

State Aid on R&D&I – The Right Way

A report analysing and clarifying State Aid Rules in R&D&I for RDOs

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I. Executive Summary and Methodology of the Authors	2
II. The Rationale of State Aid Law.....	2
III. State Aid Rules according R&D&I	3
IV. The Legal Rules of State Aid Law in R&D&I	5
V. General State Aid Control under Article 107, 108 TFEU	7
VI. Direct State Aid.....	8
VII. Indirect State Aid	11
VIII. The Specific Infrastructure Issues.....	18
IX. The Control of State Aid Rules	23
X. Summary and Recommendations	25
Annexes	26
Annex 1	26
Annex 2	36
Annex 3	41
Annex 4	45
Annex 5	46
Annex 6	48

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I. Executive Summary and Methodology of the Authors

1. State Aid Law is a field of EU regulation that requires specific knowledge and expertise (which is often lacking). At universities, research organizations and companies alike, there usually is a basic understanding of this field although there are some “knowledge gaps”. This is often the case in the field of R&D&I due to certain misinterpretations of the legal framework. This includes some overinterpretations of the limitations contained in that framework. The issues at stake are sometimes not so simple to understand and apply, but the framework is necessary to avoid market distortions and potential indirect aid situations in a way that is contrary to the common interest in the European Internal Market. It is also important to incentivize support for research, development and innovation. Therefore, State Aid Law offers sufficient flexibility for aid that is both necessary and proportionate so that innovative ideas can be turned into products and services that create growths and jobs where financing from the market alone is not forthcoming.

This report aims to explain the State Aid rules from its fundamentals and its special requirements when applied to the field of R&D. It focusses on the Research and Knowledge Dissemination Organizations (In the following named as RDO) as well as their cooperation with industry.

The purpose is not to deepen legally any detail of this difficult legal field but to facilitate the access and understanding of the rules on the basis of some practical examples.

For a systematic overview please see the presentation in **Annex 1**, where the basics of R&D&I State Aid Rules are summarized. This presentation has been made during a JRC TTO circle conference in Dublin in July 2019 (see [source](#), please note that there is one slight typo in slide 15 of this public document., therefore the version in Annex 1 prevails).

2. The methodology chosen for this report is to present the most important basics of State Aid Law and in doing that to highlight the issues where, most awareness gaps have arisen. Examples of EC decisions after Member States notifications, involving RDO's are given in order to illustrate EC interpretation of SA RDI rules.

For helping the reader to overcome problems with the issue, this report primarily aims to clarify the basics of RDI State Aid Law and to give practical support to the recipient of public funding in its application. This report has the intention to clarify the basics of RDI State Aid Law and in this way help the reader to solve some specific problems with the issue. In a similar way, it may be of assistance to member states in applying the RDI State Aid Law in its internal processes.

3. In writing the report, the authors took further guidance in the following frequently asked questions:
 - How are the various activities in a Research and Knowledge dissemination organizations (RDO) carried out and what does that mean under State Aid Law?
 - Are all cooperations with undertakings considered to be economic activities?
 - How can economic activities be distinguished from non-economic ones, especially in cooperation with undertakings?
 - What are the peculiarities of Research Infrastructures and what is important to be aware of?
 - In which cases is there an obligation to notify aid to a research activity or a funding measure to the European Commission?

See also **Annex 2**, an overview of frequently asked questions (FAQ).

II. The Rationale of State Aid Law

The European Union Member States are not always free to support companies and institutions. The national governments have to follow EU rules which set limits on funding and supporting its industries and other institutions relevant for the market. The rationale of these EU rules is to avoid a distortion of competition by subsidies and other measures which would be harmful to a proper functioning of the market and ultimately also to consumers, companies and in fact to the entire Research, Development and Innovation ecosystem system in the European Union. State Aid rules do not prohibit the granting of aid measures in general, but aim to avoid negative influences on the free markets, to innovation and competition.

State Aid is defined as an **advantage**, in any form whatsoever, conferred on a **selective basis to undertakings** by national public authorities. State Aid therefore occurs, where there has been an intervention by the State or **through State resources** (e.g. grants, funding, tax reliefs, goods and

services on preferential terms). The intervention **gives the recipient an advantage on a selective basis**, e.g. to specific companies or industry sectors. This measure must (potentially) distort the markets and the intervention is likely **to affect trade** between Member States. However, despite the general prohibition of State Aid, in some circumstances governmental supporting measures are **necessary for a well-functioning economy**. Therefore, in several sectors under several circumstances the Treaty considers State Aid as compatible with the Internal Market and leaves room for specific exemptions or offers specific guidance on how to apply the rules. One of these sectors is the support of R&D&I, which is allowed under specific conditions. As we will show, these exceptions are not so narrow as often perceived and in practice are very useful indeed.

State Aid rules are not only specific to RDI activities but also apply to other fields, taking into account their respective requirements and circumstances. Their rationale is to safeguard free competition in the European market. Generally speaking, they must ensure that aid measures do not disturb the markets in a way that is contrary to the common interest. However, as this report will show, they are usually allowed where market functions cannot comply with the given duty, for example in the case of Services or duties of public interest. It is also allowed (and often necessary) in case of a market failure or in the absence of a market. Under these circumstances the granting of subsidies or other aid measures under State Aid control is the best way to address the failure.

The aforementioned principles are also expressed in Art. 107 (1) TFEU, which states, that “any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favoring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market if they are influencing or disturbing markets in a way that is contrary to the common interest.” This makes clear, that public support measures must not disturb the markets in a way that is contrary to the common interest. On general terms aid measures are disallowed if they are influencing or disturbing markets in a way that is contrary to the common interest. Much of the established case law of the European Court of Justice is also based on these underlying principles.

Exempted from that basic rule are measures of public support that are explicitly allowed under Art. 107 (2) TFEU (such as, for example, aid having a strict social character, help on natural disasters, etc.). Again, other measures may be allowed under special circumstances and on equitable discretion, among which also the support of R&D is subsumed. These are:

Art. 107 (3) (Extract) The following **may be** considered to be compatible with the internal market:

- a. aid to promote the **economic development of areas** where (.....).
- b. aid to promote the execution of an **important project of common European interest** or (...).
- c. aid to **facilitate the development of certain economic activities** or of certain economic areas, where (...).
- d. aid **to promote culture and heritage conservation** where (...).
- e. such **other categories of aid as may be specified** by decision of the Council (...).

Explicit provisions about funding of Research and Development activities are *not* available in Art. 107 TFEU, but can be found in separate rules to be addressed later.

Additionally, the Commission provided some clarification in its “Notice on the notion of State Aid” which was published in 2016. This notion further explains the concept of State Aid under circumstances where an action is likely to affect trade or distort competition.

Promoting research and development and innovation (‘R&D&I’) is an important Union objective and is expressed in Article 179 of the Treaty, which states that the EU shall have the objective of strengthening the scientific and technological bases by achieving a European research area in which “*researchers, scientific knowledge and technology circulate freely, and encouraging it to become more competitive, including in its industry, while promoting all the research activities deemed necessary (...)*”. Articles 180 to 190 of the Treaty then determine the activities to be carried out in that respect and the scope and implementation of the multiannual framework programs. So, there is no doubt, that funding measures for R&D&I must be possible under the exemptions of 107 TFEU.

III. State Aid Rules according R&D&I

First and foremost, it is important to understand why the European Union has set such rules and is following it consistently and consequently.

Pursuant to Art. 107 (1), State Aid measures are compatible with the European rules if they do not affect trade between Member States, and do not distort or threaten to distort competition, primarily by selectively favouring certain undertakings.

The support of R&D&I performed as a non-economic activity is normally allowed. It is even allowed where the support is given for an economic activity and this economic activity is only *ancillary* in relationship to the non-economic activities of the receiver of the public support (see definitions under the following II.2.). However, if and where the support for the economic activity – generally spoken – goes too far (i.e. is not *ancillary*), then the receiver of the support will be treated and defined as an *"undertaking"*, and therefore considered as a recipient of State Aid even where the receiver is a university or a public research institute.

An undertaking under the definition of State Aid Law, is a legal entity, carrying out economic activities consisting of offering products or services on any given market. This is irrespective of its legal status, or whether it is organised as a public or private legal entity.

Under that definition and application of State Aid Law only the public funding of *economic* activities is subject to State aid rules. Stated otherwise, state aid can only be granted to undertakings.

1. The Member States of the Union all have extensive public service organizations that cater for the public interest. Some of these are organized as public legal entities while others may have a private legal character. The activities of these public service organizations are divided in economic and non-economic activities.

a. **non-economic** activities are the activities of public interest which guarantee the function of the society. This means large parts of the administration, the schools, the police, the military and other functions of general public interest. Most of these functions cannot be left to the markets, because they cannot be cost-covering and so they have to be financed by publicly funded institutions (authorities, schools, universities, etc.). Furthermore, they must be free, neutral and independent from economic interests, such as e.g. the police, courts and larger parts of the educational system.

The State Aid Law speaks about "non-economic activities" which the member states are organizing in various ways on their internal rules and cultures, but always as necessary functions for the general public interest. Regardless of the form of organization (public or private) these functions need support from the public community, by (in part or full) public funding of the costs. **Such non-economic activities are not subject to State Aid rules.**

b. All the other activities in the markets are **economic** activities, the trade, the production, the sales – everything taking place in markets are under economic rules and therefore are defined as "economic activities" under State Aid Law. **Economic activities are subject to State Aid rules.**

2. The European legislation and legal rules emphasize, that those economic and non-economic functions may not be mixed up and their financing and accounting should be clearly separated. Esp. it is not allowed to cross subsidize economic activities by public means which are dedicated for non-economic activities. This is a logical and consequent rule to protect the markets from being distorted by subsidies which are not in the general public interest. This basic principle has already been expressed for a long time in the **transparency guidelines** which aims to have a clear and transparent distinction of the financial relationships between member states and public undertakings. This basic principle became part of EU law as early as 1980.

(Commission Directive 80/723/EEC of 25 June 1980 on the transparency of financial relations between Member States and public undertakings and the further Commission Directive 2006/111/EC of 16 November 2006 on financial transparency within certain undertakings on the transparency of financial relations between Member States and public undertakings - Official Journal L 195, 29/07/1980 P. 0035 - 0037, newest RL 2006/111/EG.

✎ The basic principle of the cited transparency guidelines applied to R&D means that economic and non-economic activities must be clearly separated. This principle is also flanking the State Aid Rules. As far as this separation is clearly and transparently possible in sectors there is no problem with the reasoning and application of State Aid Rules. However, there are fields, where both functions are available in one and the same organization and therefore there is a distinct chance of overlapping. There, the application of State Aid Law needs special attention, and this is not that easy as sometimes hoped.

The separation of actions and financing in many respects is not so simple, because one function often supports the other one and it requires sound accounting processes. To avoid the undesirable

effect of cross-subsidization in this overlapping of economic and non-economic activities, special rules were created to solve this obvious need. This relates to the separation of activities and especially the separation of accounts. This clear separation is required on the one hand, but it also gives freedom for necessary transitions and some overlapping activities on the other hand. **Such is especially the case in the fields of Research and Development and Innovation (R&D&I)** where almost on a routinely basis non-economic and economic activities are performed in one and the same organization. Often these activities cannot be readily separated from each other in the sense of the transparency required by State Aid Law. This can be a demanding exercise, but the State Aid rules do give some valuable clues.

RDO's are quite frequently assigned with the duty of Technology Transfer to undertakings (see point 19b of the R&D&I Framework) aside of their primary activities (see point 19a of the R&D&I Framework). These activities are always non-economic activities, by the regulations of:

- Point 19a) bullet two of the R&D&I Framework and point 27: independent R&D for more knowledge and better understanding, including collaborative R&D where the RDO or research infrastructure engages in effective collaboration (5);
- Point 19b) of the R&D&I Framework: knowledge transfer activities.

For reasons of convenience in the rest of this report, we encompass point 25 and 27 in a single wording: RDI cooperation between RDOs and undertakings.

Indeed, in order to best fulfill their missions, RDO's sometimes also perform economic activities like research on behalf of undertakings (point 25 of the R&D&I Framework) which are on other type of RDI cooperation between RDOs and undertakings.

As both of these activities are often performed by the same staff and departments, they must clearly be separated by distinct procedures, notes, laboratory books and budgeting. There are time-tested procedures for this in the internal organization of RDO's including universities. This separation is also required for RDO's to have a clear and precise picture of the proportions of the various activities taking place in the units. As we will see, the differentiation of activities is also necessary (and not to be neglected!) where the economic activities remain under a threshold of 20% of the annual capacity of the RDO. The consistent differentiation between economic and non-economic activities is a key principle that RDO's should apply at all times.

4. In this respect the question arises, how to find and establish the relevant entity over which the annual capacity must be calculated. And how is this relevant entity defined under State Aid rules? For example, if a research organization is running several institutes, which are in a legal or economic sense autonomous centers having their own separated budgets. What is then the granularity that should be applied for a correct State Aid assessment? Is it the organization taken as a whole, the legal unit or is it just the single institute providing the economic activity? This is regrettably not finally answered yet. There is however a high probability that in its policy, like in other State Aid Law issues, the Commission is not so much driven by the legal form of the organization but rather on its economic input on the market. It is as yet not evident, but highly probable, that the 20% threshold will be applied on the yearly capacity of the unit being relevant in the respective market. The tendency is to assess the smallest administrative unit that uses the same input factors as used for the economic activities (e.g. personnel, machinery) as the responsible one. So, one cannot be sure from the beginning whether the acting unit with its separated budget or the whole institution is relevant for the assessments under State Aid Law. For example, where one institute of a given RDO is performing economic activities by using resources of another institute of the same RDO the assessment should encompass both their annual capacities.

IV. The Legal Rules of State Aid Law in R&D&I

This report is about the above-described procedures in research and knowledge dissemination organizations (including universities) and their activities in RDO's. It must be stated from the beginning, that the state aid rules are difficult to apply to the field of R&D&I and its actors. One major reason is that RDO's indulge in a great variety of non-economic activities, some of which could easily be mistaken for economic activities. As these activities are dealt with under the chapter "indirect state aid", it is also described in detail under chapter VII.

Furthermore, the Member States and the Commission of the EU are supporting and fostering the cooperation in R&D&I between the public and private sectors, especially a specific form of cooperation called "effective collaboration" because this is considered to be in the general public

interest. This definition and differentiation from other forms of cooperation is covered under section 2.2. of the R&D&I Framework.

It is therefore not surprising, that the cooperation between various types of organizations and cultures from public and private sources may lead to problems in the proper separation of economic and non-economic activities as required by the state aid rules. The reader should bear in mind that the criteria for such classification are usually different from those imposed by national tax law or other national regulatory issues. For example, one of the core questions is to separate the activities in cooperation with industry. In this respect effective collaborations, even where they are co-funded or funded full costs by an undertaking (point 27 R&D&I Framework) are considered non-economic. On the other hand, research on behalf of undertakings such as contract research or research services (point 25 R&D&I Framework) is considered to be an economic activity. We will revert to this important question in a more detailed way in Chapter VII.

To overcome this challenge of differentiation of activities we have more detailed rules for R&D&I than in other fields or markets.

These rules are laid down in two important basic documents. The "General Block Exemption for State Aid rules" (GBER) which is a Regulation (law) and the "Union Framework for State Aid for R&D&I which is a "Communication" (EC policy guidance document), in this report referred to as the R&D&I Framework.

In the GBER, the Commission has declared specific categories of State aid compatible with the Treaty if certain conditions are fulfilled, thus exempting them from the requirement of prior notification and Commission approval. In such cases, there is no room for the Commission to decide.

In the cases where the GBER provides no exemption the Commission must decide. As regards the field of RDI, for these purposes the Commission has laid down its principles and policies in the R&D&I Framework. The R&D&I Framework is not a formally binding Regulation, but as a rule of policy that does (to some extent) bind the Commission. In practice however, it should be treated as if it were the law. EC decisions are rarely challenged in the European Court of Justice, and often if an EC decision is challenged, ECJ upholds the EC's decision: see an example in IX-2.

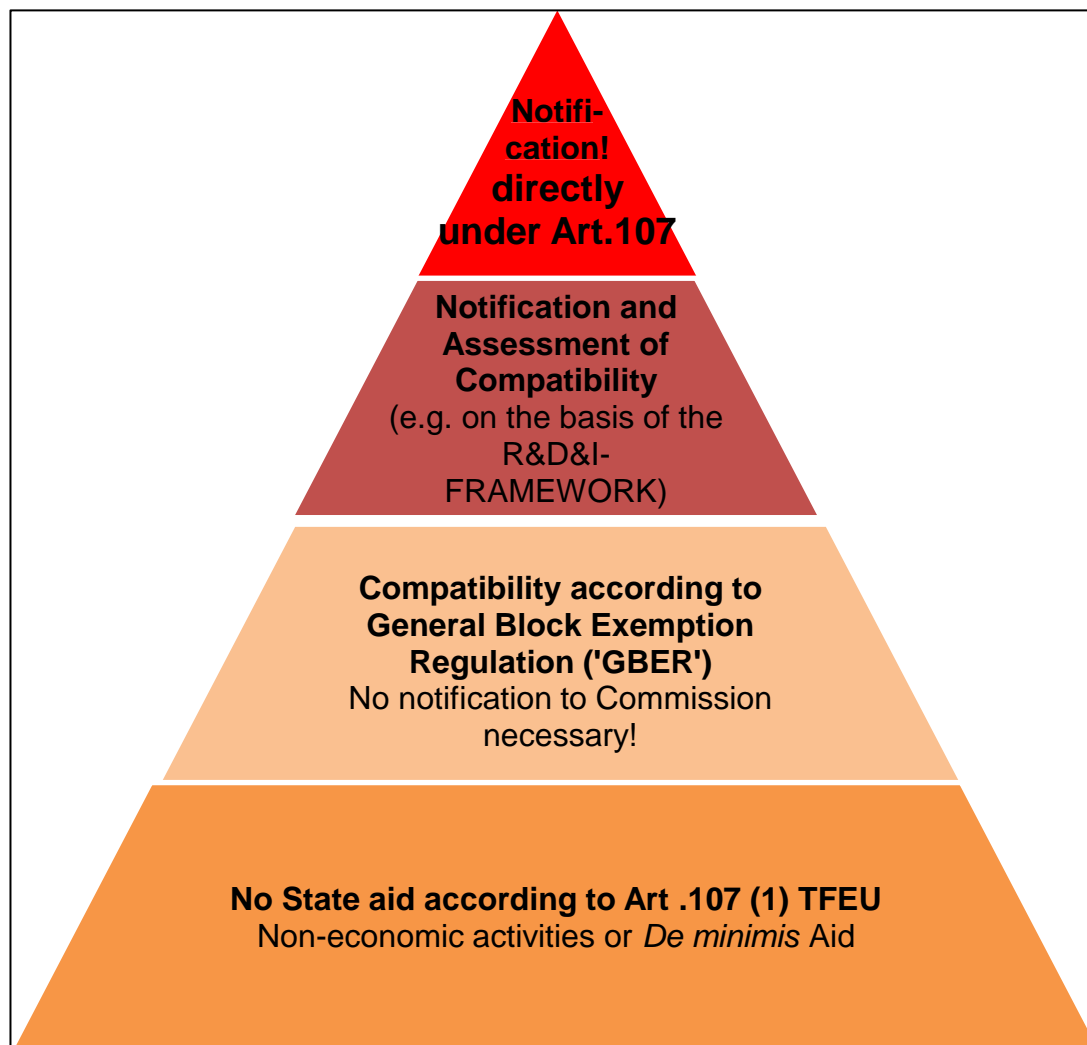
These documents do not only set requirements, they also state exemptions for the work in R&D&I to address lawful actions in cases of market failure. And these exemptions give a real help to not come into conflict with State Aid Law rules. The following differences apply:

- The GBER (2014) addresses various specific markets (telecommunication, banking, energy and many others, including R&D&I) and is providing rules under which state aid is exempt of prior notification – it is "block exempted". If a measure has to be notified, because it is not exempted, an information procedure under GBER rules to the commission must be set in motion. Other cases beyond the thresholds need a notification process.
- The R&D&I Framework (2014) applies explicitly and only to R&D&I activities and gives rules under which this work is out of conflict with state aid rules (chapter 1 and 2). It additionally is setting a framework for assessing cases notified by its member states under special criteria (chapter 3 and 4).
It provides basic and general guidance to assess whether the activity is in line or in contradiction with the State Aid rules. This will be treated in detail later.

Sometimes one is wondering which of these two documents, the GBER or the Framework is applicable. Which one has to be observed or do both apply at the same time? The two documents complement each other. In simple words:

The general rules for conferring State Aid in various and specific markets, also including R&D&I cases, are addressed under the GBER. The special requirements for R&D&I, where the Commission needs to assess a given aid measure, are laid down in the R&D&I Framework.

The following graph illustrates the application of these rules.



V. General State Aid Control under Article 107, 108 TFEU

1. The TFEU and its Protocol of Lisbon under Nr. 27 is ensuring "the internal market as set out in Article 3 of the Treaty on European Union", which is explicitly including a system ensuring that competition within this internal market is not distorted, The internal market may be distorted as a result of national funding measures by the Member States. Such national measures could lead to a "race to the bottom", in this process destroying a market based on economic principles. Therefore, the TFEU contains a number of basic rules that curtail such measures as funded with national public means. These rules can be found in Art 107 TFEU, that basically disallows funding measures with an impact to the market which are (cumulatively):
 - a. Giving an advantage by a funding measure
 - b. Selective effects for the markets caused by the State Aid
 - c. Influencing or falsifying competition by this advantage of State Aid in a way that is contrary to the common interest

These basic requirements as set out by the Treaty are further specified in a number of documents dating back to 2014. These are – as mentioned earlier – the General Block Exemption Regulation and the Framework for State aid for research and development and innovation (R&D&I Framework). These documents adopted in 2014 are modernized versions of earlier legislation to the same effect.

2. The control of State Aid is ruled under the following Art. 108 TFEU. In general, the Commission wishes to have control over all the state aid measures of its member states. This is partly reached by means of the definitions and by stating procedures which are compliant with State Aid (i.e. non-economic activities under the Framework), furthermore by specifying which state aid is compatible according to the GBER and finally by the requirement of notification for special actions (see graph above). That means in practice, that the funding programs of member states

as well as research infrastructures and single actions which are over the thresholds of the GBER are assessed by the Commission, which then applies its policies as laid down in the R&D&I Framework.

3. Definition of research and knowledge dissemination organization

“Research and knowledge-dissemination organisations” are entities, irrespective of their legal status (organised under public or private law) or way of financing, whose primary goal is to independently conduct fundamental research, applied research (industrial research and/or experimental development) or to widely disseminate the results of such activities by way of teaching, publication or knowledge transfer. Examples cited include universities or research institutes, technology transfer agencies, innovation intermediaries, research-oriented physical or virtual collaborative entities (GBER Art.83, Point 15 of the R&D&I Framework).

The impact of this definition must not be confused with the question whether the recipient of a funding measure is an undertaking or not. The definition is only to describe what the duties and targets of such organizations are. As a matter of fact, many not-for-profit research organizations that receive public support may also qualify as an undertaking for certain parts of their activities. It is common that various and diverging activities are performed under the same roof with the same sources.

For a research and dissemination organization that carries out mainly non-economic activities, including effective collaboration with industry, and carries out purely ancillary economic activities, there is no need to notify state aid in case of a new RDI program for example needing additional public funding to its basic block funding (new infrastructure being performed under the same regime). In general, the funding of non-economic activities is not subject to State Aid rules.

Insofar, in a rough estimation assessing the background of R&D&I State Aid Law, most RDO's (taking into account their typical activities) shall not have problems with this type of direct State Aid. However, one important requirement is to have and to maintain insight and clarity about the proportion of genuine economic activities performed in the organization. The necessary terms for differentiation between economic vs non-economic activities are described under chapter VII.

VI. Direct State Aid

The differentiation between economic and non-economic activities is a basic distinction in State Aid Law, because State Aid is only possible in the support of economic activities (see also chapter III). State Aid Law is also using various terms for “Direct” and “Indirect” State Aid.

1. The RDOs' primary activities are predominantly non-economic in nature. These activities are (1) defined in point 19a of the R&D&I Framework, and (2) knowledge transfer activities as defined in point 19b of the framework. Funding for these primary activities is never considered to be State Aid. Primary activities are education, independent RDI for more knowledge and better understanding, (including) effective collaboration on RDI (which can be partly or fully funded by undertakings) and the activity of disseminating research results. However, in technology transfer activities (19b) all the profits from these activities must be reinvested in the primary activities of the Research Organisation or Research Infrastructure.
2. In other cases, an RDO may be a recipient of State Aid and/or an intermediary through which State Aid flows to undertakings. If a RDO carries out an economic activity (e.g. contract research or research services according to point 25 R&D&I Framework) funded by, or using resources funded by the state or an arm of the state, the RDO will usually be a recipient of State Aid. It may however be able to avoid this if the economic activity is only ancillary.

If public funding is given to an RDO or a Research Infrastructure having mixed economic and non-economic activities, and the public funding is also used for so called ancillary economic activities, then these economic activities are not subject to State Aid rules. In case the State Aid measure is undercutting the threshold of 20 % then the ancillary-exemption applies under additional preconditions referred to in the following. Please note that specific and strict requirements apply before ancillary is assumed:

- First and foremost, that the economic activities of the relevant entity do not account for more than 20% of the overall annual capacity of that entity. This capacity must be measured in e.g. man-hours and input-volumes, but never in terms of revenue, financial budget or turnover.
- Second, that these economic activities are consuming exactly the same inputs (such as material, equipment, labour, and fixed capital) as the non-economic activity.

- It is not finally clear how to assess the situation, when the threshold is really exceeded. Then these questions will be answered by that fact whether the economic activities are only additional and ancillary activities needed in order to fulfil the non-economic activities or they predominate in a way that it can be assumed that economic activities lead to an assessment as undertaking. The threshold may also for these cases be a good orientation. As also mentioned, the assessment which activities are the one or the other, not national rules or tax law is relevant. This is only assessed by State Aid Rules (see chapter VII – indirect state aid)
3. Therefore, the rules for Direct State Aid only apply to RDO's and Research Infrastructures insofar they also qualify as undertakings under the definition of State Aid. And only for that part. This may happen, when the share of economic activities is not or no longer ancillary. It is quite normal for the mission of such organizations to have a certain but rather small ancillary portion of economic activities. The mission of most research organizations involves activities like Technology Transfer to the private sector and not for direct commercial use by their own. They transfer Knowledge and IP to undertakings which use them for direct commercial exploitation. Research and Knowledge-dissemination Organizations therefore use their results for indirect exploitation of knowledge (e.g. by licensing or RDI cooperation with undertakings). Manufacturing and sales of products is only done in exceptional cases and mostly with the approval of their funding bodies. To summarize this, if the RDO or Research Infrastructure only carries out ancillary economic activities, then no case of direct State Aid is awarded. If the products are sold, services are rendered or facilities are rented out at market price, then normally there is also no indirect state aid to undertakings.
- When an RDO establishes a RDI cooperation with an undertaking, it should be ascertained whether this R&D&I cooperation falls under an activity that is either independent research, effective collaboration according to point 27 of the R&D&I Framework or that must be qualified as research on behalf of undertakings according to point 25 of the framework. It is important for the RDO to demonstrate that no indirect state aid is passed to an undertaking through such research partnerships (see chapter VII for more details).
4. Globally, State Aid can be directly passed by a member state to an undertaking, but also indirectly through an RDI partnership with an intermediary such as an RDO. The questions of whether and under which conditions State Aid is passed on to undertakings are defined in section 2.2 of the R&D&I Framework of 2014). Here, the framework makes a clear and crucial distinction between the two cases (1) research on behalf of undertakings (contract research or research services), which are economic and (2) effective collaboration with undertakings, which is non-economic in nature.
 5. For dealing with Direct State Aid questions we have two documents that apply to State Aid for RDI (see above II. 2,3). These documents also give guidance as to which funding limits have to be observed and in which cases a single notification is necessary, which means a single approval of a project or infrastructure.

a. When a funding measure falls within the scope of the GBER, because it is not exempted by its rules, the GBER applies for notification of projects under a certain threshold. It does not apply, if the threshold is exceeded, then the activity is due to single notification.

This extract of Art. 2 GBER gives some examples of such thresholds:

1. This Regulation shall not apply to aid which exceeds the following thresholds:

i) for aid for research and development:

*(i) if the project is predominantly fundamental research: **EUR 40 million per undertaking**, per project; that is the case where more than half of the eligible costs of the project are incurred through activities which fall within the category of fundamental research;*

*(ii) if the project is predominantly industrial research: **EUR 20 million per undertaking**, per project; that is the case where more than half of the eligible costs of the project are incurred through activities which fall within the category of industrial research or within the categories of industrial research and fundamental research taken together;*

(iii) if the project is predominantly experimental development: EUR 15 million per undertaking, per project; that is the case where more than half of the eligible costs of the project are incurred through activities which fall within the category of experimental development.

b. The R&D Framework is giving a clear outline how the limits (aid intensities in % of eligible costs) of funding in direct State Aid funding shall be (4.5. proportionality of the aid).

As stated in point 76 of R&D&I Framework, the maximum aid intensities generally applicable to all eligible R&D&I measures are set out in Annex II.

Maximum Aid Intensities for undertakings are defined in annex II of the R&D&I Framework):

	Small enterprise	Medium-sized enterprise	Large enterprise
Aid for R&D projects			
Fundamental research	100 %	100 %	100 %
Industrial research	70%	60%	50%
Industrial research subject to effective collaboration between undertakings (for large enterprises cross-border or with at least one SME) or between an undertaking and a research organisation, or subject of wide dissemination of results	80	75	65
Experimental development	45%	35%	25%
Experimental development subject to effective collaboration between undertakings (for large enterprises cross-border or with at least one SME) or between an undertaking and a research organisation, or subject of wide dissemination of results	60%	50%	40%

Then point 89 R&D&I Framework gives the possibility to use higher thresholds in certain circumstances:

"Where aid is awarded for R&D projects or for the construction or upgrade of research infrastructures and the Commission can establish, on the basis of the methodology laid down in points 87 or 88, that the aid is strictly limited to the minimum necessary, higher maximum aid intensities than those laid down in Annex II may be allowed, up to the levels set out in the following table":

The table in point 89 of the R&D&I Framework gives the higher maximum aid intensities than those laid down in Annex II that may be allowed under this point 89.

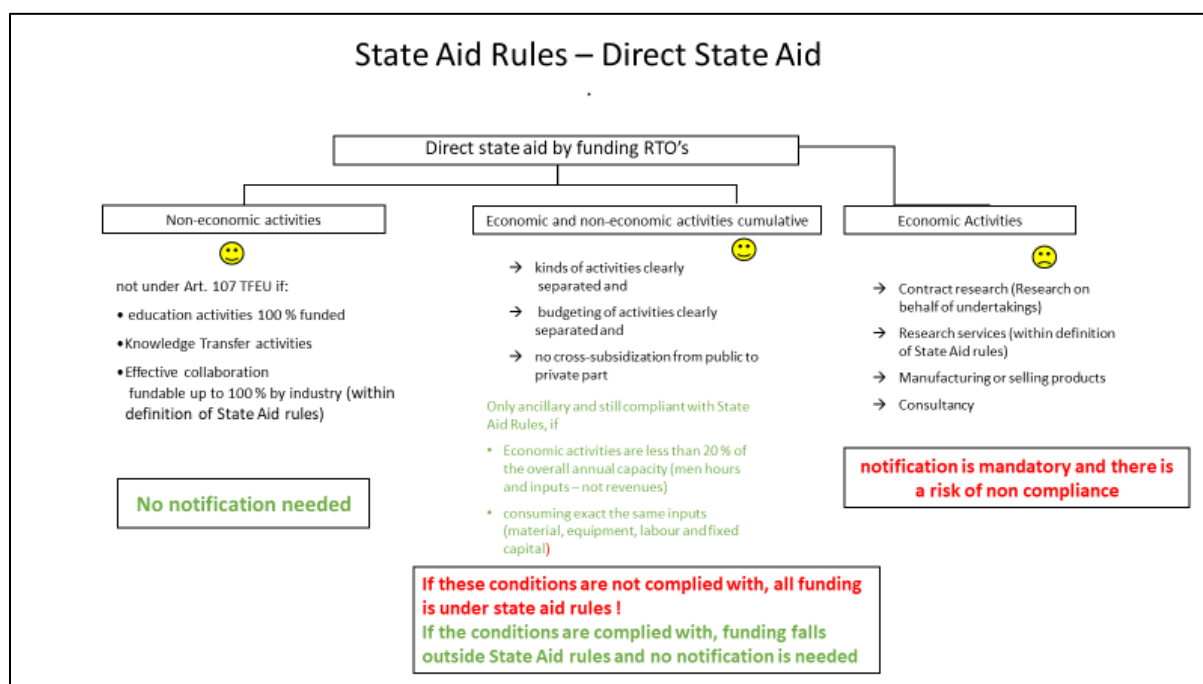
	Small enterprise	Medium-sized enterprise	Large enterprise
Aid for R&D projects			
Fundamental research	100 %	100 %	100 %
Applied research	80 %	70 %	60 %
— subject to effective collaboration between undertakings (for large enterprises cross-border or with at least one SME) or between an undertaking and a research organisation, or	90 %	80 %	70 %
— subject to wide dissemination of results			
Aid for the construction and upgrade of research infrastructures	60 %	60 %	60 %

(applied research = industrial research + experimental development)

As one can see here, allowed direct aid intensity threshold to undertakings is higher when the RDI partnership between a research and knowledge dissemination organization and an undertaking is an effective collaboration (which is deemed non-economic, but only *for the research organization*). For the notification of the project limits and rules are existing.

Generally, the Commission is entitled to be aware of all State Aid to undertakings of its Member States, except those cases mentioned in Art. 107 (2) and (3) TFEU. The DG Competition of the EU Commission is responsible for these issues and is pursuing a current control of all State Aid granted in the Member States and is requiring notification in order to be informed exactly on what is going on. The rules giving advice on how and when, or not to notify at all, are described in the GBER and R&D&I Framework (see above IV) Therefore, In the prospect of a R&D activity or other publicly funded activity in a Member State, the Commission has to be informed by a notification process, clearly describing which Aid is granted and whether the limits (see above) are not exceeded. The basis for this is laid down in Art. 108 TFEU and in the GBER, which gives an exemption list.

The following decision tree is summarizing how to differentiate under direct State Aid:



VII. Indirect State Aid

EXAMPLE (1). A research and knowledge dissemination organization has a financial mix of basic block funding, public competitive project funding and large industry funding from collaborative (effective collaboration) RDI partnerships with industry (column III) and a smaller amount of industry funding from contract research (less than 15 % of its global RDI funding).

For the collaborative (effective collaboration) RDI partnerships with industry the following conditions are agreed:

- (in part or full) financing of the not-for-profit R&D organization by the company;
- royalty bearing licenses are granted by the large not-for-profit R&D organization to industry, which can be exclusive in a limited field (with, in this case, mandatory exploitation thresholds) and limited in duration.

This research and knowledge dissemination organization has also knowledge transfer activities (licensing and creation of start-ups).

1. Introduction

As already mentioned in Chapter VI, State Aid can be directly passed by the state to an undertaking, but also indirectly through an RDI partnership with an intermediary such as a research and Knowledge dissemination organization (RDO). The question of whether and under which conditions undertakings obtain a selective advantage within the meaning of Article 107(1) of the Treaty must be answered in accordance with general State aid principles (R&D&I Framework section 2.2). Here, it

is very important to distinguish between “research on behalf of undertakings” (economic activity) as provided by a research organization or research infrastructure, and on the other hand, cases of effective collaboration between undertakings and a research organization or research infrastructure (non-economic activity).

Non-Economic and Economic activities in research and knowledge dissemination organizations.

These terms are of importance for Research Organizations performing a mixed set of activities, including cooperation with industry as well performing their own research work. These terms are defined in the R&D Framework. The major principle is the clear separation of these activities: Economic activities are subject to State Aid rules whereas non-economic activities are not.

Often economic and non-economic activities are performed in one and the same research organization or on the same research infrastructure. Point 20 of the R&D&I framework provides the following:

“Where the research organization or research infrastructure is used almost exclusively for a non-economic activity, its funding may fall outside State aid rules in its entirety, provided that the economic use remains purely ancillary, that is to say corresponds to an activity which is directly related to and necessary for the operation of the research organization or research infrastructure or intrinsically linked to its main non-economic use, and which is limited in scope. For the purposes of this framework, the Commission will consider this to be the case where the economic activities consume exactly the same inputs (such as material, equipment, labor and fixed capital) as the non-economic activities and the capacity allocated each year to such economic activities does not exceed 20 % of the relevant entity’s overall annual capacity”.

“Non-economic” activities according to the definition of Section 2.1.1 of the R&D&I Framework are mainly **Education, Effective RDI collaboration and Knowledge / Technology Transfer Activities** (such as licensing and start-up creation, if the income is reinvested in the research work again). “Economic activity” means **putting goods or services on a market** such as renting out equipment or laboratories to undertakings, selling used materials or equipment, supplying services to undertakings or performing research on behalf of undertakings (contract research or research services like consultancy and others).

2. Knowledge Transfer activities

Knowledge transfer activities include licensing, spin-off creation, or other forms of processes of acquiring, collecting and sharing explicit and tacit knowledge as performed by the research organisation/research infrastructure **are non-economic activities** (R&D&I Framework Point 19,) when:

- they are conducted either by the research organisation/research infrastructure (including their departments or subsidiaries) or jointly with, or on behalf of other such entities;
- and all profits from those activities are reinvested in the primary activities of the research organisation/research infrastructure.

In addition, the non-economic nature of those activities is not prejudiced by contracting the provision of corresponding services to third parties by way of open tenders.

Most «RDO’s» are not-for-profit organisations and their earnings are totally re-invested in RDI activities. Therefore, if this is the case, their knowledge transfer activities such as licencing and spin-offs creation are “non-economic”, falling outside state aid rules. Therefore, public funding to research organisations for these activities is usually allowed. However, please note that in principle licences to spin-offs or other undertakings must be given under market conditions as otherwise they may constitute indirect state aid.

For instance, the non-economic nature of the creation of a spin-off by an RDO is reinforced when applying following best practices such as:

- hosting of the spin-offs by the Research Organisation should be limited in time (e.g. 3 years) and in the size of the spin-offs (e.g. 10 employees).
- sectorial exclusive licences are not an issue provided that the sectorial exclusivity is limited to a certain domain and in duration, and that there are exploitation thresholds or a cash payment additionally to the royalties ensuring sufficient exploitation.

Research organisations can externalise all or some of the knowledge transfer activities linked to spin-off creation or licencing to private companies (e.g. tech start-up accelerators, affiliates for taking equity in spin-offs, etc.), which does not affect the fact that it is a non-economic activity. However, if it is outsourced to a private company undertaking, then the selection should take place via an open tender or may be other transparent method on market-based conditions.

So, finally all activities of the example (1) are in line with R&D State Aid Rules as far as the described conditions are fulfilled.

3. Research on behalf of undertakings (Contract Research or research services. Section 2.2.1 of the R&D&I Framework)

In EU state aid rules, the term “research on behalf of undertakings” (“contract research” or research services; section 2.2.1 of the R&D&I Framework) is used for agreements that do not fulfil the conditions of “effective collaborative research” (see VII-4). In “research on behalf of undertakings” agreements the industrial partner typically:

- specifies the terms and conditions of the contract unilaterally,
- owns the results of the research activities,
- carries the entire risk of failure (financial, technological, scientific).

For research organisations, their economic activities mainly consist of “contract research” like technical assistance, studies or consulting, or the provision of services outside of any effective collaborative agreement, as well as contracts for the sale of products or renting out of equipment or RDI facilities.

As the industrial partner typically specifies the terms and conditions of the contract, there is no co-decision nor joint participation for such activities. There is typically no obligation of dissemination of results which do not give rise to IPR and, because these activities are usually at a very high Technology Readiness Level, they rarely lead to scientific publications.

In order to assess an economic activity on legal terms according to State Aid Law, it is helpful for interpretation to answer following questions:

- are the technical specifications imposed by industry without iterative and bilateral discussions?
- does the Research and Knowledge dissemination Organization relinquish IP ownership to the industrial company?
- can the undertaking totally prohibit any publication or other wide dissemination of results which do not give rise to IPR (*scientific publications, conferences, other disseminating activities, collaborative standardization, training, etc.*)?
- does the undertaking totally outsource its RDI need without having an own part of RDI to do?
- are the expected research results described in terms of an obligation of results? (the research organization continues to work until the technical specifications imposed by the company at the beginning of the project are reached, without being paid more than the initial cost foreseen by the research organization at the beginning of the project (and agreed in the contract) OR, there is a breach of contract and the research organization is not paid at all (or the last instalment of payment is not paid)
- are there other items indicating absence of risk sharing?

It is the opinion of the authors that if the majority of the 6 answers is YES (with four YES or more, you can be sure), the RDI partnership is surely research on behalf of an undertaking in the sense of point 25 of the R&D&I Framework. In other cases, legal professional advice should be sought.

There is no indirect state aid if the research on behalf of an undertakings is performed either on a market price, or, in the absence of a clear market price, by payment of 100% of the full cost plus a margin.

Examples of research on behalf of undertakings:

- Contract research: such situations generally arise often when the undertaking has no (or poor) RDI capacity: it outsources all its RDI needs. This generally is low risk RDI at a very high TRL. Typical figures are:
 - Duration: less than 1 year
 - Total global funding from undertaking to RDO: means value of 100.000 Euro or even less for RDI services
- Research services: examples:
 - Physic-chemical characterization of a material specimen with a specific costly equipment
 - Consultancy
 - certification activities

4. Effective Collaboration with Undertakings - Section 2.2.2 R&D&I Framework

4.1 General items

The carrying out of independent RDI aimed at gaining more knowledge and better understanding, including effective collaborative RDI with other parties, is considered to be a non-economic activity and therefore no direct state aid is awarded to research organisations and no indirect state aid is awarded to the participating undertakings through research organisations/research infrastructures (R&D&I Framework points 27 & 28) for such activities.

For these modes of collaboration to be qualified as effective collaborative RDI, the Research Organisations needs to engage in "effective collaboration" with at least one other independent party, which entails that several of the following criteria (array of proof) are fulfilled and defined in the collaborative research agreements:

- a. Definition of a common objective, with generally no obligation of results but rather obligation of means (to exert reasonable effort) to fulfil the common objective. In this respect for example, common objective means that the undertaking does not impose its technical specifications without iterative and bilateral negotiation with the research organisation ending by agreed common objectives;
- b. Division of labour between the participants: joint participation and contribution in the definition of the scope of the project, the specification of the RDI activities, and their implementation;
- c. Sharing of the financial, technological, scientific and other risks between partners, even though one or several parties may bear the full costs of the project (without margin) and thus relieve other parties of its financial risks;
- d. Sharing of the research results:
 - Intellectual Property Rights (IPR) and access rights are allocated to the different partners with respect to the value of their contribution and respective interest, or in the case of an exploitation by the partner, a compensation equivalent to the market price is attributed to the research organisation/research infrastructure (royalties or lumpsum) with respect to the value of their contribution and the value of the technology;
 - results which do not give rise to IPR are widely disseminated through conferences, publication, open access repositories, or free or open source software.

4.2 Defining factors of independent effective Collaboration

These factors can be found by analysing the terms and conditions prior to the project start, with details of the contributions to costs, sharing of risks (financial, technological and scientific), dissemination of research results, and access to and rules for allocation of intellectual property rights).

The Commission considers that no indirect state aid is awarded to the participating undertakings for collaborative research that are either co-funded or fully funded by industry, if one of the four following conditions is fulfilled (summary of point 28 of the R&D&I Framework):

- full costs of the research are born by the undertakings or
- results of the collaboration which do not give rise to IPR are widely disseminated and IP rights created by the RDO vest within the RDO or
- a balanced allocation of the results and IPR on results or
- a market price for IPRs allocated to the undertaking is paid by the undertaking

We reproduce here the entire point 28 of the R&D&I Framework:

«28. *Where collaboration projects are carried out jointly by undertakings and research organisations or research infrastructures, the Commission considers that no indirect State aid is awarded to the participating undertakings through those entities due to favourable conditions of the collaboration if one of the following conditions is fulfilled:*

- (a) the participating undertakings bear the full cost of the project, or*
- (b) the results of the collaboration which do not give rise to IPR may be widely disseminated and any IPR resulting from the activities of research organisations or research infrastructures are fully allocated to those entities, or*
- (c) any IPR resulting from the project, as well as related access rights are allocated to the different collaboration partners in a manner which adequately reflects their work packages, contributions and respective interests, or*
- (d) the research organisations or research infrastructures receive compensation equivalent to the market price for the IPR which result from their activities and are assigned to the participating undertakings, or to which participating undertakings are allocated access rights. The absolute amount of the value of any contribution, both financial and non-financial, of the participating undertakings to the costs of the*

research organisations or research infrastructures' activities that resulted in the IPR concerned, may be deducted from that compensation».

In other words, the research and knowledge disseminating organization and the undertaking carry out a project where there is effective collaboration. In that case, even if the undertaking does not pay the market rate or the full costs of the project the undertaking (condition a) will not be a recipient of State Aid if the results of the collaboration which do not give rise to IPR are widely disseminated and any IPR resulting from the activities of a research organization or research infrastructures are fully allocated to those entities, (condition b)

OR

any IPR resulting from the project and access rights are allocated between the research and knowledge disseminating organization and the undertaking so as to reflect their work packages, contributions and respective interests, (condition c)

OR

the research and knowledge disseminating organization receives compensation equivalent to the market price for the IPR which results from its activities and which is assigned to the undertaking (condition d).

Point 28 R&D&I Framework gives great flexibility to RDOs to comply with State Aid RDI rules by being able to choose between different conditions to be fulfilled. Example: Point 28 a) **OR** b) **OR** c) **OR** d). For example, an RDO in a given Member State can carry out an effective collaboration with an undertaking without any dissemination of non-IPR results if the undertaking bears the full cost of the project (28 a) OR if the RDO chooses c) OR (d). In those cases, no indirect State Aid is awarded to the undertaking, and the undertaking is not a recipient of State Aid.

In practice, however, it is often, when not always, observed that even if conditions a) or c) or d) are chosen, these collaborations are the subject of scientific publications (or other dissemination means like standardization, training, etc.) for a part of the knowledge created by the RDO in the project, the RDO and the undertaking have a common interest to publish. They even give rise sometimes to public-private scientific co-publications since the undertaking has effectively participated in the carrying out of his own part of the project. R&D&I effective collaboration is indeed known to stimulate public-private scientific co-publications.

Indeed, EC's Union Innovation Scoreboard uses the criterion of public-private co-publications as one of the 25 criteria used to measure the innovation performance of the Member States, which confirms that this criterion is essential for the EU innovation ecosystem.

(https://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_en).

See for example in **Annex 4**: "Analysis of research collaboration between universities and private companies in Spain based on joint scientific publications"

In order to assess whether an RDI partnership with an undertaking and funded by 100% of the full costs (or cofounded by the undertaking) by the undertaking is still an effective collaboration according to point 27 of the R&D&I (and not research on behalf of an undertaking according to point 25 of the R&D&I Framework), it is helpful for interpretation of this clause to answer following questions:

- Are the technical specifications of the effective collaboration defined in common between the Research Organization, resulting from a bilateral and iterative process, taking into account the common interest?
- Does the RDO keep ownership (or joint ownership) of IP it creates itself in the common project against adapted access rights to the undertaking?
- Are the non IPR results widely disseminated (scientific publications, conferences, other disseminating activities, collaborative standardization, training, etc.)?
- Do both partners have their own part of a common project of common interest (RDO's part being naturally funded by industry, and naturally, RDO does not fund at all, even partly, the undertaking's part of the common project!): joint research, collaboration, etc.
- Is the RDI agreement about an obligation of means?

As stated in point 27 of the R&D&I Framework, *"the terms and conditions of a collaboration project, in particular as regards contributions to its costs must be considered prior to the start of the project"*. The costs of the research and knowledge dissemination's part of project which will be partially or totally funded by the undertaking, include all the means it will engage in the RDI project, men-hours and inputs costs. "Obligation of means" means that the sole obligation the research and knowledge dissemination organization has, is to engage these means. Even if at the end of the project the technical specifications defined and agreed in common before the start of the project are not reached (which can happen because RDI projects are risky), the undertaking pays the agreed costs.

- Are there other items indicating that it is about risks and results sharing?

If the answers to the majority of that questions, (at least 4 out of six) are YES, then the RDI partnership is surely an effective collaboration (point 27 R&D&I Framework). In other cases, legal professional advice should be sought.

In practice the undertaking will usually fund only a part of the full costs of the RDO. However, according to point 27 R&D&I Framework, the undertaking can even fund up to 100% of the full costs of the RDO without endangering the status of "effective collaboration".

4.3 The various ways in which an RDO may be engaged in RDI partnerships with industry are summarized in the following table:

Type of RDI activity	Block funding (direct annual public subsidy to the research organization) No collaboration with industry	Collaborative Institutional RDI competitive project in consortia funded by a public agency (H2020, DFG, ANR,...). U and RDO are funded by the agency; no financial flow from U to RDO		Independent <u>Effective</u> collaborative RDI (within the definition of EC RDI state aid rules; point 27) project funded by industry (for example 50% full cost or 100% full cost). Financial flow from U to RDO	Research on behalf of undertakings (contract research or research services, within the definition of EC RDI state aids rules; point 25) or RDI services Financial flow from U to RO: 100% full costs plus Margin
Economic versus Non economic	Non-economic	Non-economic		Non-economic	Economic

(U = Undertaking; RDO = research and knowledge dissemination organization)

Which kinds of cooperation are taking place and which distribution among the different forms of cooperation is given is depending on type of Research Organization, other circumstances like thematic fields, availability of funding, industrial needs and others, importance of the four columns can be different, but economic activities have to be ancillary in order that public funding to the RDO is considered as falling outside state aid(ancillary means that the economic activities use the same inputs as the non-economic activities and that economic activities do not exceed 20% of the relevant entity's overall annual capacity (point 20 of R&D&I Framework).

4.4 Example of a Research organization with many RDI partnerships with industry

The following table illustrates the various ways in which a given applied Research Organization may be engaged in RDI partnerships with industry, giving an estimate of the part of funding in its overall annual capacity for each activity. The percentages are pure *examples* for illustration purposes.

Type of RDI activity	Column I	Column II	<u>Column III</u>	Column IV
	Block funding No collaboration with industry (direct annual public subsidy to the research organization)	Collaborative Institutional RDI competitive RDI project in consortia funded by a public agency (H2020, DFG, ANR,...). U and RDO are funded by the agency; no financial flow from U to RDO	Independent <u>Effective</u> collaborative RDI (within the definition of EC RDI state aid rules; point 27) project funded by industry (for example 50% full cost or 100% full cost). Financial flow from U to RDO	Research on behalf of undertakings (contract research or research services, within the definition of EC RDI state aids rules; point 25) or RDI services Financial flow from U to RDO: 100% full costs + Margin
Economic versus non-economic	Non-economic 35%	Non-economic 35%	Non-economic 23%	Economic 7%

(U = Undertaking; RDO = research and knowledge dissemination organization)

Therefore, generally speaking the RDI activities of this example RDO are mainly non-economic as far as the economic part of their activities being ancillary activities (less than 7% of R&D&I capacity). The Research Organization is qualified as an "research and knowledge dissemination organization" according to the definitions of EC R&D&I Framework and the GBER of 2014.

- **Column I:** Internal RDI activities funded by Research Organization's direct block funding: there is here no engagement with industry. It is often RDI at low TRL (Technology Readiness Level) for resourcing
- **Column II:** Collaborative Institutional competitive RDI project funded by a public agency (H2020, DFG, ANR,...). Undertakings and Research Organizations are funded by the agency; no financial flow from Undertakings to Research Organizations take place. Examples here are the H2020 Pillar II or III where Research Organizations and undertakings collaborate.
- **Column III:** Effective collaborative RDI (within the definition of point 27 R&D&I Framework) project funded by industry (for example 50% full cost or 100% full cost) with financial flow from Undertakings to Research Organizations
- **Column IV:** Research on behalf of undertakings (contract research or research services, within the definition of EC RDI state aids rules; point 25 R&D&I Framework) or RDI services with financial flow from Undertakings to Research Organizations: remunerating 100% full costs plus a margin

For a given undertaking, generally speaking, joint research programs with Research Organisations often mix column II, III, and IV as described in next paragraph.

4.5 Further examples of activities according to the classification of activities (see the table after the following explanations)

The forms of cooperation in RDO's are very diversified. In the following different regularly arising constellations are described which do not cause a conflict with State Aid Law. They are correlated to the columns previously introduced in 4.2 and 4.3

Column I: after a column I internal RDI program, the Research Organization does not find any existing undertaking for further collaboration (column II, III, IV). This given Program has resulted in a very disruptive innovation. After a market study, the Research Organization concludes that the best way to transfer the results to society so that society benefits from new products and services, is to create a start-up (this is a non-economic activity and no notification is necessary).

The Research Organization has an affiliate whose mission it is to take equity in RDO's start-ups (seed capital venture). RDO and its affiliate create a start-up. In many cases, the knowledge transferred is so disruptive that one or several RDO's employees are part of the initial staff of the start-up. This is nevertheless a non-economic activity and as such it is exempted from State Aid Law (see above VII.2.) Please note that the equity participation /investment must be compliant with Articles 21 and 22 GBER. Also note that the actual license to the start-up or the contribution in kind of assets in the start-up may constitute indirect state aid to the start-up if not concluded against market conditions.

Column II: A RDO has found one or several undertakings in order to start a collaborative RDI project, funded under a state-aid compliant public financing instrument, according to column II (this is non-economic and no notification is needed) in order to elevate its background (BG) knowledge to a higher TRL level. After such collaboration, various options are possible and here are some examples:

- One or several undertakings of the consortium may take a license on all or parts of RDO's foreground knowledge created in the project. If parts of this Foreground knowledge needs RDO's Background knowledge in order to exploit RDO's Foreground, the license includes both access to the user rights to Foreground and Background. License on Background is usually non-exclusive. The license on Foreground is either non-exclusive or exclusive, and for the latter, limited to the undertakings sectorial field, limited in duration and with a way of exploitation ensuring that results funded by public funding are not blocked by the undertaking. The latter can be done by, for example, imposing so-called anti-shelving measures like the payment of a one-off fee at license signature and imposing mandatory exploitation thresholds under which the undertaking loses sectorial exclusivity.
- No undertaking within the consortium takes a license on the RDO's foreground knowledge as created in the project. There are here two main options:
 - The undertaking is nevertheless interested in that RDO's knowledge. RDO and undertaking therefore engage in a bilateral RDI partnership funded totally or in part by the undertaking in order to continue to elevate the knowledge to a higher TRL level. We refer to column III or IV.
 - Return to column I: The RDO tries to create a start-up.

Column III: RDO and an undertaking engage in a common bilateral R&D&I project according to point 27 R&D&I Framework (independent effective collaboration). This collaboration can take several different forms. Again, this is non-economic in nature and no notification is needed:

- Joint research without creating a physical common laboratory, as well as;
- Joint research in the frame of a physical common laboratory.

Such bilateral joint research often involves high-risk R&D&I.

Typical figures of joint research projects according to Column III are:

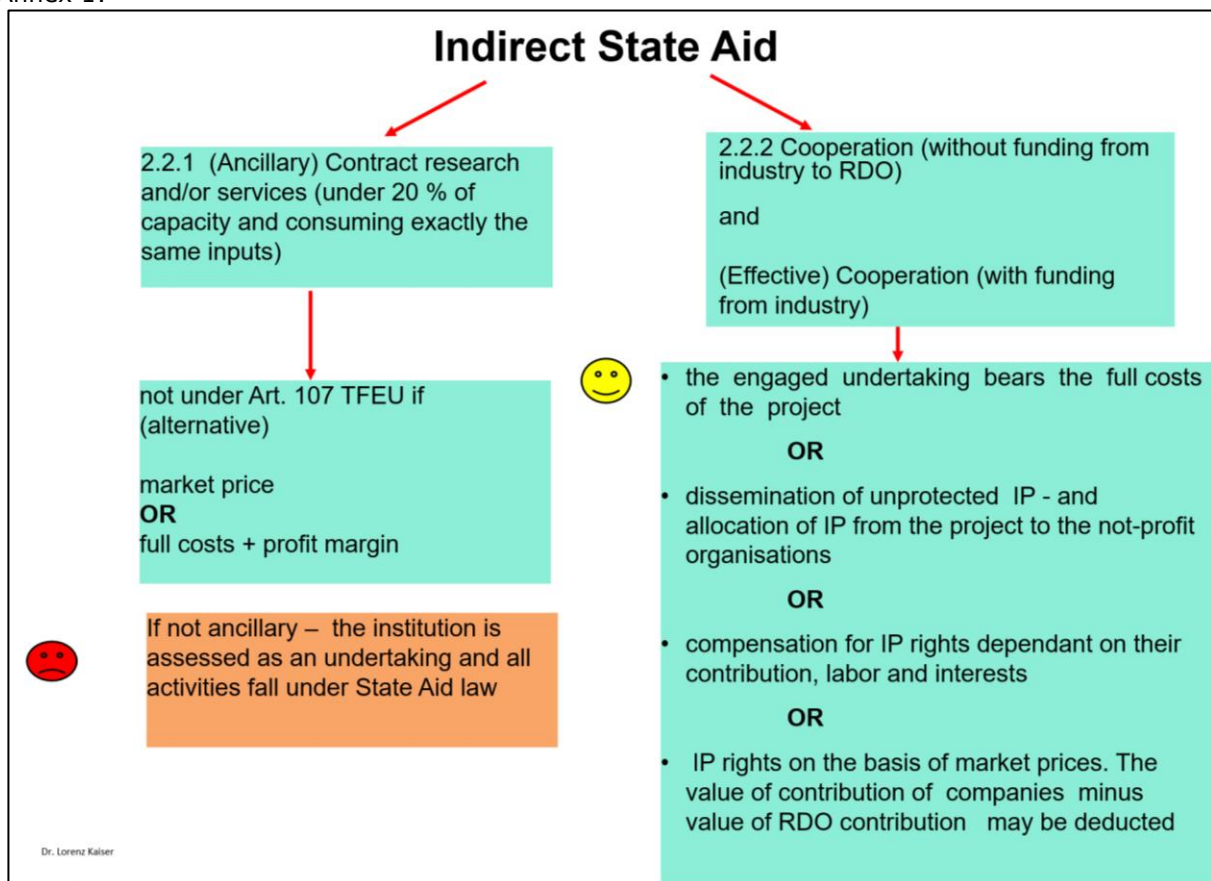
- Duration: more than 1 year
- Total global funding from undertaking to RDO: usually more than 500.000 - 1 Million Euros

Column IV: research on behalf of undertakings: contract research or research services

Such situations generally arise when the undertaking has no (or poor) R&D&I capacity: it outsources some or all of its R&D&I needs. This is generally low risk R&D&I at a very high Technology Readiness Level. Typical but not conclusive figures are:

- Duration: less than 1 year
- Total global funding from undertaking to RDO: a median value of 50.000 Euros or even less for RDI services. However, the actual values may vary widely dependent e.g. on the purpose of the project.

See an overview on indirect state aid in the following decision tree as extract of the presentation in Annex 1:



VIII. The Specific Infrastructure Issues

1. Research Infrastructures

In the above the operation of the EU State Aid rules in respect of research projects and results was discussed. RDI projects use sometimes *research infrastructures* or RI's. RI's are usually costly facilities like a laboratory, a specific costly equipment (clean rooms for microelectronics, etc.) or a supercomputer. Often such facilities require (co) funding with public financial means. And here the EU State Aid rules again come into play in various ways and several aspects of the purchase, use and operation of the RI need to be tested against the EU State Aid rules:

- The Research Organization as a recipient of State Aid, e.g. as a government grant or loan;

- The supplier of access to the use of the RI as a recipient of State Aid, in the cases where the Research Organization is not the supplier. The supplier is the operating entity exploiting and managing the Research Infrastructure
- Other users of the RI for non-economic activities
- Other users of the RI for economic activities

First let us discuss what an RI actually is by quoting the definition as used in both the GBER and R&D&I Framework of 2014:

Research infrastructure means facilities, resources and related services that are used by the scientific community to conduct research in their respective fields and covers scientific equipment or set of instruments, knowledge-based resources such as collections, archives or structured scientific information, enabling information and communication technology-based infrastructures such as grid, computing, software and communication, or any other entity of a unique nature essential to conduct research. Such infrastructures may be 'single-sited' or 'distributed' (an organized network of resources).

While this definition seems to be rather straightforward, there are a few elements that stand out. First of all, this is not only about physical infrastructures such as equipment and lab facilities. Also, non-physical resources are covered. Secondly, it must be "of a unique nature essential to conduct research". And finally, the infrastructure may be "distributed". Here one might think of "virtual laboratories" or e.g. a European Research Infrastructure Consortium or ERIC.

As far as an RI is only used for the primary function of the RDO, performing non-economic activities, then aid for the RI is not considered to be State Aid at all. Where there are economic activities using the RI and when these economic activities are not ancillary, only then it must be investigated whether aid for the RI is compatible with the internal market.

Here, again reference is made to the 20% rule of point 20 of the R&D&I Framework. When the use for economic activities is purely ancillary (meaning that it stays below the threshold of 20% of the annual capacity of the relevant entity AND whose economic activities consume exactly the same inputs (such as material, equipment, labour and fixed capital) as the non-economic activities) then its funding may fall outside of the state aid rules in its entirety. There are however certain exceptions to this rule in Art. 26 of the GBER.

This is of importance for one other reason. Under the vigor of Art. 26 of the GBER, as set out below, operational costs, such as cost for personnel, support and maintenance etc. are not considered to be eligible under the exemption for investment aid to RI's. When the RI remains below the threshold these costs can however be taken into account (see examples to best practices under!

Where the above situations do not apply, state aid to such RI's is compatible with the internal market under a number of conditions. The conditions under which member states may grant investment aid for RI's that are (in part, and more than ancillary) used for economic activities, are primarily set out in the GBER. In this respect it should be noted that the GBER allows for both investment *schemes* as well as *ad hoc* aid. Aid for RI's often takes the form of *ad hoc* aid due to the fact that more often than not specific investment arrangements are made, usually involving both public and private parties. Such state aid can be either a direct financial contribution but may also be made "in kind" such as by e.g. the granting of a building plot, by or providing some favorable treatment (e.g. permits) or by granting a tax break.

Art. 26 of the GBER sets out the specific requirements under which such investment aid for an RI is compatible with the internal market:

- a. The aid is limited to aid for the *construction or upgrade* of research infrastructures, up to (typically) 50% of the eligible costs. Eligible costs are limited to investment costs for both tangibles and intangibles such as required patent licences. Please note that operation or exploitation costs are not considered to be eligible under the exemption for investment aid to RI's. The aid may be granted up to an overall ceiling of 20 Million Euro's per RI.
- b. Where a research infrastructure pursues both economic and non-economic activities, the financing, costs and revenues of each type of activity shall be accounted for separately, using justifiable cost and capacity accounting principles.
- c. The price charged for the operation or use of the infrastructure shall correspond to a market price. In the absence of an established market price, either the price should reflect full cost plus a margin, or the price should be the result of an arm's length negotiation covering at least the marginal costs.
- d. Access to the infrastructure shall be open to multiple users and be granted on a transparent and non-discriminatory basis. Undertakings which have financed at least 10 % of the investment costs of the infrastructure may be granted preferential access under more favourable conditions. In order to avoid overcompensation, such access shall be *proportional* to the undertaking's contribution to the investment costs and these conditions shall be made publicly available.
- e. Where a research infrastructure receives public funding for both economic and non-economic activities, Member States shall put in place a monitoring and claw-back mechanism in order to ensure that the applicable aid intensity is not exceeded as a result of an increase in the share of

economic activities compared to the situation envisaged at the time of awarding the aid. Dependent on the rules and procedures as adopted by Member States certain obligations in respect of monitoring and clawing back may be imposed on funding agencies as well as on the aid receiving organisations themselves.

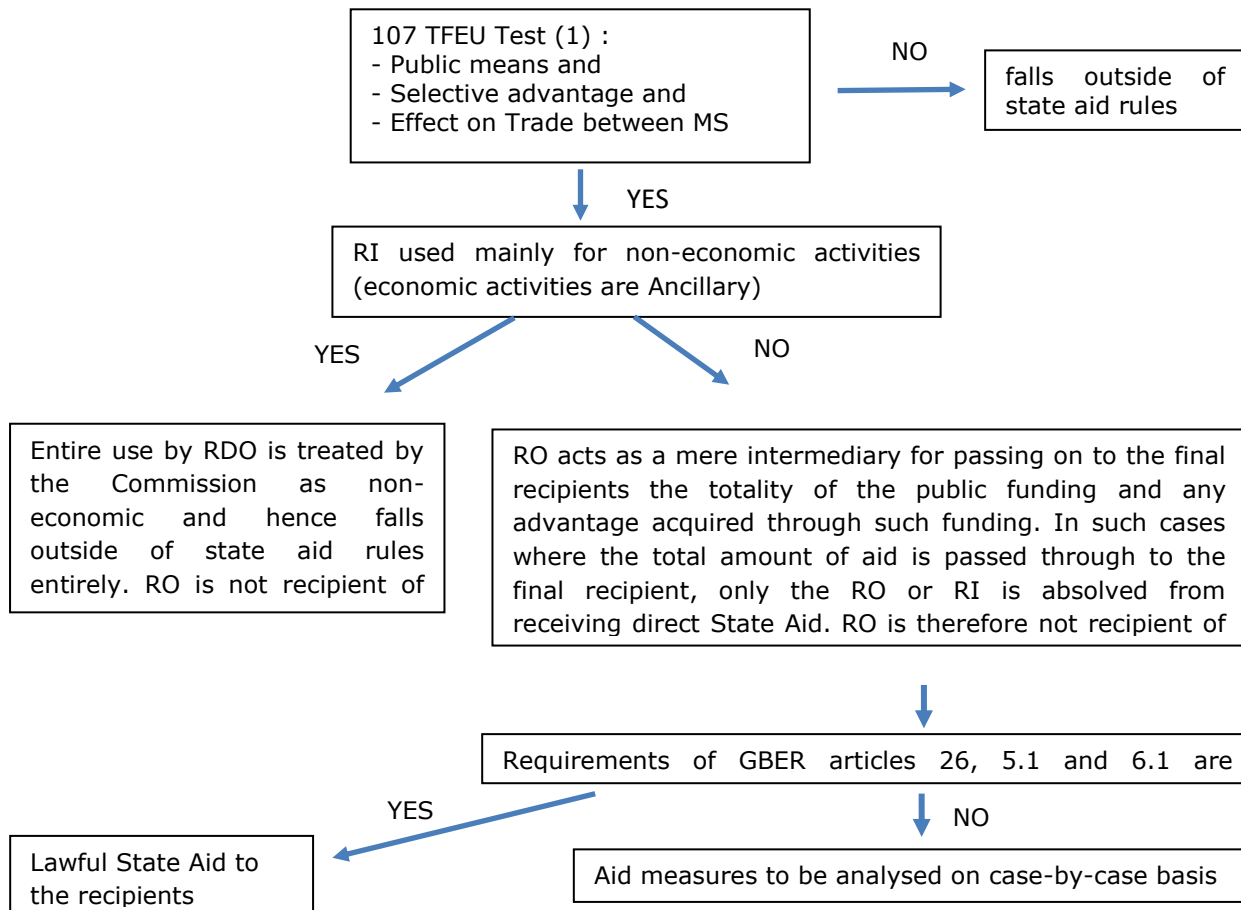
Please note that this latter requirement must be applied in a strict way. Where the economic use of the RI does not stay below the abovementioned threshold of 20% of its annual capacity in any given year, then the claw back mechanism must be applied to the *entire* amount of the incompliant state aid, not just the excess above the 20% threshold. For this reason, it is recommended that the partners in an RI agree amongst each other a course of action to accommodate such situation.

Here, we must also distinguish between the RDO or RI as eventual recipient of direct state aid if and where the economic activities of the RI are not ancillary, and other beneficiaries of the same aid. An RDO or RI may indulge in economic activities using public financial means. For such cases point 22 of the R&D&I Framework states that the Commission will not consider the RO or RI to be a beneficiary of state aid if it acts as a *mere intermediary* for passing on to the final recipients the totality of the public funding and any advantage acquired through such funding. In such cases where the total amount of aid is passed through to the final recipient, *only* the RO or RI is absolved from receiving unlawful direct State Aid. Please note, in respect of the final recipient, there could still be a case of unlawful *indirect* state aid for the undertaking that is the final recipient.

Apart from the specific criteria of art. 26 please take note that the GBER also contains generic requirements. For instance, art. 6.1 requires that the aid measure must have a demonstrable incentive effect. On RDI this means that the incentive effect must be measured against the EU innovation ecosystem and to the benefit of EU competitiveness. And art. 1.5 (c) stipulates that aid measures may not restrict the possibility for the beneficiaries to exploit the research, development and innovation results in other Member States.

Decision tree for Research Infrastructures (next page)

The principle of "arm's length negotiations" as defined in point 1.3f R&D&I Framework in short means that the parties have negotiated in the same way as undertakings would have negotiated. (open, transparent and non-discriminatory methods must be taken into account) This requires a high burden of proof which can be provided by e.g. a paper trail, i.e. the documentation of the duration of negotiations, the number of meetings, the minutes of those meetings, or the assessment of each other's proposals.



The following example shows typical situations as they arise in the relations between Research and Knowledge Disseminating Organisations and industry (undertakings) when they involve Research Infrastructures.

EXAMPLE N°2

An RDO owns and manages a research infrastructure paid for with public funding, with several undertakings aiming to use the facility used for different purposes:

- Own internal projects of RDO (column I of table in chapter VII)
- Joint collaboration (non-economic):
 - Collaborative Institutional R&D&I project funded by a public agency: column II)
 - Effective collaboration with undertakings partly or fully funded by undertakings (column III)
- Research on behalf of undertakings (column IV of table in chapter VII)
- Rentals to undertakings for their own needs (access to facility without any RDI partnership with RDO)

Example of best practices for costing when an RDO owns the RI

The activities for which the RI is used are purely non- economic or the economic activities are ancillary.

- For Effective collaboration with undertakings, which are partly or fully funded by undertakings (for example between 50% to 100% full cost) (column III), costs borne by an undertaking include:
 - The payments for maintenance and running of the infrastructure and the costs of use of process fluids (electricity, water, heating, ventilation....) pro rata to its utilization of the project: 50% to 100% of the costs;
 - The payment of the R&D&I project costs engaged by the RO (researchers and other staff funding): 50% to 100% full costs.
- For Research on behalf of undertakings (column IV), costs borne by an undertaking include:
 - The depreciation (amortization) of the cost of the infrastructure pro rata to its utilization of the project, with a margin;
 - The costs for maintenance and running of the infrastructure and the costs of use of process fluids (electricity, water, heating, ventilation....) pro rata to its utilization of the project: 100% full of these costs with a margin;
 - The payment of the R&D&I project costs engaged by the RO (researchers and other staff funding, ...): 100% full costs with a margin.

More favorable costing might be possible if this advantage is limited to the de minimis amount and subject to all the conditions set out in the De minimis Regulation.

- For rentals, the costs borne by an undertaking include:
 - The depreciation (amortization) of the cost of the infrastructure pro rata to its utilization of the project: 100% full costs with a margin. The costs for maintenance and running of the infrastructure and the costs of use of process fluids (electricity, water, heating, ventilation,...) pro rata to its utilization of the project, with a margin.

More favorable costing might be possible if this advantage is limited to the de minimis amount and subject to all the conditions set out in the De minimis Regulation.

1. The economic activities carried on the RI are not ancillary

- For Effective collaboration with undertakings, which are partly or fully funded by undertakings (column III) costs borne by an undertaking include:

The depreciation (amortization) of the cost of the infrastructure pro rata to its utilization of the project, without margin

The costs for maintenance and running of the infrastructure and the costs of use of process fluids (electricity, water, heating, ventilation,...) pro rata to its utilization of the project, without margin

The payment of the RDI project costs engaged by the RDO (researchers and other staff funding): 50% to 100% full costs
- For research on behalf of undertaking and for rentals, the costing modalities are the same as in paragraph A (as for non-economic and ancillary economic activities).

See in Annex 5 two examples of RI's owned by an RDO in France

2. Innovation clusters (GBER article 27)

There is one other instrument that comes close to RI's or is complementary to RI's, namely the "innovation cluster". The basic requirements for an innovation cluster are similar to those of the RI as set out above. With a few notable changes: on the downside, the aid for an innovation cluster may not exceed 10 years. On the upside, the eligible costs for an innovation cluster include personnel and administrative costs including overhead relating to:

- Operating of the cluster to facilitate collaboration, information sharing and the provision of specialized business support activities;
- Marketing of the clusters facilities to increase its participation;
- Management of the cluster's facilities, organization of training, workshops and conferences, networking and cooperation.

3. Science parks

Science parks are not defined under the GBER or R&D&I Framework as separate entities. Therefore, how aid to such science parks is to be treated under EU State Aid rules is dependent on the specific circumstances. A science park may well include one or more RI's and/or Innovation Clusters. In this respect it should again be noted that some parts or activities of a Science Park could be subject to *de minimis* or could qualify under other elements of the GBER, like the special arrangements for SME's of Art. 14, 18, 28 and 31 GBER.

Science parks might sometimes also be SME's and/or start-up incubators. We quote here an example of an EC decision after Member State notification on such Science Park: http://ec.europa.eu/competition/state_aid/cases/258080/258080_1850847_195_2.pdf.

The Commission had decided that the measure does not constitute State aid thanks to the *de minimis* rules.

State Aid SA.41540 (2015/N) – Republic of Lithuania Aid to public legal persons - Science and Technology Parks (STPs)

- State aid at the level of Kaunas STP and Klaipeda STP
In the light of the foregoing, the Commission concludes that no State aid is present at the level of Kaunas STP and Klaipeda STP.
- State aid at the level of the final beneficiaries – the incubated SMEs
«An economic advantage will be conferred to the SMEs incubated in Kaunas STP and Klaipeda STP by means of price reductions of the services provided to them by the STPs. This advantage will be limited to the de minimis amount and subject to all the conditions set out in the De minimis Regulation»
The Commission has accordingly decided that the measure does not constitute State aid within the meaning of Article 107 (1) of the TFEU.

4. Project of common European interest (IPCEI)

An IPCEI is a transnational project of strategic significance for the EU and for the achievement of the Europe 2020 objectives, The IPCEI Communication is based on Article 107(3)(b) of the Treaty on the Functioning of the European Union (TFEU), which allows Member States to grant aid to promote the execution of an important project of common European interest. The notification process is simplified and supported additionally for such projects because of their importance. Again, the reader is reminded that public funding for the non-economic activities of RDO's (possible economic activities being ancillary) is never subject to state aid control. Therefore, it is advisable that the member states, when filing the required common notification, address and express the non-economic nature of participating RDO's.

Here, it should be noted that at the time of finalizing this report, the IPCEI Communication is in a revision process.

Legal documents linked with IPCEI's

The Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — EU State Aid Modernisation (SAM) - COM(2012) 209 final, 8.5.2012.

[https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52014XC0620\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52014XC0620(01)&from=EN);

COMMUNICATION FROM THE COMMISSION: «Criteria for the analysis of the compatibility with the internal market of State aid to promote the execution of important projects of common European interest» (2014/C 188/02)

Examples of possible IPCEI in the RDI field: the joint development of a research infrastructure of a pan-European interest that is necessary for the development of top-level science and innovation in the EU could be considered an IPCEI, in particular if it is part of the roadmap for the European Strategy Forum for Research Infrastructures (ESFRI). For instance, the cost of €1.5 billion for the construction of the European Spallation Source linear proton accelerator in Sweden, with its data management centre in Denmark, is being financed by 17 participating countries.

For IPCEI's, state aid authorizations are extended, when compared to the basic EC RDI state aid rules as laid down in the framework, by:

- Increasing aid intensity. Where justified, public support may cover up to 100% of the funding gap on the basis of a large set of eligible costs;
- Allowing aid for the first industrial deployment of an R&D project, i.e. during the up-scaling of the pilot facilities and the testing phase.

In the administration of IPCEI's up to the date of edition of this report only **one example is existing, please find a short description here: IPCEI Microelectronics**. A summary of EC's decision on this dossier is described in Annex 3. IPCEI Microelectronics is the first real RDI IPCEI in Europe. It involves 29 organizations (27 undertakings and two research and knowledge dissemination organizations) and four Member States.

Extracts of EC's decision:

"The European Commission has found that an integrated project jointly notified by France, Germany, Italy and the UK for research and innovation in microelectronics, a key enabling technology, is in line with EU State aid rules and contributes to a common European interest.

The four Member States will provide in the coming years up to €1.75 billion in funding for this project that aims to unlock an additional €6 billion in private investment. The project should be completed by 2024 (with differing timelines for each sub-project)."

...

"France and Italy submit that two research organisations will take part in the IPCEI Microelectronics projects and activities as partners; however, due to their research organisation status and performance of non-economic activities, and the fact that their economic activities comply with the ancillary principle as defined by point 20 of the R&D&I Framework, these research organisations shall not be considered as beneficiaries of aid."

IX. The Control of State Aid Rules

1. The control of state aid rules by DG Competition and Courts is enforced by DG Competition, and in cases of appeal against the decisions of the commission, ultimately by the European Court of Justice. State aid control has its legal basis in Article 108 TFEU.

There are two different level of controls:

- EC decisions after Member State notifications: when notification of RDI direct state aid to undertakings is necessary, Member States prepare a file for notification. Then EC analyses this notification dossier, negotiates if needed its compliance with R&D&I State aid rules with the Member States, and then publishes a decision for allowance of this direct RDI State Aid (see chapter IX-1) and annex 3);
- Jurisdiction cases (lawsuits) by the European Court of Justice after an EC DG COMP decision (see chapter IX-2).

Member States notifications and EC's decisions

See in Annex 3 several examples of notifications of dossiers of RDI aid to undertakings where there are RDI collaborations with Research and Knowledge-dissemination Organizations. The dossier has to demonstrate that direct RDI aid meets the criteria of the R&D&I Framework to undertakings and that the RDI partnerships between undertakings and research organizations conducted within the framework of the projects does not grant any indirect state aid to undertakings.

Direct R&D&I aid to undertakings is allowed by the R&D&I Framework when following criteria are met:

- a) The aid is intended to remedy a market failure (R&D&I Framework section 4.2);
- b) Aid is an appropriate means of action (R&D&I Framework section 4.3);
- c) the aid has an incentive effect (R&D&I Framework section 4.4);
- d) the aid is proportionate (R&D&I Framework section 4.5);
- e) The aid is not likely to disrupt the competitive operation of the target markets to an extent contrary to the common interest (R&D&I Framework section 4.6).

For RDO's, it is simple: They need to demonstrate that they are research and knowledge dissemination organizations according to the definition of EC R&D&I State aid rules and that the R&D&I partnerships between undertakings and research organizations conducted within the framework of the projects does not convey any indirect state aid to undertakings. Many research and knowledge dissemination in Europe have model documents for that, and they apply it in the given RDI collaboration in the frame of the dossier.

2. Example in one dossier: Extract of EC's decisions

"Absence of indirect RDI state aid related to the financing of the pilot facility"

The Commission is therefore able to conclude that ST Microelectronics does not benefit of any indirect state aid related to the pilot facility, whether due to the use of the equipment, their installation on the site of Tours, the existence of a priority option for purchasing it or the purchase price of such equipment”.

Example of jurisdiction: the Delftship case

Sources:

- Commission decision in 2011: 10/05/2011

SA.27187 (NN 68/2010) - The Netherlands: Alleged State aid through a software-licensing agreement between Technical University Delft and Delftship B.V.

- European Court of Justice ruling in 2014; Case T-488/11, 12 June 2014

<http://curia.europa.eu/juris/document/document.jsf?text=&docid=153542&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=495695>

Please note: this decision refers to a previous version of the Community Framework for State Aid for Research and Development and Innovation (2006/C323/01). The general principles of this version are however very similar to the 2014 framework document.

This case is mainly about the correct pricing of a software license granted to a university spin-off. A team from the Technische Universiteit Delft (TUD) developed software for the design and load-calculation of advanced ships, that sparked a high interest from the market. At a certain moment in time, the lead engineer and his supervising professor decided to leave the TUD to start a new company called Delftship BV (DS). This was not a spin-off from the TUD, but an independently established company. TUD, now being unable to continue development of this software, terminated the project and decided to enter into license negotiations with DS. TUD then granted a worldwide exclusive license to DS against a yearly royalty of 5% over the annual turnover of the licensed products sold by DS.

Two competitors of DS, SARC BV and Mastership filed a state aid complaint with the Commission, stating that the terms and condition of the license agreement would constitute illegal state aid to DS. Based on an independent valuation, SARC claimed that the license fee was below market price. The Commission subsequently started an investigation.

SARC used a number of arguments. First and foremost, it stated that TUD had not established a market price by opening competition as it neither held an auction or a public procurement procedure, nor sought an independent valuation or benchmark. They further argued that the price should have been established based on *full costs*. SARC further submitted its own value estimation as well as two independent valuations, all showing a considerably higher market value. Finally, SARC argued that the *grantback* license on new versions and the maintenance and support did not represent a significant value.

The Dutch authorities pointed out that in this case full cost would not be an adequate basis for value calculation as this should only be used for full economic activities and not where results were attained in a rather inefficient academic setting. They further argued that the value of the software was lower due to required “productizing” of a former research-tool and the fact that the software contained a high percentage of open source code. Finally, the authorities explained that TUD believed that offering the software to competitors of DS that already had similar tools would make no sense and would not contribute to the knowledge transfer activities of TUD, being one of the primary functions of a university.

Having concluded its investigation, the Commission decided that “*the conditions of the license agreement in question do not constitute State aid and therefore do not fall within Article 107 (1) of the TFEU*”.

This decision was based on a number of arguments. First and foremost, the Commission noted that the none of the situations described in the *then* valid version of the R&D&I Framework could be directly applied. However, the Commission did assess the situation based on the nearest scenario described. As to the merits of the case, the Commission considered that the TUD had followed an effective negotiation process as it attained a considerably better final agreement than it had first started with (e.g. by removal of an overall royalty cap in the final agreement) and the professor that co-founded DS was not negotiating on behalf of TUD. The Commission further recognized TUD’s own needs in the future availability of the software for its own purposes and that these needs were best catered for by the lead engineer, now employed by DS. As to the value of the software, the Commission considered that the maturity level of the software was here of no importance, as the agreement was royalty based. If DS would increase its prices towards its customers over time, then this would also have led to higher returns for TUD. It further considered that due to large inconsistencies *between* the reports, none of the valuation reports submitted by SARC could be accepted as solid proof showing that TUD had granted an advantage to DS. It is noteworthy to see that the Commission recognized the argument brought by the Dutch authorities that here *full cost* would not be an adequate approach for value estimation. First due to the educational setting in which the software was developed. And secondly, that even in a fully commercial setting, the market value does not necessarily coincide with the costs of development.

SARC then appealed the Commission's decision before the General Court of the EU. The Court (5th Chamber) dismissed each and every argument brought by SARC and upheld the Commission decision. Quite remarkably, the Court also challenged SARC's standing to sue before the Court. Following established case law, it considered that an applicant may only challenge a State Aid decision taken by the Commission if it is of direct and individual concern to it. And this requires proof that its market position would be significantly affected. The Court found that SARC had failed to meet this significant burden of proof in the sense that it had not provide the Court with sufficient information on the structure of the relevant market and its competitive position in that market.

X. Summary and Recommendations

This entire document and the following summary and recommendations is primarily intended to help RDO's and Member States in avoiding applying an overly restrictive interpretation of the RDI state aid rules. It may therefore increase the knowledge transfer and collaboration between RDO's and academia on the one hand and undertakings on the other hand.

1. Not everything is RDI State Aid

For example, State Aid rules only apply where the beneficiary of a measure is an 'undertaking'. Generally speaking, the GBER sets out the conditions under which certain R&D&I-aid is block-exempted from the obligation of prior notification to the European Commission (see chapter VI). Such aid needs to serve a purpose of common interest, have a clear incentive effect, be appropriate and proportionate, be granted in full transparency and subject to a control mechanism and regular evaluation, and not adversely affect trading conditions to an extent that is contrary to the common interest (GBER Art. 5).

There is less of a need for notification for research and dissemination organisations and notifications of big programs is easier, especially if their economic activities do not account for more than 20% of the annual capacity of the research and dissemination organisation.

2. RDI State Aid is a positive issue: increasing innovation, competition, economy, avoid reinforcing monopolies, encouraging effective RDI collaborations between research organizations and undertakings.

In particular, RDI State aid favors effective collaboration in differentiating this from economic activities as e.g. research on behalf of undertakings – even if they are partly or fully funded by undertakings. They are in the general public interest and not only the sole interest of a given undertaking (research on behalf of undertakings). Therefore, they are classified as non-economic activities. The criterions to differentiate these kinds of activities are to be found under chapter "indirect State Aid" VII.2 and VII.3.

3. Separate accounting: economic versus non-economic

It is mandatory for RDO's having mixed activities that there is no cross - subsidization of economic activities with public financial means intended for their non-economic activities.

4. Ancillary economic activities

If an RDO having mixed activities can demonstrate that their economic activities are ancillary (which means that they do not account for more than 20% of the annual capacity of the research and dissemination organisation and that they consume exactly the same inputs than the non-economic activities) and are clearly separated from non-economic activities, then the rules for direct state aid do not apply to the public funding of that RDO.

5. Distinguish between "effective collaboration" and "research on behalf of undertakings" in case of RDI partnerships between an RDO and an Undertaking, when funded by the undertaking

This is of the utmost importance because some of the effective collaborations could be wrongly understood as "contract research on behalf of undertakings" and then as economic activities. This is needed in order to demonstrate that their economic activities do not account for more than 20% of the annual capacity of the research and dissemination organisation.

6. Direct aid maximum intensities to undertakings are higher subject to effective collaboration between an undertaking and a research organization

Allowed direct aid intensity threshold to undertakings is higher when the RDI partnership between a research and dissemination organization and an undertaking is an effective collaboration (which is non-economic). See table in chapter VI.

7. Do not get confused between national research and innovation legal framework (for example taxation law) and EC RDI State Aids rules

This danger of confusion may be shown best using some examples of different use: In some Member States all private income of a research and dissemination organization (being it royalty earnings or earnings from RDI partnership with undertakings, for both types of partnerships, i.e. effective collaboration or research on behalf of undertakings) is taxed (Most similar e.g. in Germany)

So, they are taxed at national level even when part of the activities is non-economic in the meaning of EC RDI State Aids rules. In other Member States, it is the exact opposite: e.g. in France the majority of economic activities in the meaning of State Aids rules is not taxable.

8. Public funding to RDO's that mainly carry out non-economic activities and their economic activities are purely ancillary, does not require a state aid notification. E.g. in case of new RDI programs, additional public block funding or the funding of new infrastructures.

Annexes

- **Annex 1:** presentation for an overview of State Aid in R&D&I
- **Annex 2:** FAQ
- **Annex 3:** EC decisions after MS notifications: "TOURS 2015" and "Nano 2017"
- **Annex 4:** Analysis of a research collaboration between universities and private companies in Spain.
- **Annex 5:** Examples of RI's owned by RDO's in France
- **Annex 6:** Short CV's of the authors

Annex 1

Report on State Aid for R&D&I



Dr. Lorenz Kaiser 2021

Dr. Lorenz Kaiser

1

The duty is an explanatory report to the basics of State Aid

Some typical questions in State Aid Law for R&D&I:

- How are the various activities in a Research and Knowledge dissemination organizations (RDO) divided and what does that mean under State Aid law?
- Is any cooperation with an undertaking considered as an economic activity?
- How can the economic activities be differentiated from the non-economic, esp. in (effective) cooperation with undertakings?
- What are the peculiarities of Research Infrastructure and what is important to be aware of?
- In which cases is there an obligation to notify aid to a research activity or a funding measure to the European Commission

Dr. Lorenz Kaiser

2

What is the rationale and aim of State Aid Law ?

Basic background:

Commission Directive 80/723/EEC of 25 June 1980 on the transparency of financial relations between Member States and public undertakings

- Ongoing Check of **existing State Aid measures by the Commission** in the member states
- In case of **incompatible state aid** the member state is requested to **withdraw or change** this measure. Beneficiary has to **refund the Aid** with interests
- Obligation to notifying **any intended State Aid Measures** as far as under State Aid Rules
- **Complaints** about incompatible State Aid **mostly by competitors**, but also possible by public authorities or other member states.
- **No Cross Subsidisation** from Public to Private in R&D&I

DR. LORENZO KISSMAY 2020

3

Research & Development & Innovation (RDI) Framework for State Aid for R&D

- Art. **107 TFEU** forms the **legal basis** for the State Aid Rules, but requires explanations in a "Framework":
- **internal administrative provision** of the Commission to define the term of "State Aid" in the field of R&D based on consultations of the European Ministers of Economic Affairs
- **commitment** of the Commission to the R&D&I State Aid Framework
- only subject to **Commission** and **ECJ control**
- **no formal need** to involve **European Parliament and Council of Europe**
- actual version of 2014 in parallel to Horizon 2020

Framework for State aid for research and development and innovation - 2014/C 198/01

DR. LORENZO KISSMAY

4

Applicability of Art. 107 (1): Four Criteria

Framework for State aid for research and development and innovation
(2014/C 198/01)

1. Aid from public **funds** (granted by Member States) or through state resources to undertakings (not individual or households)
2. Aid confers **advantage** (provides favour)
3. Aid is **selective** (to certain undertakings or production of certain goods)
4. Aid **affects trade & distorts competition** between Member States (potential distortion is sufficient)

! CRITERIA ARE **CUMULATIVE** NOT ALTERNATIVE!

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5

Article 107 (1) Treaty on the Functioning of European Union (TFEU)

Structure of Art. 107 TFEU

- (1) : **definition** of "incompatible" State Aid
- (2): cases of de iure **derogations** to the incompatibility
- (3): cases of **discretionary derogation** to the incompatibility

Art. 107 (1.) reads as follows:

„Save as otherwise provided in the **Treaties**, **any aid granted by a Member State or through State resources** in any form whatsoever which **distorts or threatens to distort competition** by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be **incompatible with the internal market.**“

Dr. LORENZ KISS

6

Article 107 (1) Treaty on the Functioning of European Union (TFEU)

Structure of Art. 107 TFEU

(1) : **definition** of "incompatible" State Aid

(2): cases of de iure **derogations** to the incompatibility

(3): cases of **discretionary derogation** to the incompatibility

Art. 107 (1.) reads as follows:

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6

89 RDI Framework – State Aid Intensities

	Small enterprise	Medium-sized enterprise	Large enterprise
Aid for R&D projects			
Fundamental research	100 %	100 %	100 %
Industrial research	70%	60%	50%
Industrial research: subject to effective collaboration between undertakings (for large enterprises cross-border or with at least one SME) or between an undertaking and a research organisation, or subject of wide dissemination of results	80	75	65
Experimental development	45%	35%	25%
Experimental development subject to effective collaboration between undertakings (for large enterprises cross-border or with at least one SME) or between an undertaking and a research organisation, or subject of wide dissemination of results	60%	50%	40%

89 RDI Framework gives the possibility to use higher thresholds in certain circumstances (under conditions **87 and 89 RDI Fw**): The table in article 89 of the RDI Framework gives the higher maximum aid intensities than those laid down in Annex II that may be allowed under this article 89

	Small enterprise	Medium-sized enterprise	Large enterprise
Aid for R&D projects			
Fundamental research	100 %	100 %	100 %
Applied research	80 %	70 %	60 %
— subject to effective collaboration between undertakings (for large enterprises cross-border or with at least one SME) or between an undertaking and a research organisation, or	90 %	80 %	70 %
— subject to wide dissemination of results			
Aid for the construction and upgrade of research infrastructures	60 %	60 %	60 %

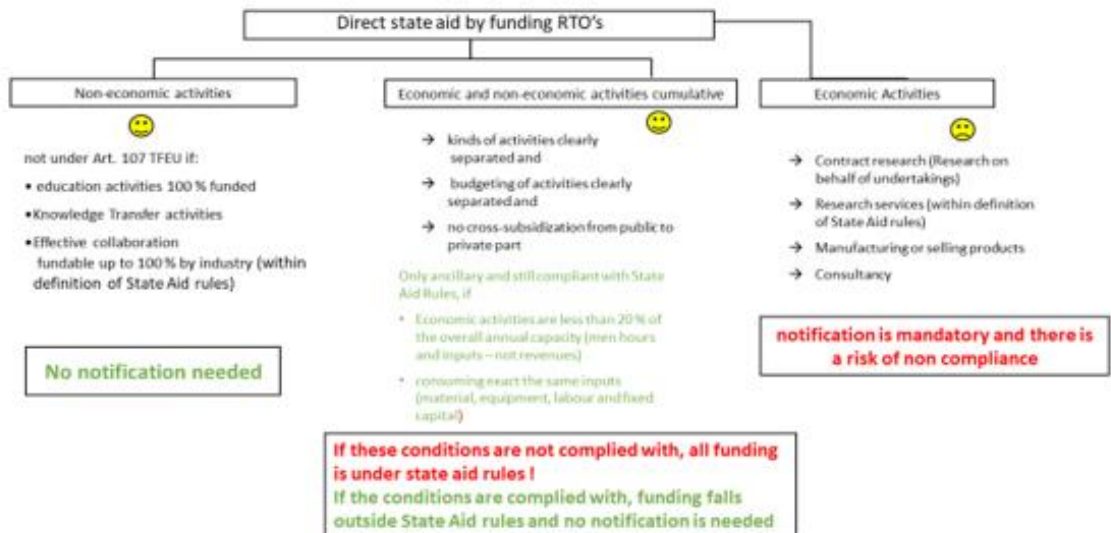
87: EC is testing whether the aid is **limited to the necessary minimum.**

88: for assessing what the necessary minimum is, the EC **compares the aided project with a comparable project carried out without any aid**

9

Direct State Aid

State Aid Rules – Direct State Aid



Dr. LOUIS KESBY

10

What means „ancillary“?

In case economic activities take place in a RDO which would mean incompatible state aid, and they are

- ❖ Under a threshold of 20 % of the overall annual capacity of the RDO (men hours and inputs, no revenues)
- ❖ Consuming the same inputs (material, equipment, labour and fixed capital)

Then they are ancillary (State Aid RDI Framework 2.1.1 Nr. 20).

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11

Not finally answered Questions:

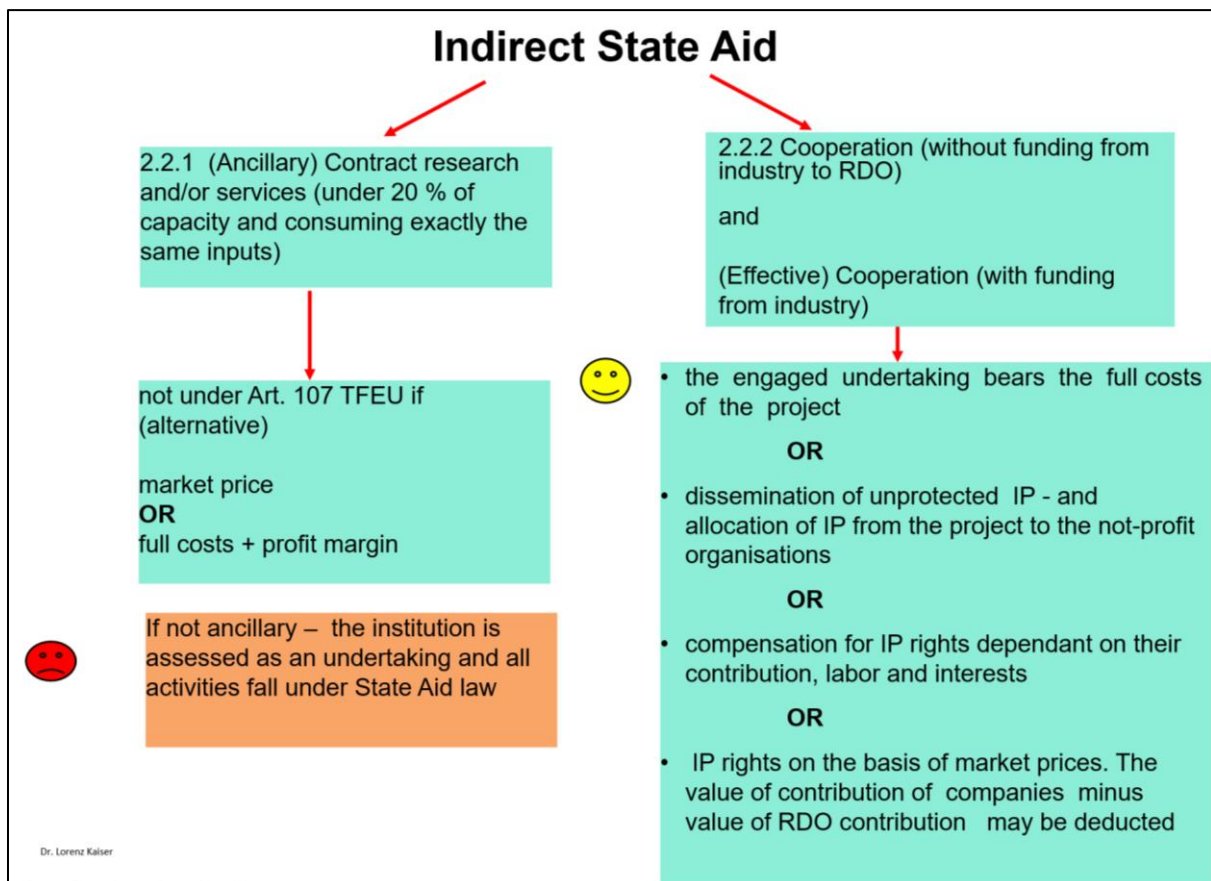
What, if the share of economic activities is higher than 20 %? What if 25, 30 or 40 ? Then it is **not allowed to be predominant** (GBER). When is this the case?

How to assess the percentage of economic activities in an RDO with more than one institute? For example one institute with 15 % (under threshold) the other 70 % (over threshold). Each separate unit or the whole organization?

When a **RDO** is an „**undertaking**“

Dr. Lorenz Kaiser

12



Forms of Cooperation related to non-economic / economic activities

Form of of RDI activity	Institutional (basic) funding	Cooperation in RDI	Independent <u>Effective</u> collaborative RDI (definition of EC RDI state aid rules; clause 27)	Research on behalf of undertakings (definition of EC RDI state aid rules; clause 25)
	(direct annual public subsidy to the research organization) No collaboration with industry	Only own financing without funding cooperative projects in consortia funded by public agencies (H 2020, Research Ministries, public authorities). No financial flow from Company to RDO	project funded by industry (for example 50% or full cost or 100% full cost). Financial flow from Company to RDO	Payment from Company to RDO as market price Or (in absence of m.p.) 100% full costs plus Margin i.e. Research services Production Consultancy
Economic or non economic	Non economic	Non economic	Non economic	Economic

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14

Questions for differentiation of **effective collaboration** and **contract research on behalf of undertakings**

Majority of questions is answered

YES, probability for effective collaboration

- Is the technical specification defined jointly between the Research Organisation and the contract partner, taking into account the common interest?
- Are the non IPR results widely disseminated (scientific publications or other disseminating activities or trainings)?
- Does the RDO keep ownership (or joint ownership) of its IP creates itself in the common project or are the IPR completely transferred?
- Do both partners have their own advantage on the of common interest goals of the project or is it a "one way street"?
- Is there a win-win situation visible
- Is the RDI agreement about obligation of means?

Majority of questions is answered **NO, probability for Contract Research on behalf of undertaking**

DR. LORENZO KILIAN

15

Research Infrastructure

research infrastructure means facilities, resources and related services that are used by the scientific community to conduct research in their respective fields and covers scientific equipment or set of instruments, knowledge-based resources such as collections, archives or structured scientific information, enabling information and communication technology-based infrastructures such as grid, computing, software and communication, or any other entity of a unique nature essential to conduct research. Such infrastructures may be 'single-sited' or 'distributed' (an organised network of resources)

When the use for economic activities is **purely ancillary** (meaning **20% of the annual capacity**)

.....**consume exactly the same inputs**

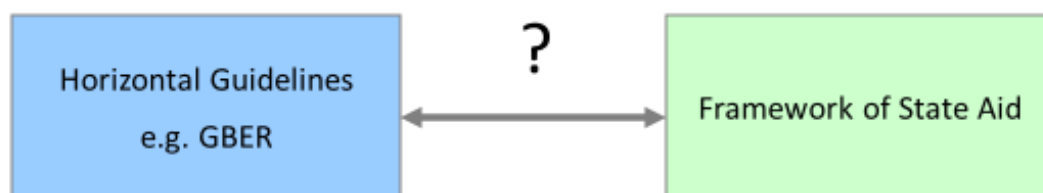
then the entire use is non-economic and **falls outside of state aid rules entirely.**

- The aid is limited to aid for the construction or upgrade of research infrastructures, up to (typically) **50% of the eligible costs**. Eligible costs are limited to investment costs for both tangibles and intangibles such as required patent licences. **Please note that operation or exploitation costs are not considered to be eligible** under the exemption for investment aid to RI's. The aid may be granted up to an overall ceiling of 20 Million Euro's per RI.
- Other requirement, but very similar to general rules of RDI Framework

DR. LORENZO KESSEY

16

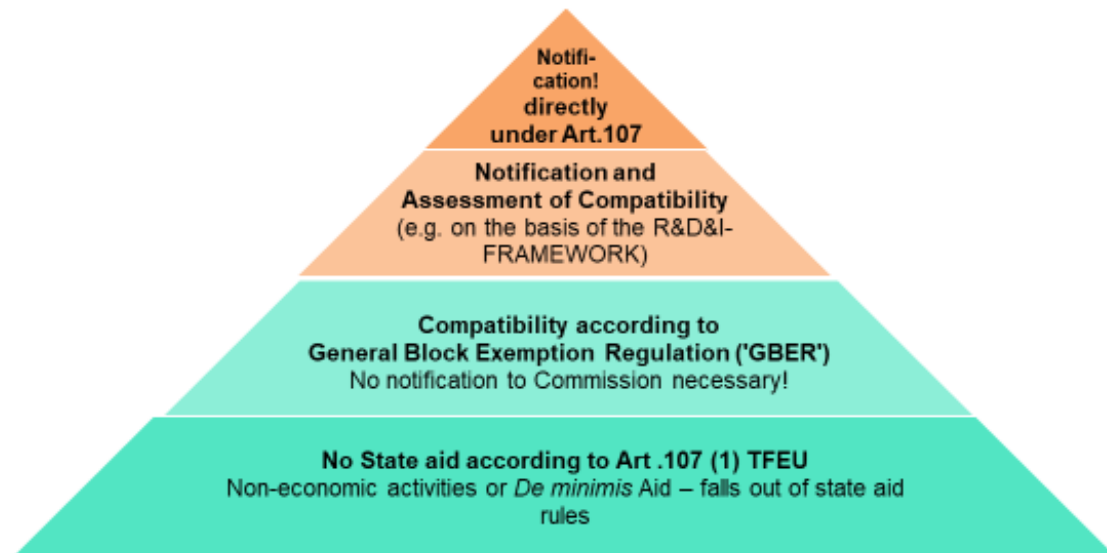
Relationship between GBER and Framework for State Aid what is applicable?



DR. LORENZO KESSEY

17

Notification or not? Applicability of GBER

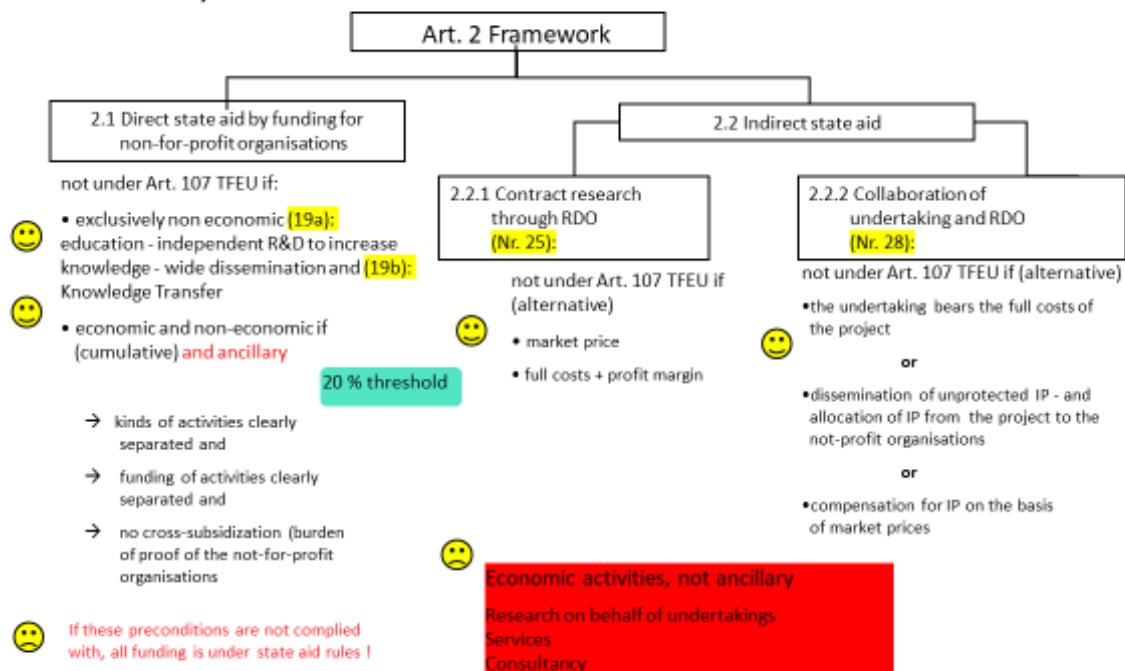


Dr. LORENZ KIEBER

18

State Aid Rules according to Art. 107 (1) TFEU

Community Framework for State Aid for R.&D.&I.



Dr. LORENZ KIEBER

19

Report on State Aid for R&D&I



Dr. Lorenz Kaiser 2021

Dr. Lorenz Kaiser

1

Annex 2

FREQUENT ASKED QUESTIONS

1. When does the University, as a recipient of aid, have the status of an undertaking for the purpose of State Aid?

When the university carries out economic activities AND cumulatively when these activities are not ancillary

2. When is the University in the position of aid provider in carrying out R&D&I projects together with third parties?

When the university carries out economic activities AND (cumulatively) when these activities are not ancillary. Economic activities are by their nature projects assigned by third parties such as research on behalf of undertakings (contract research, research services and consultancy).

3. What are the University's responsibilities and duties in the field of State Aid, when it is only one of the project's co-investigators and the project's principal investigator is another University?

It depends on the type of project, the funding and the type of other investigators (see report chapter VII indirect state aid and the definitions in the graph on the following columns).

- Column II: in case of non-economic activities, in any case there is no responsibility and therefore no duty. This is guaranteed by the general conditions of the national program agencies that distribute competitive public funding. In general, these agencies have previously made a global and general notification to EC for all of their activities of program funding over a long time. As long as the University complies with the grant conditions, there are no special duties or obligations under state aid control. Please note that the nature of the work *may* have an effect on the amount or the percentage eligible

36

under *national* rules. E.g. if the research work was described in the grant request as fundamental in nature, but the actually performed work was more market-oriented, this may lead to a recovery of funding by the national funding agency.

- Column III and IV: see decision tree page 12

4. How to ensure a market mechanism when the project's commercial partners have already been selectively chosen and are project's participants?

It depends on the type of project, the funding and the type of other investigators (see report chapter VII indirect state aid and the definitions in the graph on the following columns):

- Column II (non-economic activities):
eventual market mechanisms are described in the general conditions of the national program agencies that distribute competitive public funding. As many of them follow the rules of the FP (H2020), most of them have even royalty free options for accessing the FG and the BG necessary to exploit the FG created in the project by the university. There is absolutely no responsibility and duty for the university (comply with the general conditions of these agencies);
- Column III (non-economic activities) and IV (economic activities): either the activity is per sé non-economic or its economic activities are ancillary and independent from the market mechanisms.

5. A commercial partner entered and participated (e.g. materially, financially) in the project. If he had known of the "State Aid problem", he would not have entered in the project. The RDO is interested in cooperation with a commercial partner on mutually beneficial terms and conditions.

The industrial partner should be aware of the form of cooperation and thresholds that make it no state aid relevant activities. The cooperation partners then should avoid activities falling under not compliant economic state aid activities (see decision tree on direct State Aid).

There is no "State Aid problem". It is not reasonable for an undertaking to expect that they will have free access to publicly funded research facilities or the results thereof. An industrial partner should be aware of the legal implications of a RDI agreement that it enters into. However, RDO's are well advised to clearly and in an early stage clarify the conditions on which a commercial partner may enter and participate in a project. In executing the project, all partners should avoid conducting activities that are not compliant with the state aid rules (see the decision tree on direct State Aid). Furthermore, the RDO is well advised to avoid any situation where their opinions could be construed by an undertaking as legal advice.

6. Is the University obliged to notify State Aid to the national aid coordinator if conditions for granting the block exemption are fulfilled?

Clearly No

7. In case the conditions for granting the block exemption are not fulfilled and *de minimis* aid is not involved, is it necessary to notify the aid to commercial partners of the University to the European Commission?

This is not necessary, if the university performs only non-economic activities (effective independent collaboration: column III) or if the economic activities are ancillary. Please see the follow up, when a notification is necessary under graph at the end of chapter IV

8. How time compatible is it to receive the opinion of the European Commission (18 months) – if needed, with duration of a project? (For example - It may be necessary to conclude a contract with a commercial partner for the duration of the project and it is not possible to wait for the opinion of the European Commission).

Time can be long, but, in case of using soundly framework conditions for compliant non-economic R&D&I activities as explained in the report document, notifications are very rarely necessary!

9. What are the criteria of a market price and how to calculate it?

- Market price (or equivalent) for licensing (price of the license): Market price conditions for licensing after effective independent collaborations are defined in point 29 R&D&I Framework: one of the four conditions has to be fulfilled
- Market price for RDI co-operative projects costs in case of research on behalf of undertakings: comply with point 25 R&D&I Framework (a: "market price", which often does not exist) OR b)) (second bullet the most common case). Market price for R&D&I "research on behalf of undertakings" is often not available, because there is no market for the respective activity. Then all the relevant costs must be calculated and as well as a margin (for profit or typical for the activity concerned) has to be calculated.

10. What is a claw-back mechanism and how does it work? Can you explain happens in this case?

The "claw back mechanism" is not a typical measure of State Aid Rules in R&D&I. It says that a state aid that was granted and which is exceeding the compliant support according to State Aid Law must be ordered back by the member state, that has granted such exceeding support.

An example: The European Commission has ordered a member state to claw back several million of EURO of public funds given to a start-up company after an investigation showed that the funding was spent wrongly or in a too high range. The EC then decided that the money was granted in error and had to be partly paid back.

Claw back refers to the repayment of any unlawfully granted subsidies or other selective advantages that may have been granted to beneficiaries of State aid. Please note that this is largely a matter of national law. The European Commission (subject to the supervision of the CJEU) decides on the compatibility of State Aid with the Internal Market and may order a member state to reclaim the excess amount, including the interest from the date of grant. This is usually implemented by means of a contractual or grant condition enabling the funding agency the possibility to claw back. This *might* also involve an obligation imposed on the grantee to reinvest the excess amount in a way that is compatible with the Internal Market. Additionally, the national courts have the power to order repayment of the unlawful state aid. Subject to national law, this may take the form of an interim order.

11. Please explain what is pari passu and how it works and when is it relevant? Are there any timing-related limitations for the application of the pari passu principle?

The "pari passu" is not a typical case of State Aid Rules in R&D&I and it does not play a role in the scope of the report. It roughly says: A contribution from public funds does not involve state aid if it takes place at the same time as a significant capital contribution by a private investor made in comparable circumstances and on comparable terms (*pari passu*).

The term "pari passu" refers to transaction where public financial means are used for an economic activity AND the same terms and conditions apply to the public and the private operators AND the intervention of the private operators has a genuine economic significance. It represents a Market Economic Operator test. According to point 86 of the Notion on State Aid, in such cases the Commission assumes the transaction to be in conformity with the Internal Market. This is particularly relevant for public private partnerships like science parks (insofar as they indulge in economic activities), where a public entity invests *on an equal footing* with an undertaking, e.g. by selling land plots. *Pari passu* is time sensitive to the effect that if the situation and interests of public partners in relation to the private transaction partners changes over time, it may cease to be *pari passu*.

12. Shall the pari passu arrangement be set by the university or by the agency/funding authority which is providing the EU/national public funds? Should the university have its own rules?

This question is far from practice in R&D&I and is going too far beyond the aims and out of the remit of the report.

Whereas it is always advisable for a university to have an internal policy on state aid and to have a compliance officer monitoring this, there is no general guidance on whether the university or the funding authority should be setting up the *pari passu* arrangement. In any case, the public entity entering into the transaction or making the investment should ascertain that it is acting on equal footing with the private operator, in this way in fact acting as if it were a private entity itself. In case of ad hoc funding, the funding agency has the

option to pose additional conditions and therefore *could* involve itself in the *pari passu* arrangement itself. Whether it *should* be involved is up to the parties concerned.

13. Please explain and give an example of a case of state aid accumulation.

Cases of “state aid accumulation” are not a typical question of State Aid Rules in R&D&I and therefore do not play a role in the scope of the report. It means roughly the accumulation of different funding measures which may lead to not compliant State Aid.

State Aid cumulation is dealt with in the GBER Article 8. The GBER specifies maximum aid intensities for certain sectors, including RDI. As a general rule, the cumulation of aid for the same eligible costs is allowed as long as the sum total remains below the maximum aid intensity specified. Of course, if the Commission approved higher aid intensities in a specific Commission decision, such aid would be allowed up to the ceiling specified for that particular purpose. Any aid already granted under the GBER for the same eligible cost will have to be taken into account by the funding agency when giving the additional aid under the decision. However, the cumulative value may reach the aid intensity as specified in the Commission decision.

On another level, it is the responsibility of the RO/RI to comply with the relevant grant conditions. In cases where mixed funding is used, care should be taken that the conditions governing the various grants are compatible with each other.

How could a university come into contract with private sector as the report describes in page 20 to 22 the relevant factors for this situation?

Universities all over Europe have different approaches for cooperation with industrial companies. These may be dependent on matter of national law, internal policies and other factors. From the State Aid Law perspective there are two ways:

- Effective collaboration RDI project funded by the private sector (non-economic): column III
- Research on behalf of undertaking (economic): column IV

As described in the document (chapter indirect State Aid VII4), column II projects (no financial flow from the undertaking to the university), a competitive publicly funded project is often a first step to other projects (column III and IV).

14. The government/EU has provided funding. How long should the Research and Knowledge Dissemination Organization (RDO) be bound by the rules?

See general conditions of the funding agencies. This is heavily dependent on national law. Such rules may be contained in subsidy legislation and/or in the specific grant conditions as posed by the funding agency. Usually specific grant decisions explicitly refer to the underlying law and conditions.

15. How to calculate the use of the operational capacity?

- a) Identifying in detail both:
 - o Men-hours
 - o Inputs-volumes
- b) Calculating the ratio (men-hours + inputs-volume for economic activities) / men-hours + inputs-volume for all activities).

16. At what level of granularity should the use of capacity be calculated? What if having a large number of employees exclusively working on economic activities as part of s smaller or larger teams?

In sorting carefully between column III non-economic RDI cooperation and IV economic RDI cooperation), the RDO will perhaps find that economic activities are lower (ancillary) than feared.

Granularity: see paragraph III-3 of the report.

17. What if the relevant research center (entity) within a larger research organization does not have legal personality neither independent accounting?

see paragraph III-3 of the report.

Having an independent accounting system using generally accepted accounting principles, even in case of not having legal personality, is always a good practice. It not only simplifies the State Aid analysis, but also it helps the university Directing staff to manage more efficiently its RDI programs, its human resources, it globally facilitates the internal budget reallocations in order to manage better. For example, all UK and Dutch universities have analytical accounting allowing such level of granularity. More and more universities in other Member States do the same (in Sweden, in Belgium, in Norway, also in some German Länder like Bavaria).

See for example: https://cuni.cz/UK-3215-version1-EUni_Estermann.pdf
"Towards Full Costing in European Universities"
Association of European Universities.

18. Is depreciation cost included in the calculation? Are other indirect or overhead costs included?

YES

19. Can the university support startups by giving for free (vs. renting out) its equipment /labs or its premises?

No, if the aid is above the *de minimis* threshold. But, if support is totally free, depending on national laws for universities, this could be considered as an irregular management action.

20. What is the state-aid implication in case one of the professors sets up at the premises of an RDO his own company, thus using the RDO's research labs? Can there be indirect state aid in this case?

Yes, if the RDO aid with public funding to this company is above the *de minimis* threshold and this selective advantage is not paid for by the company. Unless this is a local issue that has no effect whatsoever on the Internal Market.

21. In case of financed joint project between an RDO and -industry, where each partner carries out its own work packages, would it be a problem to have mixed research teams working at the premises of the RDO and using its laboratories or is there an indirect state aid concerns in this case?

No, if the financed joint project is an effective collaboration project and points 28 and 29 are fulfilled.

No, if the financed joint project is research on behalf of an undertaking and if point 25 is fulfilled.

Independently of State Aid, collaborations of this type are always more efficient if the R&D&I tasks of the RDO and the undertaking are well defined and separated (men-hours and inputs-volumes), as well as lab bookkeeping and budgets. In case where column III and column IV activities are mixed, they must be carefully distinguished, both in budget (men-hours and inputs-volumes) and in the lab bookkeeping.

22. The RDO has filed a patent application and a patent was granted. The patent is an outcome of publicly funded project. Then the RDO/research center has licensed the patent in exchange for a very good compensation. Are there any concerns from a state aid perspective?

No, such licensing *activity* is non-economic (point 19b). The licensing itself is a non-economic *activity* according to point 19b of the R&D&I Framework. This means that the licensing activity and the people involved in licensing or other forms of technology transfer may be paid for by public means. However, there may be indirect state aid if the patent is licensed-out or sold in such a way that a selective advantage is granted to an undertaking. If it has an impact on the internal market, in situations where this could amount to unlawful state aid, to prevent this, a fee in conformity with market prices and market conditions must be charged.

Annex 3

EC decisions after Member State notifications

Single Member State notification cases

- i. Aide d'État SA.36392 (2014/N) – France: Aide accordée par la Caisse des Dépôts et Consignations au projet de R&D « TOURS 2015 » de STMicroelectronics dans le cadre du programme d'investissements d'avenir
(http://ec.europa.eu/competition/state_aid/cases/251501/251501_1567269_117_2.pdf)

The project "TOURS 2015" aims to develop:

- a. Objective 1: next generations of energy efficiency enhancing components;
- b. Objective 2: new generation integrated passive components for [...];
- c. Objectives 3: solid micro-batteries in thin film [...].

To carry out a major part of the works, a pilot installation will be put in place as part of the TOURS 2015 project.

This pilot installation which will be acquired by the CEA thanks to a full funding from the National Fund for the Digital Society ("DSF"), will be made available to partners in exchange for the payment of access fees "reflecting the full cost of ownership and use [...] in proportion to its utilization rate, in order to avoid any indirect aid " for the benefit of the user partner. The possible purchase of the pilot plant by an industrial company "will be at a market value".

More specifically, the pilot installation:

- (a) will be owned by CEA, who will second a "dedicated team" to work on collaborative R & D project TOURS 2015;
- (b) will be installed on the site of ST in Tours, the choice of the site of a third for the implantation of the CEA pilot plant being justified by the "anhydrous environment" specific and adapted to the implementation of R & D work";
- (c) will first be used for three years for collaborative R & D activities by the CEA and ST in the framework of TOURS 2015;
- (d) will then be sold by the CEA to ST (which has an option to purchase) at the end of three years of use in collaborative R&D.

Uses: the pilot installation will be acquired by CEA to carry out several types of RDI activities:

- a. Mainly, the pilot facility will be used to carry out the work of the collaborative research conducted by ST and CEA on Objective "Micro-sources "energy" project TOURS 2015;
- b. On an ancillary basis, it will also be used to conduct collaborative R & D projects with academic partners outside of TOURS 2015;
- c. On a very minor basis, it will be used to produce samples to feed the RDI collaboration and test the "recipes" proposed by the academic partner laboratories.

Consequently, the pilot plant is intended to be used for the most part for CEA collaborative R & D activities (in and outside the TOURS 2015 project), and in an extremely minor way, at the end of the R & D phase, and if the latter allowed to remove technical and economic locks, for a limited production of components (it will be a question of "starting the production quickly, without it being necessary to readjust the RDI results to an industrial manufacturing line "). On the other hand, the French authorities state that this production tool will be unsuitable for the "Full industrial and commercial exploitation" which requires investment in very important complementary elements to set up "a real manufacturing line" able to supply the volumes demanded by the market.

Main partners:

- One undertaking: ST
- Several research organisations : CEA, INSA, CNRS, UNIVERSITIES
-

IP Ownership:

- a. Background knowledge: each partner remains the owner of the information, patented or unpatented inventions, including know-how, trade secrets or any other type of information in whatever form, they own prior to the entry into force of the collaboration agreement or would be developed or acquired by it in parallel with the implementation of the collaboration and independently of it;
- b. Foreground knowledge: each party will own the intellectual property obtained by its employees ("own foreground knowledge") and in case of co-invention by employees belonging to two parties ("joint foreground knowledge"), the new patents arising therefrom

will be held in co-ownership with the prorata of the contributions of each partner to the project.

IP Exploitation: results of research organizations that do not give rise to Intellectual Property Rights (hereinafter "IPR") will be widely disseminated by scientific communication (conferences and publications in scientific journals). Each party will be free to exploit as it wishes its results subject to IPR. The results of research organizations that will give rise to intellectual property rights could be the subject of a license. ST will have the opportunity to negotiate with the organizations seeking exclusive licenses and in this case, exclusivity, limited to ST's field of exploitation, will be subject to additional remuneration from the company to research organizations. The French authorities indicated that the licenses will be paid for at the market price,

Valorisation and dissemination:

The TOURS 2015 project will generate results protected by intellectual property rights but also free access knowledge, estimated for each objective of the project to:

- a. Objective 1 - energy efficiency: 10 patents (publication of the patent document), 6 publications and 6 externalities related to dissemination of knowledge;
- b. Objective 2 - nomadic integration: 12 patents (publication of the patent document), 5 publications and 5 externalities;
- c. Component 3 - micro-sources of energy: 18 patents (publication of the patent document), 9 publications and 9 externalities.

Externalities = PhD thesis (about 30, creation of a cluster, participation in FP projects, ...)

Direct RDI state aid to ST:

This aid meets the criteria of the R&D&I Framework. In particular, following its in-depth examination, the Commission considers that:

- a. The aid is intended to remedy a market failure;
- b. Aid is a suitable means of action;
- c. the aid has an incentive effect;
- d. the aid is proportionate;
- e. The aid is not likely to disrupt the competitive operation of the target markets to an extent contrary to the common interest.

Indirect RDI State aid to ST through collaborations with CEA and other research organisations: none

- *Absence of indirect RDI state aid related to the financing of the pilot facility*

The Commission is therefore able to conclude that STMicroelectronics does not benefit of any indirect state aid related to the pilot facility, whether due to the use of the equipment, their installation on the site of Tours, the existence of a priority option for purchasing it or the purchase price of such equipment.

- *Absence of indirect state aid related to R & D activities in collaboration with research organizations*

The Commission notes that CEA is a public research and technology organisation whose main mission, defined in its statutes, consists in pursuing independent R & D activities in the fields of defense and security, technologies for information and health, and energy. CEA diffuses the results of its research through teaching, publications and technology transfers. It fully reinvests revenues from technology transfers in its main activities.

In TOURS 2015, CEA-LETI and CEA-LITEN will intervene in several lots of works for the development of technology bricks. CEA-LITEN will also have a coordinating and integrating role work in the field of micro-sources of energy.

CEA meets the definition of research organization within the meaning of section 2.2 (d) of the R&D&I Framework.

Thirteen other laboratories are RDI collaborative partners in the TOURS 2015 project, each working to develop scientific models and specific technological bricks. French authorities indicate that their main missions are higher education, independent research and technology transfer of the results of this research. These laboratories reinvest total revenues from technology transfers in their core activities.

No company is a shareholder or member of their board.

The French authorities have indicated that the work carried out under the project TOURS 2015 by the teams from the 15 laboratories of public research organizations are independent R & D activities which fall within the public service remit of these laboratories (non-economic activities). It is further

specified that these laboratories have management and accounting systems that allow them to distinguish their economic and non-economic activities, as well as their costs and financing. The Commission is therefore able to conclude that these bodies meet the definition of research organization within the meaning of point 2.2 (d) of the R&D&I Framework.

The French authorities have clearly indicated that all the results from the TOURS project 2015, not giving rise to IPRs, could be widely disseminated.

For the rest (i.e. the IPRs resulting from the R & D activity of research):

- a. Regarding IPR not transferred to ST, research organizations will be well "full allocation owner" within the meaning of the second condition in point 3.2.2 (as highlighted by footnote 28) of the R & D & I Framework: the organization will enjoy the economic benefits associated with those rights, including the right of ownership and the right to license.
- b. With regard to IPRs for which the research organization has decided to conclude with ST a license agreement:
 - With exclusivities: it is specified that exclusivity, which will be limited to ST's field of exploitation and in duration, will be subject to additional remuneration to the research organizations so as to ensure effective exploitation in reasonable delays of the granted IPRs;
 - Apart from exclusivities, the research organizations will be free to exploit directly or indirectly the knowledge and the patents they hold in co-ownership with one or several partners, on a non-exclusive basis.

In view of the above, the Commission is of the opinion that the conditions of section 3.2.2 of the R & D & I Framework will be respected, so that it can conclude that the collaboration between companies and research organizations conducted within the framework of TOURS 2015 does not grant any indirect state aid to STMicroelectronics.

- ii. Aide d'État SA.37743 (2013/N) – France; Aide au programme «Nano2017»;
(http://ec.europa.eu/competition/state_aid/cases/250715/250715_1578988_198-2.pdf)

This decision refers to an older version of the R&D&I Framework, (2006/C 323/01). However, the global principles are very similar to the current 2014 framework document.

Some key characteristics of this program:

- The strategic goal of the Nano2017 program, which started on 1 December 2012 and is expected to be completed by the end of 2017, is to reposition the FDSOI technology as an alternative to FinFET technology in the global market, as well as to support the structuring of the European industrial sector in micro-nanoelectronics, at the heart of which the Crolles - Grenoble cluster plays a central role in the field of advanced digital CMOS.
- Two main partners in France: ST as an undertaking and CEA as a research organisation
- In addition, the Nano2017 program will involve 174 partners in 19 countries: 17 European countries (France, Germany, the Netherlands, Italy, Belgium, Great Britain, Austria, Ireland, Finland, Sweden, Czech Republic, Romania, Poland, Hungary, Spain, Greece and Portugal) as well as Turkey and Israel.
- The scale and broad technical coverage of the Nano2017 program led ST to design it as a major European research project. The program consists of a "national" component around which six complementary components will be developed, which will receive support under the ENIAC Joint Undertaking. The ENIAC components, lasting 3 or 4 years, are co-financed by the European Commission and partner Member States and monitored by JU ENIAC.

French national component

- Direct RDI state aid to ST: 400 MEuros

This aid meets the criteria of the R&D&I Framework. In particular, following its in-depth examination, the Commission considers that:

- a. The aid is intended to remedy a market failure;
- b. Aid is a suitable means of action;
- c. the aid has an incentive effect;
- d. the aid is proportionate;
- e. The aid is not likely to disrupt the competitive operation of the target markets to an extent contrary to the common interest.

- Indirect RDI State aid to ST through collaborations with CEA and other research organisations: none, because the Commission notes that the CEA is a public research and

technology organisation whose main mission, defined in its statutes, is to pursue independent R & D activities in the fields of defense and security, information, health and energy technologies,. The CEA meets the definition of research organization in the sense of point 15 (ee)) of the R&D&I Framework and disseminates the results of its research through teaching, publications and technology transfer. It fully reinvests revenues from technology transfers in its core business. In Nano2017, CEA-LETI and CEA-LIST will be involved in several work packages for the development of technological bricks. The Nano2017 program is expected to generate IPR-protected but also free-of-charge knowledge that have been estimated over the life of the project at about 5,000 scientific publications, 200 patents and 500 PhD thesis. The Commission therefore concludes that no additional indirect State aid is granted to ST through the public partners, provided that conditions 2 and 3 of section 3.2.2 of the R&D&I Framework are met.

Annex 4

"Analysis of research collaboration between universities and private companies in Spain based on joint scientific publications" <https://files.eric.ed.gov/fulltext/EJ1087382.pdf>:

Extracts:

"Similarly, researchers in private companies also publish the results of their (essentially applied) research. The possible motivations for so doing have been described, in theory at least. Publication has been viewed as an avenue for a company to improve its research results; for private researchers to switch jobs more easily, having gained recognition in other spheres where research is also conducted; and for companies to recruit high level researchers and garner interest for their products, improve their corporate image and favour interconnection and collaboration".

"Calvert and Patel (2003) published a paper on co-authorship between private enterprise and the top 20 British universities between 1981 and 2000. Their results showed that the research majors, along with technical and newly created universities, engaged most actively in joint publications with companies, particularly in the pharmaceuticals, electric power and electronic industries".

"Archambault and Larivière (2011) analysed Canadian companies' scientific output and patents from 1980 to 2005. Their analysis inferred that companies awarded patents published scientific papers more geared to basic research than companies that published papers but did not patent their results. Moreover, the papers published by the former received more citations and appeared in journals with a higher citation rate, while their patents were also cited more intensely".

"In bibliometric studies (Jeong, Choi and Kim, 2011), it is regarded as the standardised approach to analysing collaboration (Lundberg et al., 2006) because constitutes a reliable, verifiable and invariable way to observe joint research activities and obtain reasonable and comparable information on a significant scale".

Annex 5

Two examples of a RI owned by research and knowledge dissemination organisations.

Source: "Seminar on state aid for infrastructure; The regulation of state aid; January 25, 2017".

The French ministry of industry and economy and French ministry of higher education and research made a presentation during this seminar describing two examples of Research Infrastructures (RI) owned by RDOs.

Globally, State Aid analysis for RI is easier if the supplier of access to the use of the RI is the owner of the RI. French State did not notify the two cases to EC because the economic activities carried out on the RIs were in both cases ancillary.

We extract here some of the main points of the presentation.

Generic reasoning for the two examples:

- "The instruction is made at the level of autonomy of the entity of the legal entity that will be **OWNER** of the infrastructure".
- "Framework for the instruction is determined by the following issues:
 - Does the beneficiary own the infrastructure? Is it autonomous?
 - What are its activities?
 - What is the nature of its activities?
 - Test of the accessory (are they of the same inputs);
 - Test of the ancillary criterion (determined by the threshold of 20% of the annual capacity)".

- **First practical example: CEA INBs (installation nucléaire de base) dossier**

- "Which level is relevant for the compatibility analysis (legal entity, scientific direction or infrastructure)?
 - the Nuclear Infrastructures are research infrastructures managed and serving almost exclusively the research activities of CEA's Directorate of Nuclear Energy for its own or in collaboration (own research, collaborative research and research services)
 - The Verification of the research organization qualification within the meaning of point 15 (definition) of the R&D&I Framework and compliance with the 80/20 ratio, at the level of the given Directorate and at the legal entity level"

- **Second practical example: a FEDER project with 3 undertakings and one public university laboratory**

The 3 relevant steps for the verification process are:

- **Qualify the structure:**
 - Research organisation
 - Research infrastructure
- **Qualify its activities:**
 - Level of analysis
 - Autonomy of the entity
 - Inputs
- **Check the share (%) of economic activities**
 - List and quantify the economic and non-economic activities
 - Assess the ancillary nature of the economic activities

Finally the State Aid analysis in the case of the FEDER Project comes to a non-economic activity of the RI by the following terms:

1. *Qualification of the structure*
2. *Identity its activities*
3. *Check the % of economic activities: here 17% (rentals research services) In application of the rule it was found that no State Aid is granted because the economic activities are ancillary*
4. *Follow up:*
 - *Annual verification*
 - *Recovery mechanisms*

Annex 6

Short CV of the Authors

Curriculum Short



Dr. Lorenz Kaiser is lawyer specializing in Research and Development Contracts and Intellectual Property Rights. Since August 2019 he is Senior Legal Counsel of GE Aviation in Garching, Germany. From 1983 up to February 2018 he has been Division Director for R&D Contracts and IPR at Fraunhofer-Gesellschaft heading the departments "R&D Contracts", "Patents and Licenses", "Public Sponsoring" and "Corporate Legal Governance" rendering centralized services for all Fraunhofer Institutes, where he retired starting 2018. During all his professional activities he engaged in the development of models for research cooperation and contractual solutions, which includes also the transfer of knowledge through Spin offs from Research facilities and universities. Dr. Kaiser is performing advanced training courses and engages in German and International expert groups for R&D Cooperation and IP Management. He is Director General of QIMIP (Quality Initiative for the Management of IP – www.qimip.de), organized by the German Institute of Inventorship

Special fields:

- contracting in R&D
- funding regulations
- EU-law
- Seminars, lectures
- publications in IP law



In 2002, Michel Neu joined CEA's central Technology Transfer (TT) Office as Head of Intellectual Property Rights (IPR) and Research and Development Agreements Department. From 2010 to 2014, he was head of the IP Committee of the KIC (Knowledge and Innovation Community) INNOENERGY of the EIT (European Institute of Innovation and Technology). Since 2014, he is International Expert in IPR (Intellectual Property Rights) and Technology Transfer at CEA. Since October 2015, he is also Chairman of EARTO's Legal Working Group.



Folkert Teernstra joined TNO, legal and IPR services in 2003 and has been working there in several capacities up till now. He is acting as Sr IP legal counsel with the Intellectual Property and Contracting department of TNO. His present tasks involve both operational licensing of IP as well as IP and tech transfer related policy issues. In this capacity he has been involved in the EARTO Legal Working Group since its onset. Before joining TNO, Folkert has been working for private enterprises for about 10 years, where he was also involved policy issues, e.g. the negotiations and drafting of standardized model consortium agreements. Apart from his work for TNO, Folkert is engaged in speaking at training courses on the topics of IP and technology transfer.

RTOs - Research and Technology Organisations: From the lab to your everyday life. RTOs innovate to improve your health and well-being, your safety and security, your mobility and connectivity. RTOs' technologies cover all scientific fields. Their work ranges from basic research to new products and services development. RTOs are non-profit organisations with public missions to support society. To do so, they closely cooperate with industries, large and small, as well as a wide array of public actors.

EARTO- European Association of Research and Technology Organisations: Founded in 1999, EARTO promotes RTOs and represents their interest in Europe. EARTO network counts over 350 RTOs in more than 20 countries. EARTO members represent 150.000 highly-skilled researchers and engineers managing a wide range of innovation infrastructures.