to provide any evidence that such cases do actually happen. It would nevertheless be an interesting topic for further deliberations. An exchange of information among tax authorities in different Member States on this issue would be advisable.

### 3.4 The combination of tax credits and government grants

An R&D project might benefit from a tax incentive and could at the same time be eligible to receive a direct R&D grant from government. The question is how this is handled. One approach can be to deduct the government grant from the eligible costs used for the tax incentive. A second one can be to accept dual funding. A third approach would be to exclude the possibility of combining a tax incentive with a grant. Again, this question is dealt with in different ways in countries as each of them tries to strike an optimal balance between administrative simplicity of reporting and control and a sufficiently strong incentive effect of both R&D grant and tax incentives schemes.

#### R&D grants in combination with tax incentives

In France, R&D grants have to be deducted from the eligible expenditures. Similarly, in Latvia a project which has received a grant is not eligible for tax allowance as a whole, i.e. including the co-financing.

In the UK the SME tax relief cannot be combined with R&D grants.

In Norway combining the tax incentive with a grant is permitted. However, if the total government support surpasses the limits for state aid in the EU, the tax relief is reduced accordingly.

If dual funding is accepted, there should be a mechanism for avoiding excessive funding. In the Norwegian scheme the company must, when making the relief claim, report whether the project has received other public funding, and the company's auditor must confirm the information. The result could be that the tax credit is reduced, so that the sum of the grant and the tax credit does not exceed the permitted aid levels for R&D in the General Block Exemption regulation (EU 651/20014).

From an administrative point of view it would be best to deal with the funding of a project only one scheme. This argument would not hold in cases where government funding in combination with regional funding, as well as EU funding (e.g. from Horizon 2020) is a possibility (e.g. in Portugal). One can also foresee that a project is so risky that the tax relief is not sufficient for the company to undertake it without additional public funding and the funding agency may not have sufficient means to pick up the bill for what otherwise would be financed through the tax incentive. How to treat the combination of tax credits and direct grants is a policy question that the MLE group did not deal with further.

#### Learning: scope for more simple rules on eligible costs

There was an overall conclusion in the MLE group that there are considerable differences between countries as to which costs are regarded as eligible. These differences were regarded as greater than the MLE participants have envisaged previously.

To a large degree the variations in what is regarded as an eligible cost reflects that countries have different objectives for their tax incentive schemes and that the issue therefore is not only a practical matter, but also a policy issue. Countries wishing to review their policy related to eligible costs could profit from studying the approaches other countries have chosen.

The group observed that the definition of eligible costs may in some countries be rather complicated, and might be an administrative burden to handle in practice, both for businesses and for the tax administration. Through regular customer surveys the tax authorities can find out whether businesses are of the opinion that the rules related to eligible costs are overly complicated and difficult to understand. If this is the case, a revision of the rules could be considered. Simplifications could for example be possible by using more flat rates and standard templates for calculating the eligible cost. An example could be that hourly cost is set to a fixed sum without taking into consideration what the employee actually earns, or that the overhead costs are set to a fixed percentage of the total costs disregarding what they actually are. Group did however not go further into this question.

## **4. ON THE ADMINISTRATION AND CONTROL OF R&D TAX INCENTIVE SCHEMES**

### **4.1 Introduction and why the theme is of interest**

The administration of a tax incentives scheme for business R&D is important for its success. And, not surprisingly, it is where most of the discussions and learnings within the MLE Group took place, comparing national practices and benchmarking the parameters of individual schemes.

The objective of the R&D tax schemes is to induce businesses to undertake more R&D than they would have done otherwise. Its administration rules and practices must therefore be understandable and user friendly. The total administrative costs must be kept down because it reduces the value for businesses and increases the administrative costs for government. The administration also influences how targeted the scheme is in practice. All public expenditures must have a political legitimacy. An otherwise useful scheme for tax incentives for business R&D could be terminated if badly administered.

Administering tax incentive schemes for business R&D has over the years become more challenging. The schemes have generally been expanding so that more firms use them. Many schemes have become more generous, while at the same time the administrative resources have remained stable, which might increase the tension between businesses and the administration. It is a challenge to strike the right balance between user-friendliness, low administrative costs and the prevention of fraud and abuse.

To illustrate the expansion of R&D tax incentives schemes, the number of SME tax incentive claims in the United Kingdom has increased from 6,000 in 2007 to 16,000 in 2014. Similarly, in France the claims have increased from 10,000 to 23,000 between 2007 and 2013. In the Netherlands the number of companies that claim has increased from 16,620 in 2009 to 22,980 in 2015 and in Norway from 1,827 in 2011 to 3,656 in 2015.

Previously, in the United Kingdom the claims had to exceed a certain financial volume to qualify. This is an easy way to reduce the number of claims. However, a number of countries have the objective of increasing R&D particularly in SMEs, and they are more likely to be affected by such thresholds than larger companies.

### **4.2 Motivating businesses and helping them to use the tax incentive**

The objective of R&D tax incentives is to increase business R&D. Inducing more companies (newcomers) to undertake R&D is an important part of this objective.

Most countries engage in promotion and communication activities that go beyond the provision of guidelines for applicants and explaining the conditions of the R&D tax incentive scheme on the web site of the authority delivering the tax incentive. Some agencies contact businesses directly on an individual basis or offer face to face meetings with businesses (e.g. Norway, Canada), and most agencies arrange workshops, conferences and webinars aiming at both the potential claimants, as well as intermediaries (business associations, tax advisors, auditors, etc.). For example, the Canada Revenue Agency offers a new client-centred service to enhance the predictability of claim results for claimants. Through the free, on-demand Pre-Claim Consultation service, potential claimants can find out whether their R&D work qualifies for the Scientific Research and Experimental Development (SR&ED) tax incentives before they submit a claim.

Over time most countries have progressively expanded their outreach activities. The reason for this is that such activities are increasingly required by companies. In addition, such activities also seem to improve the understanding of the distinction between R&D and innovation on the part of businesses, thus reducing the chances of disputes at later stages.

Outreach activities might be less urgent for a generous R&D scheme that has been in place for some time. In this case, the uptake by businesses might be satisfactory, and no more effort to increase the use of the scheme is necessary. This is perceived to be the situation in France.

## Communication and customer relations with businesses

The Norwegian approach to awareness raising can be regarded as an interesting practice. In the past years, the Research council of Norway has increased its communication activities, spending a considerable amount of time and effort to increase awareness of the tax incentive scheme. In 2013 an updated website was launched and a three-part seminar called "The SkatteFUNN school" was launched aiming to educate intermediaries (incubators, mentors and industry consultants) in the use of the scheme. The Research Council has hosted approximately 20 such seminars so far.

In 2014 the Council expanded their outreach with a series of events called "SkatteFUNN Open day." The seminar contains a one hour presentation about the scheme, a half-hour presentation from local companies about their project and experiences, and one-on-one meetings with the participants. During the one-on-one meetings, companies get to meet advisers from the tax incentive scheme and discuss their project ideas. In 2016, the Research Council organized 20 such events. Through these activities, the SkatteFUNN staff met approximately 800 businesses and completed over 150 one-on-one meetings.

The Research Council has also started educating auditors and accountants on the details and regulations of the scheme. In total, this means that the SkatteFUNN staff discuss the tax incentive scheme with at least 1,000-1,500 companies a year.

These efforts have translated into an increase in the number of applications that rose in the years 2011-2015 from 1,827 to 3,656, i.e. on average by nearly 20 percent each year. Importantly, almost 50 percent of clients have less than 10 employees which demonstrate that the information reaches down to the very small companies.

In the United Kingdom, Customer Relationship Managers (CRMs) manage HMRC's relationships with the 2000 largest and most complex businesses. The CRM framework helps to improve the handling of complex issues, and allows for risk assessment, including R&D tax relief claim risks, to take place against a published framework. The CRM model can be regarded as an interesting model that is likely to increase the user-friendliness of the scheme and decrease the uncertainty on the side of claiming businesses.

The Canada Revenue Agency puts considerable effort into its outreach activities for its Scientific Research and Experimental Development (SR&ED) programme. These include online videos and webinars to raise awareness and direct education (during the reviews that typically take place at the client's premises). A dedicated service called the First-Time Claimant Advisory Service (FTCAS) is provided to all first-time claimants whose claims are not reviewed. This ensures that all first-time claimants receive a visit from the Canada Revenue Agency to help them "Get it right from the start".

A company's interest in using the tax incentive scheme will also depend on how easy it is to use, and how swiftly it is delivered. In the United Kingdom, for payable tax credits in the SME scheme, it takes approximately four weeks from a claim that has been forwarded until the payment is made. In the Netherlands gaining the permission to withhold R&D costs from the continuous payroll taxes takes maximally 12 weeks (and 4 weeks for first time applicants) but companies are allowed to start the R&D-activities immediately after they submitted an application. In Norway approving a project as R&D takes on average 7 weeks and the projects are permitted to start prior to the filing of the application on condition that the project started within the same calendar year. The credit is given in connection with the tax settlement the year after the tax year. In Canada the timeline for reviewing the claim and sending money to a company is 120 days.

The process of preparing a tax claim is not an easy one, and even less so for companies applying for the tax incentive for the first time. Efforts to ensure that applications and claims are correct, in particular the first time, reduce administrative burdens for both businesses and authorities. Correct applications and claims also contribute to businesses getting the incentives they are entitled to.

Ensuring correct applications and claims call for several types of activities. First of all good and easily available guidelines explaining all details in an understandable way are needed. A lot can also be done with an electronic application or claims form. This can lead businesses through all the points they have to address. The form could further have links explaining more in detail what the different points are about, with examples of how they can be filled out.

## Guidance tools

The Canada Revenue Agency provides first time applicants with a comprehensive support when making their claims. A qualified employee helps them all the way through until the application is ready for submission. Canada also has developed an interactive learning tool (SALT) that companies can use to review their own applications before they are lodged. SALT<sup>24</sup> is designed to help understand the definition of SR&ED; to understand the requirements for the eligibility of work; to determine if the company's project might include SR&ED work; to determine the extent of eligible work that the company may have performed; and to estimate the associated SR&ED expenditures of a claimant's Investment Tax Credits.

The UK approach<sup>25</sup> represents an interesting practice where a set of documents guiding the applicants provides a step-by step guidance, including specific definitions per cost category linked closely with accounting definitions.

### 4.3 The use of consultants to assist businesses in tax credit matters

Over the years tax incentives for business R&D have become more wide-spread and generous. This has created a market for different types of consultants that assist businesses in preparing their applications or claims for the tax benefits and assisting businesses in obtaining the tax relief. In Latvia three out of ten claims are prepared by consultants, a similar share is being reported in Norway. In France, there is no official estimate, but the experience shows that consultants may be involved in 20 to 25 percent of the claims. In most countries the eligible cost under a tax incentive scheme for business R&D would be the actual R&D costs, and neither costs related to the planning of a project or the costs related to obtaining the tax credit can be deducted under the R&D tax incentives scheme. Thus the use of consultants for obtaining a tax relief for business R&D will for tax purposes in most countries be dealt with as any other business expense.

The growth in the use of consultants for obtaining a tax relief for business R&D might reflect that the schemes are difficult to use, or that businesses do not get enough help in applying for the relief or for presenting a claim. Canada is a country that uses considerable resources to help businesses using the tax incentives, and did not regard consultants as a problem<sup>26</sup>. Some members of the MLE group were of the opinion that consultants were expensive and unnecessary for businesses to use. From the perspective of companies the use of consultants might increase the businesses success-rate vis-à-vis authorities and ensure a professional handling of the tax incentive that the company itself is not familiar with. In several cases, according to some members of the group, the use of a consultant caused more problems for the administration than applications or claims from the businesses themselves, due to vague claims written by non-professionals attempting to stretch what can be regarded as both R&D and eligible costs.

The activities of consultants, and the quality of their work, can vary considerably. Some are competent professionals that help companies develop R&D strategies, assist in the planning of projects, help in the search for partners, check the novelty of the project, assist in writing the application or claim and help in the steering of the project. Other consultants play a more limited role, assisting the company in presenting or arguing a case vis-à-vis the tax authorities, attempting to translate the understanding of the project from the business and technical world to tax and administrative language. Some consultants might dig into a company's activities to see if any ongoing R&D projects can be discovered that could merit support from the tax incentive. Engaging a consultant that knows the procedures and the rules might reduce the administrative costs both for businesses and for the public administration, because the applications or claims are in good order, in particular the first time they are submitted. In general, businesses should decide which tasks they wish to perform themselves and which they want to hire professional help for doing. They are also in a position to decide themselves whether hiring a consultant is worth the cost.

Some of the contracts with consultants are based on the principle that no fee is paid unless the consultant succeeds and sometimes linked to a percentage of the tax incentive received. Payment based on success is not in itself an unhealthy principle. How the fee is calculated is a business decision that should be made by the parties themselves. It should furthermore be borne in mind

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<sup>24</sup> See <http://www.cra-arc.gc.ca/txcrdt/sred-rsde/slt-eng.html>

<sup>25</sup> See <https://www.gov.uk/guidance/corporation-tax-research-and-development-rd-relief>

<sup>26</sup> In 2012-13, the Government of Canada conducted a study on billing arrangements between consultants and claimants and concluded regulating was not required.

that all administrative costs businesses incur for obtaining the tax relief, reduce the value of the tax incentive for them, whether the costs are internal or are paid to external consultants.

The MLE group discussed different measures that could be set in place in countries where the use of consultants is perceived as a problem. The most obvious one is to give businesses, and in particular first time applicants, more guidance. The administration could also give guidance on the sensible use of consultants and what type of contracts they should avoid. An alternative or supplement to this is to draw up guidelines for good consultant practice in the field of R&D tax incentives. In Canada it is mandatory, since 2014, to inform for each claim whether a claim preparer has been used, who the claim preparer is, what billing arrangement has been used and the total fee paid. A penalty of \$1000 may be assessed in respect of each SR&ED claim for which prescribed information about the claim preparer(s) is missing, incomplete or inaccurate. In France, where the number of consultancies has increased significantly, the cost of the consulting firm has to be deducted from the eligible expenses under the tax incentive scheme when: a) a fee is calculated on a success basis; b) the fee is higher than 15,000 euro or 5 percent of the expenses. In addition, France has introduced a voluntary certification of R&D tax-incentive consultants. This does not seem to have influenced the practice of the consultants, but has increased the prices consultancies charge. The French idea of certification could be pushed further, so that only certified consultants can operate on the market and that they must comply with ethical guidelines. In case of non-compliance, consultancies should lose their certification.

### **Learning: more clarity needed on problems associated with consultants**

The Group learnt that the use of consultants for obtaining an R&D tax relief is rather widespread, and perceived as a problem in some countries. How large the problems are and how widespread they are needs further study.

## **4.4 The assessment of applications and claims**

### **4.4.1 The R&D assessment in practice**

The question of assessing whether a project is actually R&D is important in several ways. First of all, sound judgement is necessary to ensure that projects that actually are R&D are supported in accordance with the legislator's intention, and that other projects, which do not classify as R&D do not enter into the tax incentive scheme unjustified. Secondly, the handling of the R&D assessment influences the business community's trust in the system, its willingness to use it and the legitimacy of the tax scheme in the public eye.

The definitions of R&D are usually well thought through. However, their practical interpretation is an issue that all countries are continuously dealing with. Giving a judgment on what is *new knowledge* or an *improved* product is clear in theory, but applying the definition to a given case depends to a certain degree on the interpretation of the legal texts and the judgement of the assessor. The expertise of an assessor will determine which projects are accepted and which projects are rejected. A professional in a field is more likely to reject projects that do not lead to additional knowledge, possibly leading to a higher rejection rate. The reverse is also thinkable, an expert might for example appreciate how difficult even small improvements can be to achieve, whereas somebody with less insight might regard the modifications as so marginal that the product actually has not changed sufficiently for the project to be regarded as R&D.

For these reasons it matters who assesses whether a project or work undertaken can be regarded as R&D, and how the procedure takes place. Ensuring the necessary expertise is not the only consideration when deciding who should assess projects. There is also a need for ensuring confidentiality all through the process.

In some countries the assessment of whether a project meets the R&D definition is handled by the tax authorities themselves. They usually have a designated team with broad expertise for dealing with the cases. Sometimes they ask for assistance from outside experts or, for example, from the Ministry for research or a research council. The variety of approaches to this issue has been one more surprising finding of the MLE group. The MLE group noted that the United Kingdom apparently did not use people with a professional background (other than in tax matters) to the same degree as other countries did. Whether this influences the assessment of what is R&D or not,

is not obvious. In Norway the assessment of whether a project meets the R&D definition and which types will be accepted as part of the R&D project is taken by the employees of the Norwegian Research Council. Using outside experts from industry can lead to issues of confidentiality. This can to a certain degree be mitigated by using retired specialists from industry (e.g. in Portugal). Experts without any industrial background can also be a solution to the confidentiality question, but might lead to assessors with limited practical experience, which might influence their rulings. In France, the tax authorities decide which applications are referred to the Ministry of Education and Science for verification of eligibility of claimed R&D expenditures. The Ministry subsequently asks experts from academia to verify the novelty of the project - this to ensure an independent and objective assessment and avoid possible conflicts of interest.

## Keeping the assessors up with the trends

A common issue faced by all countries that engage expert to assess the claims is how to keep their expertise up to the technological standards of their field. Some countries systematically develop the expertise of their assessors through participation at conferences and by promoting close interaction with companies through company visits (e.g. Canada).

### Portuguese practice

The Ministry of Finances has established a "Certification Committee" The "Certification Committee" is composed of 3 members: representatives of the Portuguese Innovation Agency (ANI), the Science and Technology Foundation (FCT) and the Institute to Support Small and Medium Sized companies (IAPMEI). The Certification Committee is responsible for the implementation of the assessment and control of eligibility of R&D activities and investments and ANI assures the logistical and administrative support to the Certification Committee. A team of experts from the three entities above, of different technological fields is engaged in the assessment. When the complexity of the tasks is justified upon the situation, the Committee may use, on an exceptional basis, third-party services from academia.

### The UK practice

HM Revenue & Customs both decide what is R&D in the meaning of the tax law, and what the eligible costs are. In the UK's 'self assessment' system, companies are required to make claims for R&D tax reliefs as part of the Corporation Tax return, and they make that claim using their knowledge of the law, including HMRC's published detailed guidance. Under the UK's electronic filing system, all SME claims for R&D relief are automatically referred to an Incentive and Reliefs (I&R) unit. There are five of them across the country with different specialisations. HMRC officers in the I&R Units then risk assess the claims, and a percentage of claims is chosen for ex-post investigation. Risk assessment and investigation is carried out by tax trained assessors, with experience and training in the R&D tax relief scheme, but not necessarily with any particular technical or scientific background. When in doubt, the assessors can consult the specialist teams that handle claims for the largest companies, and refer the most complex cases to tax and legal specialists.

Despite the existence of guidelines and checklists, the decision on what does and what does not qualify as R&D is dependent on the judgement of the assessor, and there is a risk that assessors reach different decisions in the same case due to different working methods. That is why the different ways the assessment process is organised matters. One could use one expert per project, or have two experts assessing them individually, or have the possibility to consult a panel or a jury in case the claim poses a particular difficulty. If an assessor is in doubt, there could be a procedure for ensuring a broader discussion of the case in-house. In order to ensure that the assessors are in line with each other, one could conduct a study of decisions that already have been made to check whether the ruling is independent of which assessor handled the case.

#### 4.4.2 Ex-ante or ex post assessment?

One of the most interesting findings of the MLE group was the recognition that some countries deal with the definition of R&D ex post (after the R&D has taken place, and then in connection with the assessment of the company's tax return), while other countries give an approval ex-ante, before the start of the project. A combination is also possible, in which decision related to whether a project qualifies as R&D and which types of activities would be accepted as part of the project is decided ex-ante, whereas the eligibility of costs is decided ex post. An alternative solution is that a company can choose between an ex-ante or an ex post assessment (e.g. France or the UK give companies the possibility of ex-ante assessment without this being a legal requirement).

Following this, it should also be noted that some schemes are based on *project* approvals (either ex post or ex-ante) while some are based on the declaration of R&D costs that a company has incurred for R&D purposes, and not necessarily linked to projects identified in the tax return. If the latter is the case, the company might be obliged to substantiate that the costs really have been incurred for the purpose of R&D, which can be a challenge a posteriori if the work has taken place without a clear R&D project plan and project accounts. Despite the instructions to companies on how to plan and document R&D projects, in countries that apply the ex post approach this seems to be a recurring issue.

Applying a given R&D definition ex-ante or ex post is in theory the same, assessing whether the facts meet the elements in the definition. In practice the relationship between industry and tax authorities could differ in the two situations. In ex-ante schemes, a dialogue can take place with adjustments to the R&D project and the wording used to explain the project. If approval is not given, the company can choose not to run the project. In the ex post schemes, the company has actually spent its money and the issue of approval is critical to the question of how much of the costs the company must pay itself. This might induce the tax authorities to be lenient when applying the R&D definition, or might result in conflicts that lead to appeals and ultimately the case being brought to court.

##### The Norwegian practice

The Norwegian tax credit (SkatteFUNN) is project based. An application for approval of the project as R&D must be submitted to the Research Council of Norway (RCN). The RCN assesses whether the project falls under the definition of R&D in the tax law and which activities can be accepted as part of the R&D process. Approvals are usually given for 2-3 years. Projects that have not been given ex-ante approval do not qualify for the tax incentive. However the approval is given retroactive effect for R&D that already has taken place in the year of approval.

The company claims the tax credit for R&D costs incurred during the tax year when filing the tax return for the year. The tax authorities are bound by the decision of the RCN in relation to what is regarded as an R&D project and R&D activities. The tax authorities decide which costs are eligible and sufficiently documented, and then calculate the tax credit. Moreover, in the Norwegian scheme an auditor must confirm that the claim being made is correct. The application for the approval of a project as R&D in Norway does not have to be confirmed by an auditor and is usually prepared by the applicant.

An additional piece of practice in the Norwegian case that should be mentioned is that the approval procedure has clear deadlines for approval giving a greater predictability to the process.

One more interesting aspect of the ex-ante approach taken by Norway is the possibility to explore the synergies between R&D tax credits and R&D grants schemes. This is an issue that is of interest to a number of MLE participants, yet no country seems to have grasped this issue successfully yet. The very fact that the Research Council of Norway has the information about the planned R&D activities of individual can be used in the design of R&D policy, including its grant schemes. This is a topic that is being explored by both Norway and Portugal, both countries that check all of the R&D tax claims.

The Norwegian system is an ex-ante approval of what is regarded as R&D and an ex post approval of the eligible costs. There are very few appeals, and up to now no approval case has been brought to court so far.

The MLE group noted that the question of when it is decided whether a R&D project qualifies for the tax incentive varies from one country to another. In France a company may apply ex-ante but although the non-mandatory possibility of ex-ante check exists, it is not widely used by companies

(about 300 out of 20,000 claimants use it per year). The same is the case in the UK and Latvia, although the form is not the same, as the decision is an “advanced assurance” that strictly speaking is not legally binding.

Ex-ante decisions give businesses more certainty and predictability than ex post decisions. Ex post rulings are based on what actually has taken place and not what was planned, and might therefore be less burdensome from an administrative point of view both for a company and for the public authorities. The reason for this is that authorities do not need to assess both the planned project and the one that was actually carried out. On the other hand, assessing what can be accepted as R&D is probably best dealt with when a project starts than several years afterwards, because appreciating the state of the art retroactively can be a challenge. A compulsory ex-ante review of a project implies that whether the R&D requirement is fulfilled, is checked in 100 percent of the cases. This limits the need for control at a later stage and the controls can be limited to what are eligible costs.

#### **4.4.3 Project-based applications and claims**

In some countries the R&D relief claim is made in the tax returns with no special documentation requirements. This is the case in for example France and the UK. It will then be up to the tax authorities to request documentation from the tax payer that falls into the sample assessed in a given year. A prudent tax payer would have the project plan in its files, and also project accounts. However, this degree of formality is not mandatory. The tax payer might be able to convince the tax authorities in other ways that R&D actually has been carried out and that the costs are eligible. Reconstructing what actually has been done and what it has cost several years after the R&D has taken place, can be quite a challenge.

In other countries, as for example Portugal and Norway, there has to be project plans and budgets from the very beginning, and they are subject to approval. These might be modified as the project advances. In the Norwegian case the tax credit claim will often be compared with the approved project plan and budget.

On the one hand, mandatory project plans and budgets might be perceived by businesses as rather bureaucratic. On the other hand, it might improve a firm’s R&D management, could be beneficial compared to reconstructing the R&D process if the tax authorities ask for documentation, and would probably contribute to limiting the possible abuse of the tax incentive.

#### **Learning: scope for exchange of best practices regarding assessment of applications**

The Group noted that there are considerable differences between countries in relation to how applications and claims are processed. Three core issues seem particularly interesting. The first is the professional background of the assessors of compliance with R&D definition. The second issue is whether the R&D assessment takes place ex-ante or ex post. The third issue is whether applications or claims are based on presented project plans and budgets, or on the reported costs of R&D.

#### **4.5 Preventing and sanctioning abuse**

Mistakes can be made in the application of tax incentives, and abuse of the system can take place. In addition to the societal costs of tax avoidance in general, abuse of tax credits may result in a loss of legitimacy of the scheme. As a consequence, the scheme might be abolished, harming the innovation system and thus society as a whole. Preventing abuse of tax incentives, and sanctioning transgressions, are therefore important elements of the schemes.

A general issue is finding the right balance between prevention and controls on the one hand, and the administrative costs for businesses and government on the other hand. Finding this balance in relation to tax incentives must take into account that government’s objective is not just to ensure the correct tax burden for all, but in most countries actually also to incentivise businesses to increase their R&D by the tax incentive. Paperwork, bureaucratic procedures and heavy systems of controls might be good for compliance, but could also be a disincentive to using the scheme. Avoiding abuse has several aspects to it. The first is establishing measures to prevent abuse. The

second is to have systems to uncover abuse so that abusing the system is perceived as risky. The third is to have appropriate sanctions at hand to penalize abuse, for both reasons of fairness and prevention.

The establishment of preventive measures and control systems would usually be based on analyses of which applications or claims should be regarded as carrying high risk of abuse or mistakes, and subject to closer attention, and how the abuse most likely would take place.

For countries that do not control all of the claims, controlling applications or claims could in part be based on random selection, and in part be based on a risk assessment. This risk assessment could consist of several elements that either alone, or when in combination with other factors, exceed a certain critical threshold of risk. The risk analysis would be tailored to national circumstances and the tax incentive in place. In countries that do not check all of the R&D projects and where assessment of compliance with the R&D definition and assessment of the tax and accounting issues are performed by two separate bodies, the sampling typically stays in the hands of the tax authority.

### **Using automated system for sampling risky projects in the United Kingdom**

In the United Kingdom HMRC has established an interesting practice - a risk assessment system that is based on a number of features that typically accompany tax claims that, by experience, have been associated with high risk. These include criteria based around the amount of the claim, changes in claim characteristics over time, and situations where experience has shown that errors can occur, e.g. claims made using estimated amounts.

The computerised system uses profiling techniques and automatically identifies the high risk claims which, in turn, are included in the sample of claims controlled each year. The Canada Revenue Agency also uses a computerized risk-assessment system for initial screening of claims to ensure that the claims at highest risk for non-compliance are detected and subject to the verification activities, other members of the MLE expressed their interest in a greater use of computerised methods for risk assessment of claims.

HMRC also publishes a list of common areas of risk when examining claims, and a list of common errors made. These are published for the guidance of HMRC staff, but also to provide pointers to claimants and agents on mistakes to avoid. The current list of risks and errors includes the following features:

- Project activities outside the scope of R&D for tax purposes are included in the claim.
- Expenditure outside the qualifying categories is claimed.
- Staffing costs are claimed in respect of people who are not employees of the company or externally provided workers.
- Claims are made in respect of overheads that do not qualify as consumable items.
- Expenditure is claimed on a particular item for a period before it was in a qualifying category.
- Special rules for connected parties are not applied.
- Companies do not recognise they are not SMEs.
- SME's failing to make claims under the Large Company Scheme.
- A loss previously surrendered for a payable tax credit is carried forward.
- Unconnected subcontractor expenses are not restricted.
- The amount of surrenderable loss for the purposes of the payable tax credit is not restricted.
- A payable tax credit claim is made for expenditure that only qualifies under the large company scheme.
- No account is taken of subsidies or Notified State Aid.

When establishing preventive measures or controlling applications or claims it is useful to take into consideration how abuse may take place, and to which of the - possibilities of abuse particular attention should be given. An obvious possibility of abuse lies in presenting something as R&D which is not, or is only in part R&D. The second way of abusing the system is presenting as eligible

cost outlays for other purposes (e.g. use of equipment that may not be necessary for the performance of the project). The third is inflating the costs by for example claiming for more hours of manpower or machine time than actually have been used. In addition to these main vulnerable aspects of the scheme, there can be several other possibilities for abusing the system, for example not reporting direct grants that under a scheme should be deducted from the eligible costs, not deducting other project income that should be taken into account, exaggerated internal pricing within a group to boost the cost base for an R&D project, claiming R&D costs under the scheme when the IPR will belong to another company etc. As the tax incentives vary from one country to another, the prioritization of which elements in an application or scheme should be addressed for preventive purposes or control, must be looked at in a national context.

### **Measures to minimise abuse and facilitate controls in Norway**

As presented in chapter 4.4., Norway practices an ex-ante system for deciding which projects are R&D and which activities will be accepted as part of the R&D project. The application must present a project plan, with the planned budget, broken down into sub-projects and milestones. The company has to report on the progress of the project to the Research Council (simple progress monitoring).

When claiming the tax incentive, this has to be done in a particular form certified by the company's auditor and specifying the different types of costs. In addition the company is obliged to have separate project accounts that show how many hours which employees have worked on the project and which part of the project, plus the hourly cost for each employee. These accounts are to be kept on a continuous basis. A prudent auditor would require from all employees working on the project to confirm their project engagement

Countries differ substantially in the share of R&D claims that are subject to a closer scrutiny. In Norway all of the R&D projects are assessed on an ex-ante basis in relation to the question of R&D content and which activities may be regarded as part of the R&D project, but no figure exists for the number of claims controlled by the tax authorities. In Portugal all of the R&D projects are checked ex post for compliance with the R&D definition and the tax authority receives from ANI (National Innovation Agency) a confirmation of the total eligible cost or a proposal for correcting the claim. In France only a sample of companies is checked each year (between 7-8 percent in France) resulting in the recuperation of about 280 million euro<sup>27</sup>). Both France and the UK operate on an ex post assessment basis. In Canada, that apparently uses more resources than most countries in guiding companies to claim the tax credit correctly, approximately CAN\$400 million is reclaimed annually as non-compliant expenditures. Unique to other countries, the programme includes activities to assess a company's technical and financial eligibility to the programme/credit and activities to ensure compliance with financial tax legislation/rules, i.e. the Canada Revenue Agency employs scientists and financial auditors in this programme. Canada invests an appreciable amount in detecting and deterring non-compliance in the SR&ED programme and these activities and controls successfully identify and protect important amounts of tax credits each year.

### **Learning: scope for more advanced adoption of risk-based controlling**

The MLE Group learnt that all countries represented gave consideration to the issue of prevention and abuse of R&D tax credit schemes. Most countries provide the claimants with clear requirements that are known ex-ante (e.g. the need to keep records of the R&D projects in a pre-defined manner).

The approaches used in controlling vary among countries. The use of risk-based approach to controls is in most countries either fairly recent or still only being considered for implementation.

The MLE group noted that the balance between resources used to prevent mistakes and abuse on the one side, and on controls on the other side should be the result of a systematic analyses ensuring the best use of administrative resources.

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<sup>27</sup> Rapport de la Cour sur le crédit d'impôt recherche, 2013.

The MLE group members indicated that the sanctions used when the tax incentive is abused are the same as in other tax evasion matters. Such sanctions could be reclaiming the incorrect tax credit backwards, imposing punitive taxes in addition, and normal penal sanctions such as fines or prison punishment. No countries had for example introduced as a sanction that a company abusing the tax incentive could be barred from claiming it for some years in the future or should be subject to special control requirements for the next applications or claims. The only instance indicating a move in this direction was identified in the UK which has recently (summer 2016) proposed to introduce measures that apply sanctions to the most persistent users of tax avoidance schemes, including R&D tax reliefs. Under the proposal, a 'serial avoider' who repeatedly exploits R&D tax relief in a way not intended by parliament, could have access denied for a period of 3 years. In its 'Advance Assurance' scheme, HMRC rules deny the use of this scheme to companies that have used tax avoidance schemes or are 'serious defaulters'.

#### **4.6 Dispute resolution**

The administrations responsible for R&D tax credit schemes usually want to minimise disputes since they can undermine the legitimacy of the scheme and may have negative political consequences and be costly to deal with. Despite all the efforts to explain and communicate the scheme there will always be a limited number of cases where disputes cannot be avoided (e.g. because of a mistake in assessment on the part of the administration). In most countries an appeal procedure exists whereby the claimant may dispute the cases that relate to the definition of R&D without going to court. In Latvia only one appeal instance is possible in case of a decision on what constitutes R&D made by special R&D Activities Evaluation Commission at the Latvian Ministry of Economics and this can only be appealed in the court. In France there may be two instances and a different expert (innovation mediator) may be called in. In the UK disputes are mostly resolved by agreement, as provided for in the structure of the tax legislation. In Norway an expert panel is institutionalised which assesses difficult cases collectively before the appeal procedure itself. But, unlike in most countries, this is done ex-ante as part of the assessment of an R&D project.

#### **Learning: ex-ante approval of R&D projects leads to fewer disputes**

The MLE Group members agreed that preventing disputes was by far the best way of resolving them and that litigation should be prevented as much as possible. An open dialogue over disagreements is an effective means of minimising the risk of cases being brought to court, ideally combined with a light dispute resolution mechanism before litigation. Multiple stage system of dispute resolution with a clear appeal procedure is likely to increase the confidence of businesses in the whole R&D tax scheme.

One observation that was made by the MLE group – although this was not rigorously tested – is that the more generous the R&D tax scheme is, the higher the stakes are and the higher the chances of a dispute are. This, however, applies mainly in the case of ex post assessment of R&D project which is, nevertheless the norm in a majority of countries.

Probably the most revealing learning of the MLE was that the ex-ante approval of R&D projects as practiced by Norway leads to fewer disputes. At the stage of application companies are free to amend and modify their project and may decide to stop it in case the Research Council does not approve the project. In case of the ex post assessment, the situation is radically different and the company has no possibility to modify the design and costs of the project. A telling statistic from Norway is that no single case related to the definition of R&D has reached the Norwegian courts so far, partly also because the Research Council is regarded as the most expert body on matters of R&D and the courts would rarely overrule its decision.

## Annex 1: Main R&D tax credit schemes in participant countries

### **Belgium: Partial exemption from the payroll withholding tax for knowledge workers** **Main features**

The scheme has been in place since 2003 for research organisations, since 2005 for enterprises. The measure was gradually extended from employees with a PhD to employees with a master diploma and the discount rate on the payroll withholding tax was raised from 25 percent in 2005 to 80 percent in 2013. There is no cap on the benefits. Approximately 3,000 firms use the fiscal aid versus 2,000 firms that report R&D activity. The discrepancy is probably due to the underreporting of R&D for statistical purposes, due to the fact that companies only have very weak incentives to report their R&D activities correctly. The tax incentive is based on the yearly wage bill of researchers (master or higher) involved in R&D-activities, and technicians and support staff employed in young innovative companies (YIC).

*The assessment of the eligibility of a project is made both ex-ante and ex post.* Firms have to notify the R&D-projects or programmes where researchers (and technicians and support staff in YIC-enterprises) are involved in, together with their function within the company and their diploma, within a month after the start of a new R&D activity. They can ask for advice from Belgian Science Policy Office (BELSPO) whether the activities can be considered as R&D and if the staff possesses the required qualifications. The fiscal inspection inspects retrospectively (until five years back) the fiscal aid that has been claimed and can also ask for BELSPO's advice. BELSPO's position is always binding.

### **Definition of R&D**

Belgium uses the EU definitions of fundamental and industrial research and experimental development as published in regulations 800/2008 and 651/2014. The core criteria for R&D that have to be fulfilled are novelty, creativity, systematic execution of the activity, and reproducibility of results. Specific questions asked to assess the eligibility of R&D activities differ for fundamental research, industrial research, and experimental development.

Fundamental research:

- Place the project in the context of the company
- What new scientific progress is (was) the project designed to make?
- What sort of research activity will be (was) carried out to acquire this new knowledge?
- What hypotheses, theories, laws will be tested (or have been formulated) through these research activities?

Industrial research:

- Place the project in the context of the company.
- What new knowledge and skills are (were) sought through the research?
- What sort of R&D activities will be (were) carried out to acquire the new knowledge and skills?
- For what new products, processes, methods or services will the knowledge and skills be used?
- Or, if not new but improved products, processes or services are (were) pursued, what was the original product/service for this and of what does (did) the improvement consist of?

Experimental development:

- Place the project in the context of the company.

- What existing scientific, technical or commercial knowledge or skill formed the basis for the R&D activities?
- What technological progress does (did) the project attempt to bring about?
- What obstacles / uncertainties does (did) the project attempt to overcome in order to make this technological progress?
- What sort of activity is (was) planned in order to overcome these obstacles/uncertainties?

If the R&D activity involves the development of software:

- What is (was) the programme's area of application?
- What is (was) its functionality?
- Describe the technical challenge for which a solution is (was) being sought
- What is (was) the concept used in the development of the software? What thought processes (imperative, functional, logical, object oriented) and what programme languages are (were) used?
- Describe the various stages used to reach the solution; e.g. during the planning stage (requirements analysis), the design stage, the construction stage and the test stage?
- What existing modelling programmes, programming tools, components, methods and techniques are (were) used?
- What methods and techniques are (were) self-developed?
- How innovative for the company are the IT architecture, applications / interfaces, data architecture, and algorithms of the self-developed software?

## **Eligible costs**

Eligible costs are taxes on wages of researchers (master diploma) in all enterprises and taxes on wages of technicians and support staff in Young Innovative Companies (YIC). The tax incentive applies to both in-house and insourced and outsourced R&D-staff: in the latter cases the external subcontracting firms are eligible for the tax credit. To illustrate this in practice, the direct employer of the R&D performing company can apply the tax reduction. When company A insources specialists from a company B, the company B as direct employer is eligible. The same applies when company A outsources activity to a company C, whereby company C can apply the tax reduction on its own researchers. Work on prototypes, pilot plants, software and scientific and technological information activities performed in an R&D context are eligible.

## **Organisation**

BELSPO is responsible for the assessment and control of the eligibility of R&D activities and eligibility of claims is being evaluated by experts working at BELSPO. BELSPO's opinions are binding, but companies can ask for further clarification.

## **Application procedure**

Enterprises notify their R&D activities and R&D staff (with diploma qualification and description of function) electronically. They can ask for an advice on the eligibility ex-ante to which BELSPO will respond within 3 months. When the Ministry of Finance asks for an advice, BELSPO has to respond within 1 month. The discount on the withholding tax is deducted monthly by social secretariats. More information on the scheme can be found here: [http://www.belspo.be/belspo/organisation/fisc\\_en.stm](http://www.belspo.be/belspo/organisation/fisc_en.stm)

The documents that a company needs to submit vary from case to case. For example, copies of diplomas, copies of time sheets, invoices or contracts could be needed to prove the involvement of staff in R&D activities.

## **France: Crédit d'Impôt Recherche**

### **Main features**

Established in 1983, this scheme has changed several times – in particular the rate of the tax credit. Around 23,000 companies used the scheme in 2013. Of these firms 18,000 report R&D expenditures, 1,300 report innovation expenditures only, 1,000 report textile expenditures and 2,700 do not report any expenditure (mainly because they are the holdings of subsidiaries that perform R&D). Nearly all the firms reporting R&D activities use this scheme.

The scheme applies a 30 percent rate for up to 100 million euro of R&D expenditures, and a rate of 5 percent above 100 million euro. For textile expenditures the same rates apply as for R&D expenditures, but here the *de minimis* rule applies (no more than 200 thousand euro can be accounted every 3 years). For innovation expenditures, the rate is 20 percent for expenditures up to 400 thousand euro (SME's only).

Firms declare their overall costs of R&D, but controls are operated on a project basis and firms have to provide information on a project-by-project basis. The assessment of eligibility of an R&D project is made ex post. Firms can also secure their R&D and innovation expenditures ex-ante by the so called *rescrit* (advanced tax ruling), which does not include consideration of cost, but only of eligibility by project. The assessment of sub-contracting firms' activities is made ex-ante through the so called *agrément* (label for typically 3 years).

### **Definition of R&D**

The formal definition of R&D used for the assessment of applications is the Frascati Manual definition. A guide is written by the Ministry of Research that aims at helping firms to self-assess whether an activity is R&D. Several questions are proposed. Each question provides an R&D indicator and all questions can help determine the eligibility of activities. However, taken individually, each indicator is not a sufficient condition for the existence of R&D activity.

1. Is there an innovative element in the project?
  - a. Does it cover phenomena, structures and relationships hitherto unknown?
  - b. Will it help to increase the stock of knowledge?
  - c. Are the conclusions and the results of this project, general enough to eventually be reused in another project or to be of interest to another organization?
2. Does the project use methods and innovative techniques that are not yet widespread in the profession or for which there is still no know how?
3. What were the scientific reasoning and experimental approach followed?
4. Have the results been scientifically and quantitatively assessed and validated?
5. Are the qualifications of the R&D personnel of this project adequate?
6. Is there any PhD among the R&D personnel?
7. Is the project conducted as part of a collaborative project of the European Commission, the National Research Agency (...) making explicit reference to research activity? If so, what was the role of the company in the project?
8. Is the project conducted as part of a research collaboration agreement with a public laboratory? Is it part of the thesis of a PhD student (Industrial Agreement for research training. ...)?
9. Are there any publications or scientific presentations made within the project? Has a patent application been filed?

### **Eligible costs**

Wages of researchers with a PhD or equivalent degree are considered twice for R&D credit purposes during the first 24 months following their first recruitment subject to the condition that the employment contract is unlimited and that the headcount of the research personnel is not lower than the one in the preceding year. Operating expenses related to R&D activities are estimated on a flat-rate basis (for fixed assets: 75percent of depreciation expenses and 50 percent of labour costs for researchers and research technicians; in the case of young PhDs' 200 percent of their actual non-doubled wage during first 24 months). Operating expenses cover in particular the expenditure for support staff, administrative expenses, raw materials, etc. Expenses related to the granting, maintenance, depreciation and defence of patents further qualify under the scheme. Only purchases of immobile material qualify as eligible expenditure.

Subcontracted and collaborative R&D expenses are only eligible if contracted to public or certified private organisations up to certain limits (10 million euro per year and company, increased to 12 million euro in the case R&D contracted to public research organisations). Expenditures for subcontracted R&D are doubled if the R&D is outsourced to research institutions.

The design, development and evaluation of the prototype is within the scope of eligible R&D activities as it is to dissipate scientific uncertainty and / or techniques that increase the stock of knowledge. One or more R&D prototypes may be necessary, consecutively or simultaneously. Full prototype costs are eligible as long as they can be considered as R&D. Conversely, when the trials to explore the uncertainties have been completed, the limits of R&D activities are reached. There is no special treatment for software. However, it should be noted that software developed by successive approximations is not always to be considered as a prototype even if the result is "new" (software is always "new").

## Organisation

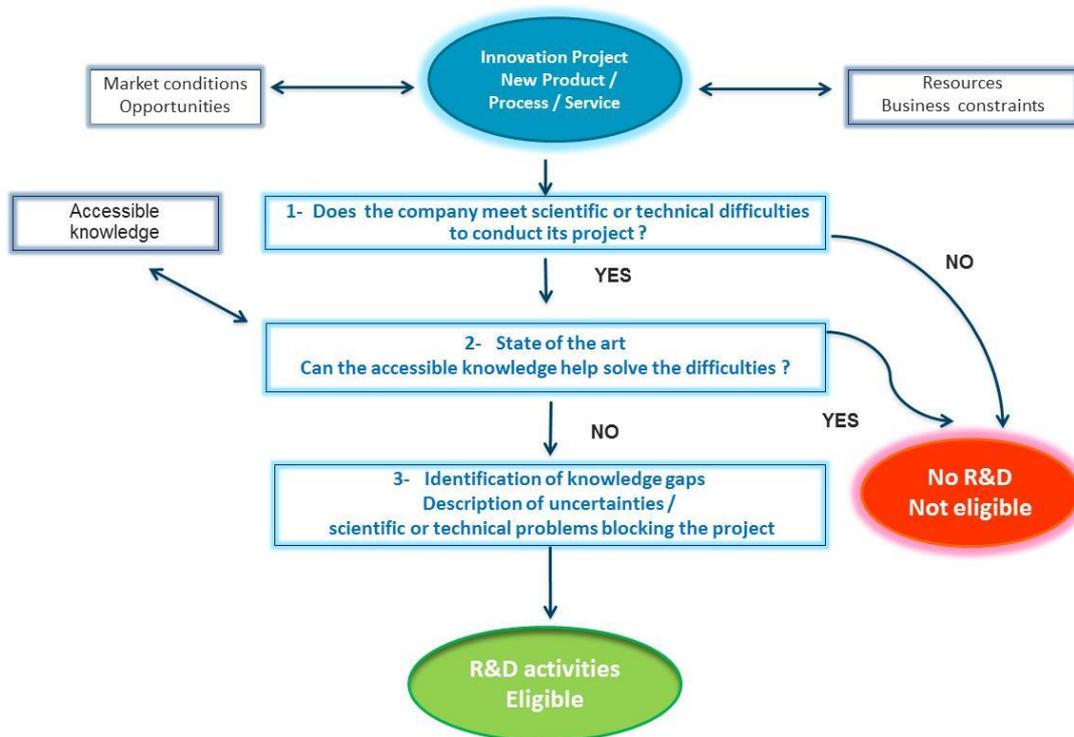
The fiscal services decide on which companies are controlled and the Ministry of Education and Research can be called upon when an R&D expertise is considered necessary (about 1,500 cases a year). Meetings with firms and experts from the Ministry of Education and Research are organised frequently in order to enhance mutual understanding. Firms can also use an ex-ante assessment of their project eligibility which is carried out by the Ministry of Education and Research. Administrative and court appeals are available.

## Application procedure

The procedure followed for obtaining the tax incentive involves the following steps:

1. Ex-ante assessment is issued when requested
2. A fiscal declaration, available online since 2014, has to be submitted ex post.
3. Private subcontractors require a label given by the ministry in charge of research
4. Any company may face an ex post control.

Simplified flow diagram to determine eligible projects



## **Latvia: Corporate income tax R&D allowance scheme**

### **Main features**

The Latvian CIT R&D allowance scheme for R&D expenses is effective since July 2014. During the second half of 2014 it has been used by 92 companies. This is approximately 10 percent of companies which have reported being active in technological innovation (this also includes firms that only purchased new technological equipment). The rate of support in Latvia is 45 percent of eligible R&D costs. Eligible costs are multiplied by 3 (300 percent) when calculating the taxable income. As the CIT in Latvia is 15 percent, this means, that the CIT bill is reduced by 45 percent of the eligible costs. There is no cap on the eligible R&D expenses.

The R&D tax allowance in Latvia is based on R&D projects. One company may declare several R&D projects during the year. As a general principle (stated by the law) the assessment of the eligibility of an R&D project and declared costs is made ex post by the State Revenue Service (SRS). Companies may submit their R&D project descriptions before starting the project to the R&D Commission of the Ministry of Economics (MoE) for an ex-ante assessment of the eligibility of planned activities. The R&D Commission may approve the project in full or may approve only part of the activities planned in the project and exclude other activities which do not fall under R&D activity definition.

### **Definition of R&D**

Definitions used in Latvia are based on the definitions used in the corresponding Regulations of the EU (EC Regulation No. 800/2008 for period from 2007 to 2013, but especially on Regulation No 651/2014 for the new period from 2014 to 2020), namely:

- Industrial research – planned research or critical investigation aimed at the acquisition of new knowledge and skills for developing new products (goods or services), new technologies, or for bringing about a significant improvement in existing products or technologies.
- Experimental development – combining, modelling, shaping and using existing scientific, technological, business and other relevant knowledge and skills with the aim of developing new or improved products (goods or services), technological processes or services, or activities aiming at the conceptual definition, planning and documentation of new products (goods or services) or technological processes.

Experts ask the following four questions to assess the eligibility of R&D activities:

1. Do project activities qualify as industrial research or experimental development?
2. Is the aim of the project development of a new product or new technology? New technology: changes in technology, equipment, software; making essential improvement of the production process or services processes. New product: fully new (goods or services) or with significantly improved functional properties or application.
3. R&D process has to result in a novelty, or to provide solution to a technological uncertainty. Technological uncertainty or novelty has to be related to the industry or services sector where applicant is active or where it intends to start activities.
4. Solution should not be obvious to one with corresponding knowledge and experience in the sector.

Activities are not required to be systematic in order to be eligible, and the outcome need not be transferable or reproducible.

### **Eligible costs**

Under the current Latvian R&D tax allowance scheme eligible costs are: cost of R&D staff and technical staff related directly to the project. Definitions of staff is given in the law – R&D staff – with doctoral degree or MSc, possibly also BSc, engineers with experience in industry; technical staff – technicians, assistants, laboratory assistants directly involved with the project. In addition, expenses for testing or certification by accredited laboratories in EU and EEZ countries directly related to the R&D project are also eligible.

R&D services from subcontractors are eligible but only from research institutions (universities or research institutes) registered in the corresponding register of the Ministry of Education and Science of Latvia, or in EU or EEZ countries.

Material costs, overhead costs, purchase of equipment or depreciation etc. have to be included in the R&D project description but are not included in the calculation of the tax allowance.

## Organisation

In case a company declares R&D expenditure *ex post*, eligibility of R&D activities is assessed by State Revenue Service (SRS). If SRS is uncertain about classification of a project it may ask advice to the R&D Activities Evaluation Commission at the MoE.

If a company submits its project for *ex-ante* assessment to the MoE R&D Commission, eligibility is assessed in simple cases initially by an internal expert of the Commission (one person with PhD degree in physics) and then approved by the members of Commission (two representatives of the Ministry of Education and Science (MoES), two representatives of the MoE, one representative of the Investment and Development Agency of Latvia, non-voting representatives of the Ministry of Finance and SRS). In more complicated cases the Commission may involve external experts. In practice external IT experts have been involved to assess IT projects and financial sector information systems development. External experts are involved under a tender procedure for a period of a year (in 2015 two external experts). Decision of the Commission of the MoE is only advisory; the final decision is made by the SRS. In practice SRS accepts the decision of the Commission.

Control of the eligibility of expenditure is done by SRS. If SRS is unclear about the costs of implemented R&D project or in cases of dispute with the company the SRS may submit the case (a report of an implemented R&D project) to the R&D Assessment Commission of the MoE. The Commission may involve external experts.

If a company follows the *ex post* route and there is a dispute with the SRS about the nature of the activities performed, it is possible for the company to submit a report on the implemented R&D project to the R&D Commission of the MoE to evaluate if the activities performed are R&D activities (industrial research or experimental development activities). The Commission may clarify if staff cost have been paid to persons corresponding to a R&D staff definition, but would not go into issue, if expenses are reflected in the books of the company in a right way. Additionally, there are general appeal procedures with the SRS in place as for all tax issues. These follow the subsequent steps: appeal to the head of regional SRS authority; appeal to the director general of the SRS, next step application to the court.

If a company follows *ex-ante* route to assess whether its activities within the planned project are eligible R&D activities, and is not satisfied with the decision of the R&D commission of the MoE, it may submit additional information (normally not more than once). As the decision of the Commission is advisory, for the company it is possible to go on with the project and declare costs to the SRS (but SRS will normally accept decision of the Commission), or go to the court.

## Application procedure

There are two application routes available for this scheme.

The *ex post* route:

- 1) Tax Declarations for a particular taxation year shall be filled out by taxpayers through the Electronic Declaration System (EDS) and submitted to the SRS. Tax declarations shall be submitted simultaneously with the company's annual report.  
<https://www.vid.gov.lv/default.aspx?tabid=11&id=513&hl=2>
- 2) The SRS has the right within 3 years to perform tax audit in the company. During the tax audit the SRS also checks if the R&D costs are declared correctly.
- 3) In case of different opinion both the company or the SRS have the right to ask the MoE R&D Evaluation Commission on the opinion if the declared activities are R&D activities or not. The assessment by the Commission has a non-binding character.
- 4) If the involved parties disagree with the opinion of the Commission of the MoE, it is possible to apply for a court ruling.

The *ex-ante* route:

- 1) The company submits project description in a free form to the MoE Commission for Evaluation of R&D Activities.
- 2) The Commission evaluates the project within 45 days. If external expertise is needed, the evaluation term can be prolonged by 30 more days. The Commission may ask the applicant to provide additional information or to correct the project in cases where the information submitted is not sufficient. The applicant may also be invited to present his project at a meeting of the Commission if the information is deemed not sufficient. The decision of the

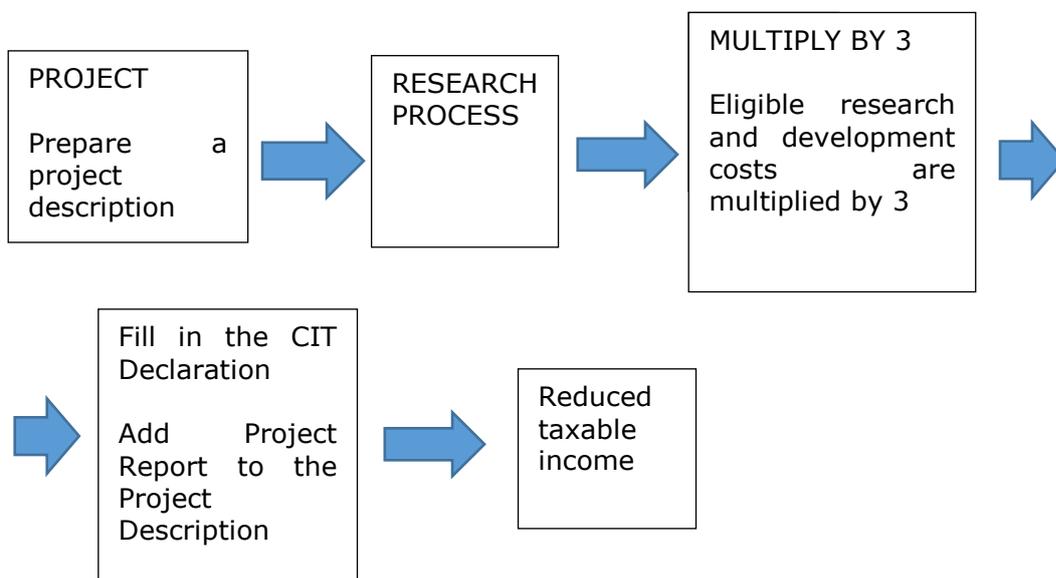
Commission is not binding (as before, usually the SRS accepts the opinion of the Commission). The Commission may exclude non-R&D activities from the project.

- 3) After the decision of the Commission the *ex post* route starts (the company has to fill in the Tax Declaration as described above).

The company has to fill in an electronic Declaration form. Web links to documents:  
[https://www.vid.gov.lv/default.aspx?tabid=11&id=6203&hl=2;](https://www.vid.gov.lv/default.aspx?tabid=11&id=6203&hl=2)  
<https://www.vid.gov.lv/default.aspx?tabid=8&id=170&hl=1>

The company has to prepare two documents: Project Description and Project Report. The Project Description has to be prepared in advance before starting the project; the Project Report has to be produced at the end of every financial year and when the project is finished. Both documents have to be archived by the company for the next 5 years. Project Description and Project Report submitted to the Commission may be a shorter (compressed) version of project documentation kept by the company.

### Flow chart: What to do to benefit from CIT incentive?



- The R&D Project documentation has to be kept in the company;
- It is not obligatory to submit the project documentation to the government institutions before the CIT benefit declaration, but the company has to be able to show the documents immediately after inquiry by the State Revenue Service;
- In case the company is in doubt whether the project activity is R&D, it is possible to obtain evaluation from the Ministry of Economics.

## **Netherlands: WBSO**

### **Main features**

The scheme is a payroll withholding tax credit and has been in place since 1994. As of this year (2016) the scheme has been merged with the corporate income tax credit (RDA). The new scheme continues under the name WBSO. Based on the definition of firms that is used for R&D reporting in 2013 there were 17,410 companies that used the WBSO in 2013. For the same year (2013) 18,649 companies reported R&D activity.

The WBSO consists of three different sub-schemes:

1. For companies (not for self-employed entrepreneurs) there are two tax brackets with different benefit percentages for all R&D costs (total R&D wage costs, plus either the actual costs and expenses or the fixed sum against costs and expenses). The tax credit (R&D payroll tax deduction) amounts to 32 percent of the first 350,000 euro of R&D wage and other costs, and 16 percent of all further R&D costs.
2. For start-up companies the tax deduction for the first 350,000 euro spent on R&D is higher (40 percent).
3. Self-employed entrepreneurs are entitled to a fixed 'R&D tax deduction' of 12,484 euro, and start-up self-employed entrepreneurs are entitled to an additional deduction of 6,245 euro. Self-employed entrepreneurs who employ others are eligible for R&D deductions to the payroll taxes paid for these employees, as well as for their own R&D tax deductions.

The WBSO tax credit is granted for the research activities of the beneficiary in general. Once the level of the overall WBSO benefit is established, it is deducted from the total sum of payroll tax due by a company. In the legislative act establishing the WBSO projects are not mentioned. This act specifies companies can apply for the rebate for R&D performed in a period of at least 3 and maximally 6 months and for no more than 3 of such periods per year. If the company has an R&D department and has received WBSO benefits a year earlier it can also apply for the period of a whole calendar year.

An additional regulation further specifies how the WBSO is implemented in practice. Although the WBSO aims to enhance R&D spending at the company level as a whole, in this regulation projects are introduced as administrative tools to divide applications in WBSO categories and time so that they are manageable for Netherlands Enterprise Agency. The WBSO decision for a company (or R&D statement) only contains the total amount allocated for all projects together.

Applications are checked ex-ante (steps 4 and 5 of the application procedure – see below). Companies report their actual R&D ex post (see step 7). Selected companies are visited ex post (see step 8).

### **Definition of R&D**

The definition of R&D used for the assessment of applications is in line with the Frascati Manual definition of R&D. However, the WBSO is limited to technical innovation - development of technically new (components of) physical products, physical production processes or software - and technical scientific research (this concerns explanatory research that is technical in nature).

The following specific questions regarding development projects are used in the assessment:

1. What is the technical innovation (technically new) of this project?
2. What is the technical problem or bottleneck you are planning to work on?
3. What is the outline solution that you have adopted or intend to research?
4. What is the technically new operating principle?

Specific questions regarding technical scientific research projects:

1. What is the reason to start the research?
2. What do you aim to do with the results of your research?
3. What are the research questions and what do you want to explain?
4. How is the research project set up and how is it conducted?

5. On which technology fields and which foundations or operating principles do you target your research?

### Eligible costs

Costs and expenditures can only be taken into consideration for WBSO support if these are incurred as a result of carrying out company's own R&D. 'Own R&D' is defined as R&D carried out by the R&D tax withholding agent to whom the R&D Declaration is given. Not all the work involved in R&D projects can be deemed to be R&D work. Administrative and organisational work, for example, is not deemed to be R&D work. Costs attributable to these activities are not, therefore, taken into consideration by the WBSO. This is shown in the following diagram:

Only those costs or expenditures that are directly attributable to the R&D work carried out by the withholding agent come into consideration for the WBSO. This means that these costs and expenditures must have a directly demonstrable causal link to the R&D being carried out. Wage costs other than those incurred by company's own R&D do not come into consideration for the WBSO.

The following table describes eligible and non-eligible costs.

	<b>Enhanced deductibility</b>	<b>- if paid for by third party</b>	<b>- if cost incurred abroad</b>	<b>Additional explanations</b>
Wages and salaries of researchers	Yes	No	Yes	The R&D activities must occur within the EU and must be performed by employees on the Dutch payroll.
Wages and salaries of other R&D personnel	Yes	No	Yes	The R&D activities must occur within the EU and must be performed by employees on the Dutch payroll.
Payments to on-site consultants/contractors	No	No	No	
Payments to off-site consultants/contractors	No	No	No	
Payments for R&D services provided by third parties	No	No	No	
Payments for other services	No	No	No	
Contributions to R&D carried out by third parties (e.g. collaboration agreements)	No	No	No	
Purchase of materials and other consumables	Yes	No	Yes	
Overheads	No	No	No	
Acquisition of plant and machinery	Yes	No	Yes	Except for investments in land and business assets which qualify for the energy or environmental investment allowance.
Acquisition of software, licences and IP rights	Yes	No	Yes	

Acquisition of land and buildings	Yes	Yes	No	Except for investments in land and business assets which qualify for the energy or environmental investment allowance.
Depreciation / amortisation of R&D assets	No	No	No	

WBSO assessment criteria are based on the principle that the applicant is the party that carries out the work (outsourced R&D is not eligible). Not all the work carried out within the context of R&D projects can be deemed to be R&D work. The text of the WBSO regulations, now incorporated into the Wage Tax and Social Insurance Contributions (Reduced Remittances) Act/R&D tax credit (WVA/S&O), and the R&D Delimitation Regulations define what is and is not understood as R&D work. The Act lays down a specification of work that constitutes R&D work, while the Delimitation Regulations list a number of explicit exclusions.

## Organisation

Internal technical consultants from the Netherlands Enterprise Agency (RVO.NL) review applications. They review the projects listed in the application, and their costs and expenditures, against the relevant laws and regulations. A firm may lodge an appeal against the full or partial rejection of an application for a WBSO tax credit by submitting a notice of objection, with reasons. If the firm is unable to agree with RVO.NL's decision on its notice of objection, then it can lodge an appeal with the Trade and Industry Appeals Tribunal. If, after due consideration, the objection or appeal is met in full or in part, the firm will receive a supplementary R&D Declaration. It is possible that the firm receives this supplementary Declaration only after the end of the period to which its application applies.

## Application procedure

Below a brief explanation of the application process for the WBSO is given which is broken down to 8 steps.

### *Step 1: A firm decides to carry out research or development*

When deciding whether to start an R&D project, one of the considerations will be its expected cost. The WBSO's mission is to help firms finance business R&D projects.

### *Step 2: A firm submits an application*

There are two ways to submit a WBSO application. Both require the use of level 2+ eHerkenning, and require the company to submit its application in digital form via the eLoket:

1. It submits the application online using the WBSO application form on eLoket. The eLoket makes it possible to log in to company's account from any workstation and submit or access the WBSO application. ([www.rvo.nl/eloket](http://www.rvo.nl/eloket))
2. It submits the application using an offline WBSO application programme. The 2016 version can be downloaded from [www.rvo.nl/wbso](http://www.rvo.nl/wbso)

### *Step 3: The firm organises an administrative records system*

The R&D administrative records for the WBSO must list the nature and content of, progress in, and scope (number of hours) of company's R&D work. If the first application is for a tax credit on the basis of actual costs and expenditures, then the firm is under the obligation to keep administrative records of the costs and expenditures actually incurred for each R&D project. If the first application is for a tax credit on the basis of a fixed sum against costs and expenditures, then no separate administration of the actual costs and expenditures is required. Firms must keep administrative records from the very beginning of the project(s), even if they have yet to submit their R&D Declaration.

### *Step 4: Experts check the application to verify its completeness*

After an application has been received, experts from the Netherlands Enterprise Agency (RVO.NL) inspect the application to verify its completeness. If the application is complete, the firm is issued a

confirmation of receipt and technical experts go on to review its contents. If the application is incomplete, the firm is offered one opportunity to supplement the application with additional information that is required.

*Step 5: Experts review the contents of the application*

Once the application is complete, technical experts will review its contents: they review the projects listed in the application, and their costs and expenditures, against the relevant laws and regulations. If the specifications of the projects or their costs and expenditures contain insufficient information for the review, they may ask questions, in writing, by telephone, or by email. A technical expert uses all the information submitted to reach a decision on the company's application and records this in a Decision. This WBSO Decision is issued to the company or (where relevant) to its intermediary.

If the application for WBSO is approved in full or in part, this Decision will be issued to the firm together with an R&D Declaration. The Decision specifies the number of hours and, where relevant, the costs and expenditures allocated to each project, and those projects that do not come into consideration for the WBSO. The R&D Declaration specifies the maximum amount of the R&D tax credit deduction that the firm is entitled to apply to the payroll tax number without sub-number (RSIN) specified, in the period to which the Declaration applies.

*Step 6: The firm deducts the R&D tax credit from its tax return*

Firms deduct the R&D tax credit they have been granted from their payroll tax return. Self-employed persons that have spent 500 hours or more on R&D may deduct the R&D tax credit from their wage tax return.

*Step 7: The firm submits a statement of its actual R&D hours worked, and the costs and expenditures*

Firms submit a statement of the actual R&D hours worked and the actual costs and expenditures incurred, where relevant, within three months of the end of the calendar year covered by the R&D Declaration concerned. Self-employed person need to provide this statement only if they have failed to invest 500 hours of R&D.

*Step 8: Experts may visit the firm to carry out an inspection*

RVO.NL may visit firms to make a retrospective inspection of company's R&D work, hours worked, and any costs and expenditures against its R&D administrative records. If any errors are identified in a firm's R&D administrative records, then the firm will be issued a correction R&D Declaration. RVO.NL may also impose a fine.

The scheme below depicts the individual steps of the process.

*List all the documents that the company has to submit as part of the application file.*

More information:

<http://english.rvo.nl/subsidies-programmes/wbso/publications>

<http://english.rvo.nl/sites/default/files/2016/02/Manual%20WBSO%202016.pdf>

## **Norway: SkatteFUNN R&D tax incentive scheme**

### **Main features**

The Norwegian tax incentive scheme was established for SMEs in the autumn of 2002 and for large companies in 2003. There have been a number of changes since. In 2016 the maximum cost ceiling for R&D projects increased to NOK 20 million (in-house) and NOK 40 million (including external pre-approved R&D resources) per year.

In 2015 a total of 2,405 unique firms applied for tax relief through SkatteFUNN. Statistics Norway (SSB) performs a yearly survey of R&D in Norwegian industry. This is a selection of enterprises with 10-49 employees from selected branches of industry. Out of the surveyed enterprises reporting R&D activity, 60 per cent claimed tax credits through the SkatteFUNN tax incentive scheme.

For SMEs the corporate income tax reduction is 20 per cent of R&D costs associated with a given R&D project. For large enterprises the rate of reduction is 18 per cent. Various caps are in place: In-house R&D is limited to NOK 20 million per year (15 million for 2015). For projects including external pre-approved R&D resource the limit is NOK 40 million per year (33 million for 2015). The maximum hours per employee per year is 1,850. The hourly rate is calculated at 0.12 per cent of an employee's nominal annual salary, not exceeding NOK 600. The hourly rate covers all costs related to the employee, as for example pay roll tax, pensions and overhead. The cost ceilings given above apply per company per year. There are no limits on the number of projects a company may run each year.

The tax incentive is based on R&D projects, which are approved by the Research Council of Norway within the same calendar year as the application has been filed. This means that it is an ex-ante evaluation of whether or not a project qualifies as R&D. The progress of each project is reviewed annually by the Research Council in an annual/final report due by March 1st each year.

The actual tax credit for costs associated with a given SkatteFUNN project is assessed and granted by the Norwegian Tax Administration. In order to receive the income tax deduction through the SkatteFUNN scheme, the company must submit a tax form approved by a state authorised public accountant along with their income tax return each year the project is running.

### **Definition of R&D**

The Norwegian definition of R&D is based on the Frascati Manual. In the cases where the wording differs slightly, the practice in day-to-day operations mitigates these differences. There are four main criteria in the SkatteFUNN tax incentive scheme: The R&D project must have a clear objective and have a defined scope (in terms of time frame, budget appropriation and dedicated personnel); the aim of the R&D project must be to develop a new or improved product, service or production process; the R&D project must obtain new knowledge or new skills; and the R&D project must be beneficial to the commercial activity of the company.

Out of these four, it is the criterion on new knowledge and skills that decides whether or not a project is considered as R&D. In the application form, the company is asked to describe what new knowledge or new skills will be obtained through the project. This new knowledge has to be new to the industry, it is not sufficient that the knowledge accrued is new to the applicant company. In addition to this open text field, the company is asked to detail R&D-challenges for each milestone in the project. There is also a text field where they can outline additional R&D challenges.

### **Eligible costs**

In addition to wages, expenses directly related to the R&D project are regarded as eligible costs, such as materials, external services, insurances etc. This also includes the purchase of R&D from other companies or research institutes. Furthermore, project specific financial costs may be included in the cost base for SkatteFUNN. This includes first time patent costs for SMEs.

Equipment bought for the project with a value below NOK 15,000 or a lifetime under 3 years may be added to the eligible costs. Other equipment must be depreciated according to normal rules in the tax law, and only the yearly depreciation cost is eligible for the tax credit. In the case of equipment being used both for the R&D project and for other purposes, only a proportional share of the costs may be attributed to the project costs. These principles also apply for the cost of buildings that are used specifically for the project. The rent related to keeping offices for employees in general, is (following the approach of International Fiscal Association) included in the hourly rate, and may not be added as a project cost.

In the case of simultaneous R&D and production, only the increased costs due to the R&D project are eligible. Project income is not deducted from the eligible costs. The same applies to grants given to the project. However, if the project has developed a prototype with an economic value after the termination of the project, the value of the prototype must be deducted from the cost base. The same applies for any materials or equipment left over from the project. Software development is included under the scheme as long as the work generates new knowledge or skills.

## Organisation

The assessment of R&D projects in SkatteFUNN is done in-house by the SkatteFUNN administration. In cases where the internal experts lack expertise in a certain area, they may draw on the expertise of other programmes in the Research Council of Norway.

The Research Council does an assessment of progress in an annual report each year a project is running and a final report at the end of the project period. The reports are due by March 1st each year. The reports focus on accrued results of R&D rather than the costs, as they are processed before the final accounts from the projects are due to be handed in. A company must, however, describe increases or decreases in costs exceeding 30 per cent of the budget.

In order to receive the income tax deduction through the SkatteFUNN scheme, the company must submit a tax form (RF-1053) approved by a state authorised public accountant along with their income tax return (due on May 31 each year). The tax forms are handled by the local tax offices in different parts of Norway. Only rarely are the SkatteFUNN projects audited and the actual costs controlled by the tax authorities, usually if the whole company is audited. A company may appeal the Research Council's rejection or limitation of a project. The deadline for submitting a complaint is three weeks after notification of the rejection of a SkatteFUNN application. Complaints must be submitted in writing via email or post, and must clearly state the reasons why the decision should be changed and provide detailed additional information about the project. Complaints must be sent to the Research Council of Norway, which will assess whether the complaint is justified and whether the decision to reject the application should be reversed. If the Research Council chooses to uphold its original ruling, the matter will be submitted to the SkatteFUNN scheme's external Appeals Committee.

## Application procedure

The procedure followed for obtaining the tax incentive:

- 1) The applying company goes to the scheme's dedicated website [www.skattefunn.no](http://www.skattefunn.no) to learn about the scheme and qualifying criteria and to start applying for SkatteFUNN online. The company may also contact the Research Council for more help and information about the application procedure.
- 2) The company fills out and submits the application online on the Research Council's application page ("My RCN Web").
- 3) The Research Council processes the application, using in-house experts and advisers, usually within 7 weeks.
- 4) 5 per cent of applications go to an automatic double evaluation by two experts. The rest of the applications are assessed by one. In cases where the experts are in disagreement, in principle cases or if an expert wants more opinions, the application will be assessed in a group session with several members of the SkatteFUNN-administration.
- 5) The Research Council reaches a decision about the project's quality and eligibility and either accepts or rejects the application. At least two experts have to agree before a project can be rejected. It informs the applying company about the decision using an electronic letter of approval or rejection. In some cases the Research Council may return the application to the company for further clarification and editing before a final decision is made.
- 6) If the project application is rejected, the company may appeal the decision. An appeal must be submitted within 3 weeks of receiving the letter of rejection.
- 7) The appeal goes back to the expert in the Research Council, with the option to change their original decision regarding the project, or to pass the complaint on to an external Appeals Committee.
- 8) The Appeals Committee's decision on the project is final.

The application does not have any attachments, so no extra documentation is required as part of the application file.

# Portugal: Tax Incentives System in Research and Business Development (SIFIDE)

## Main features

The Portuguese Tax Incentives System in Research and Business Development (SIFIDE) was created in 1997. The incentive system has gone through several revisions. Among these are increases in the rate of support and the cap of the incentive (2009); a minimum qualification for R&D personnel<sup>28</sup> (2013); an extension of the possibility to carry-forward profits up to eight years and a higher allowance for personnel costs of PhD staff engaged in R&D activities (2014).

In 2014 around 1,100 companies used SIFIDE, while in the same year the population of companies which reported R&D activity was 2,527. The scheme reduces the corporate income tax by 32.5 percent of R&D expenditure (base rate), supplemented by an incremental rate of 50 percent of the increase in expenses incurred during the current fiscal year when compared to the average from the previous two fiscal years, capped at 1,500,000 euro. For newly established SMEs the base rate is raised by 15 percentage points (for newly established companies the incremental rate does not apply).

Tax incentive is based on R&D projects. Companies declare to the tax authority in the annual corporate income tax declaration the R&D costs. However, all assessments and controls are performed on a project basis and for the purpose of controls companies have to provide information and documentation per project.

The assessment of the eligibility of R&D expenditure is made ex post. In the case of eligibility of R&D subcontracted to private entities, the R&D performers should apply for the "recognition of the reputation" to become eligible and recognized for the performance of R&D activities. The costs will be considered eligible when the "reputation of recognition" is published in the Official Journal.

## Definition of R&D

The definition of R&D used for the assessment of applications is based on the Frascati Manual definitions. There are some terms of reference which are used by experts to guide their assessment and companies are aware of it. These three questions are always present during the assessment:

- What was the scientific / technological uncertainty that the project sought to solve?
- What was the systematic R&D methodology developed by the team?
- Could the solutions/advances described, be developed by someone who has the knowledge / skills in technical fields of the area in question and knows the techniques that are commonly used in the sector?

## Eligible costs

The following cost categories are eligible for SIFIDE:

- a) Acquisition of tangible fixed assets, except for buildings and land, as long as they are created or acquired in a new state, and used in proportion to their involvement in the realisation of R&D activities.
- b) Personnel expenses with minimal educational qualifications of level 4 of the National Qualifications Framework, directly involved in research and development tasks; a special more beneficial increase of 120 percent applies to personnel costs of PhDs).
- c) Costs attributable to the participation of leaders and the management staff of research and development institutions.
- d) Operating costs up to a maximum of 55 percent of personnel costs for staff with minimum qualifications of the National Framework Level 4 who are directly involved in research and development tasks.

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<sup>28</sup> Level 4: secondary education obtained by paths of double certification, scholar and professional, or secondary education geared to further study the upper level plus professional stage (at least six months).

- e) Costs related to the subcontracting of R&D activities from public entities or entities with the status of public utility or entities whose suitability for research and development is recognized by the Government bodies responsible for the areas of economy, innovation, science, technology and higher education.
- f) Equity participation in research and development institutions and contributions to investment funds, public or private, to finance companies mainly dedicated to research and development, including the financing of the exploitation of results, whose suitability for research and development is recognized by the Government bodies responsible for the areas of economy, employment, education and science.
- g) Cost of registration and maintenance of patents.
- h) Costs of the acquisition of patents that are predominantly aimed at conducting research and development activities (for SMEs).
- i) Costs for audits for research and development.
- j) Costs of demonstration actions arising from supported research and development projects (if previously communicated to the Certification Commission).

Full-scale experimental developments (including pilot plants) require great care and special attention because they may appear as investments in production facilities. In case of a full-scale set up for experimental development, the company is required to explain such a need. If doubts persist the expert may propose a technical audit to the Certification Committee (see below). The costs of R&D incurred to firms providing subcontracted R&D services are not, only their customer is eligible to claim this cost. However, in practice these costs are sometimes difficult to identify.

#### **4.6.1 Organisation**

The tax authority of the Ministry of Finances has, since the creation of SIFIDE, agreed to delegate the control of the R&D tax credit to a Certification Committee (CC) nominated by the Minister of Economy. The CC is composed of three members: representatives of the Portuguese Innovation Agency (ANI), Science and Technology Foundation (FCT) and Institute to Support Small and Medium Sized companies (IAPMEI). The CC is responsible for the assessment and control of eligibility of R&D activities and investments and ANI assures the logistical and administrative support to the CC. A team of experts from the three entities above and with background in different technological fields is involved in the assessment. When the complexity of the tasks is justified by the situation, the Committee may use third-party services from academia.

The control of eligibility of expenses is done at two levels, initially during the evaluation by the expert (see above) and subsequently sanctioned by the CC.

An appeal procedure is available. If companies disagree with the decision of the expert, they can use the legal procedure of a "prior hearing" and the same expert re-examines the claim. The second stage of appeal falls under administrative process law where another expert is asked to evaluate the whole process and the opinion issued by the first expert. Both stages are sanctioned by the CC. Finally, the applicant company can still appeal to court.

#### **4.6.2 Application procedure**

The application procedure consists of eight steps:

- 1) Companies submit to ANI the application, describing the research projects performed during the fiscal year (n). Submission should occur until 31 July of the following year (n+1);
- 2) Application compliance analysis (based on administrative information and documentation in annex to the application);
- 3) Technical assessments until 31 December (eligibility of expenses and R&D activities);
- 4) The Certification Committee notifies the company with a decision proposal, which could be contested;

- 5) After the legal deadline for contesting the decisions (using the legal procedure of the “prior hearing”) has lapsed, a declaration for fiscal purposes is issued by the Certification Committee to the company;
- 6) If differences on the amounts of credit are verified, companies have to present a rectified tax declaration to tax authorities;
- 7) Companies have the right to present a formal complaint which can, in due time, induce a later rectification of the information communicated to the fiscal services by the Certification Committee;
- 8) Notification by the Certification Committee to the fiscal services of all the beneficiaries and the respective tax credits obtained. This should occur before the end of February of the subsequent year (n+2).

More information:

<http://sifide.aninov.pt/index.php?cat=6&PHPSESSID=46ae21d84eef42e58875abcd73ab4b7e>

Documents that the company has to submit as part of the application file:

- Balance sheets for the cost centres of the projects, of the R & D department or of the company that illustrate the most of the R & D activities in the reporting year. If the company has no analytical accounts, an Excel file with R & D expenditure by categories (Personnel expenses, operating, etc.), its description and account NCS (national accounting system);
- Annual Report of the current year (or Analytical Balance Sheet, Income Statement and Notes to the Income Statement);
- A copy of the full corporate income declaration of the current year;
- Copy of certificates of no debt or query authorization of tax and contributory situations at the time of application;
- Simulation made by the company in the calculation of the tax credit to apply.

## **How to obtain EU publications**

### **Free publications:**

- one copy:  
via EU Bookshop (<http://bookshop.europa.eu>);
- more than one copy or posters/maps:  
from the European Union's representations ([http://ec.europa.eu/represent\\_en.htm](http://ec.europa.eu/represent_en.htm));  
from the delegations in non-EU countries ([http://eeas.europa.eu/delegations/index\\_en.htm](http://eeas.europa.eu/delegations/index_en.htm));  
by contacting the Europe Direct service ([http://europa.eu/eurodirect/index\\_en.htm](http://europa.eu/eurodirect/index_en.htm)) or  
calling 00 800 6 7 8 9 10 11 (freephone number from anywhere in the EU) (\*).

(\* ) The information given is free, as are most calls (though some operators, phone boxes or hotels may charge you).

### **Priced publications:**

- via EU Bookshop (<http://bookshop.europa.eu>).

This report summarises the work and lessons from the Horizon 2020 Policy Support Facility (PSF) Mutual Learning Exercise (MLE) on Administration and Monitoring of R&D tax incentives.

An MLE is a project-based learning process whereby participating countries, assisted by a small group of experts and policy peers, jointly examine a challenge-driven policy question or an implementation issue linked to a policy reform in detail.

Belgium, France, Latvia, the Netherlands, Norway, Portugal and the United Kingdom were the participating countries in this exercise. The focus of the MLE was on the following three main operational issues: 1) Definition of R&D in tax incentive systems; 2) Eligible costs and 3) Administration and control of the R&D tax incentives schemes.

Different practice in EU Member States with regard to these three topics were presented and examined, and their potential implications discussed, with a view to stimulating Member States to learn from each other's practice.

### *Studies and reports*