C O N V E N T I O N

FNR/CP3-14-17

Between the State of the Grand Duchy of Luxembourg, hereinafter referred to as "the State", represented by the Ministre de l'Enseignement supérieur et de la Recherche (Minister for Higher Education and Research), hereinafter referred to the Minister, and the Minister of Finance,

of the first part,

and the public body "Fonds National de la Recherche" hereinafter referred to as the "FNR", represented by Mr Yves Elsen, President of the Board of Directors, and Mr Marc Schiltz, General Secretary,

of the second part,

whereas the State wishes to support high-level research and development activities and technology transfer with the aim of promoting scientific progress and technological innovation on a national level,

and in view of Articles 2 and 3 of the amended law of 31 May 1999, which created a national research fund in the public sector, tasking the FNR with the general mission to receive, manage and employ allocations and donations from public or private sources with a view to promoting technological research and development at national level in the public sector,

the parties have agreed as follows:

Art. 1 Purpose

This agreement sets forth the general conditions for the allocation of the State's financial contributions in order to finance the FNR's activities as stipulated in the amended law of 31 May 1999 creating a national research fund in the public sector.

The reference number allocated to this agreement is FNR/CP3-14-17.

Art. 2 Term

This agreement is entered into with effect from 1 January 2014 for a term of 48 months. It shall automatically cease on 31 December 2017. Negotiations regarding the next multiannual agreement shall commence no later than 30 June 2017.

The contracting parties agree to the principle of a mid-term revision of this agreement, namely on 31 December 2015 at the latest. Discussions on this revision shall commence no later than 30 June 2015. The revision shall be expressed in a rider as stated in Article 8.
Art. 3 Undertakings of the parties

The strategic objectives covered by the FNR's activities and the multiannual action plan relating thereto are described in annex 1, which forms an integral part of this agreement.

The implementation of the multiannual action plan will be contained in an annual execution programme and have a budget which the FNR will send for information purposes to the Minister on 1 February of each year.

The FNR undertakes to:

i) make suitable and reasonable arrangements in order to implement the action plan with a view to achieving the strategic objectives;

ii) provide all the detailed data requested by the State for the purpose of the proper management of the activities covered;

iii) inform the State of any event which may have a direct effect on the implementation of the action plan and the achievement of the intended objectives;

iv) provide the State and any other body or individual duly appointed by it with the information requested for the inspections and audits;

v) participate actively in the inspection, monitoring and evaluation activities;

vi) coordinate, in its capacity as national representative, Luxembourg's contribution to the Teaming part of the Spreading Excellence and Widening Participation action of European Union's Horizon 2020 programme.

The State undertakes to:

i) provide the FNR with the necessary autonomy in order to carry out this agreement in compliance with legal and related stipulations;

ii) inform the FNR of any event which could have a direct effect on the allocation of its financial contributions.

Art. 4 Financial framework

Art. 4.1. Expenses and maximum commitments

In order to implement the activities covered by this agreement, the FNR is authorised to make commitments not exceeding a maximum value of EUR 228,000,000.

Appendix 2 shows the provisional amounts for annual commitments and a forecast of the annual payments purely for information purposes.

Subject to the provisions of this Article, the FNR is authorised to make commitments which go beyond the period covered by this agreement. These commitments will be
covered by State financial contributions allocated to the FNR as part of future
multiannual agreements made between the State and the FNR.

The costs of the various programmes, priority actions and operational expenses are
limited to the maximum multiannual commitments stated below.

- Programmes and priority actions which aim to achieve the various strategic
  objectives described in Appendix 1:
  - Strategic objective 1: EUR 90,160,000
  - Strategic objective 2: EUR 27,530,000
  - Strategic objective 3: EUR 93,945,000

- Operating expenses: EUR 16,365,000

If considered appropriate, the maximum commitments stated for the various
strategic objectives may be amended but these may not in total exceed, for each
strategic objective, 10% of the commitments made over four years for the strategic
objective without, however, altering the State's annual financial contribution or the
total maximum commitment. The FNR shall inform the Minister in writing of these
amendments.

Any commitment exceeding 10% of the multiannual maximum commitment planned
for the strategic objective must be approved beforehand by the Minister.

The maximum commitment for operating costs may not be increased.

The FNR shall meet with the Ministry to set out the terms for implementing each new
programme developed within the framework of this agreement.

The portion of the planned maximum commitments that have not yet been committed
at the end of this agreement shall not be repeated after 31 December 2017 in the
next agreement.

**Art. 4.2. State allocations**

Pursuant to the provisions of Article 10 of the amended law of 31 May 1999 which
created a national research fund in the public sector, the State grants, subject to the
limit of the budget resources available, and by deduction from the budget credit
recorded at the Ministry whose remit includes research in the public sector, a
financial contribution of EUR 232,000,000 established for the activities to be
implemented within the framework of this agreement as well as the undertakings
made by the FNR in the framework of the previous multiannual agreements made
with the State.

The State's annual financial contributions are as follows:

- financial year 2014: EUR 52,000,000
- financial year 2015: EUR 60,000,000
Most recent amendment: 14/04/2014 MS

- financial year 2016: EUR 60,000,000*
- financial year 2017: EUR 60,000,000*

*The amounts of the State’s financial contributions for the financial years 2016 and 2017 may be adjusted in line with the revision of this agreement, as stated in Article 2.

The contribution of EUR 52,000,000 for 2014 is split into two parts:

- The first part of EUR 17,333,333 was paid under the terms of the second rider to agreement CP2-11-13, signed on 24 February 2014;
- The balance of EUR 34,666,667 shall be paid on 1 July 2014 subject to the submission of the 2013 annual report.

The annual contributions for 2015, 2016 and 2017 will be made in two tranches:

- An initial part of 60% of the annual amount to be paid on 1 February of each year subject to the submission of the said annual reports referred to in Article 5 by the FNR;
- The balance of 40% to be paid on 1 July of each year subject to the submission of all the reports referred to in Article 5 by the FNR.

In the event of acceptance by the European Commission of the projects submitted by Luxembourg in the Teaming part of the Spreading Excellence and Widening Participation action of the European Commission’s Horizon 2020 programme, the State will provide a relative financial contribution. The methods for implementing participation in the abovementioned programme with take the form of a rider to this agreement.

The State's financial contributions paid prior to the period covered by this agreement which are not yet spent as at 31 December 2013 shall remain available to the FNR.

The FNR shall maintain its cash position at a sufficient level to be able to honour its payments stemming from the commitments it makes for a period of three months.

Art. 4.3. Other sources of finance

In accordance with Article 10 of the amended law of 31 May 1999, which created a national research fund in the public sector, the FNR may have receipts from sources other than the allocations from the State's receipts and expenses budget. These receipts do not fall within the scope of the application of this agreement. The maximum commitment amounts referred to in Art. 4.1 shall not apply to them.
Art. 5 Reports and evaluation

Art. 5.1 Annual reports
The FNR shall submit a summary report of activities in free text form describing the notable events of the year in consideration on 1 February of the respective financial year.

For 1 May, the FNR shall submit to the Ministry the report stated in Article 13 of the amended law of 31 May 1999 creating the FNR, including the accounts for the financial year-end and the auditors' report.

If significant gaps are found between the stated objectives and the achievement thereof, corrective measures may be contained in a rider to this agreement.

Art. 5.2 Evaluation and final report
For 31 March 2017 the FNR shall draw up a self-evaluation report showing a summary of the achievement of the action plan and of the strategic objectives, and it shall also contain a table of indicators as stated in Appendix 1. This report shall serve as a basis for an external and independent evaluation to be carried out at the request of the Minister during 2017.

The scope, methods and evaluation tables shall be defined in a set of specifications which the Minister undertakes to create and which shall be submitted to the FNR for comment prior to the selection of the external experts. The FNR undertakes to cooperate and provide all the information needed for the evaluation.

The results of the evaluation will consist of a written reasoned report. The FNR shall be entitled to respond to this evaluation report. The Minister has the right to notify the result of the evaluation provided the FNR's related comments are attached thereto.

The FNR's self-evaluation report, together with the external evaluation report and the FNR's comments shall be forwarded to the Government by 1 December 2017.

On 1 May 2018, the FNR will send a final report covering the entire term of this agreement to the Minister. The final report will include a table of indicators as stated in Appendix 1, a summary description of the activities carried out and a critical analysis of the results and objectives achieved.

Art. 6 Non-performance, delay or default
Both parties shall inform the other party immediately, providing the appropriate details, of any events which may be harmful to the performance of this agreement. The parties shall set the measures to be taken by mutual agreement.

Art. 7 Inspections
The FNR shall keep the original of any documents relating to this agreement in the original version, or in duly justified exceptional cases, copies of the original, for a
period of five years after the final expiry of the period covered by this agreement. During the performance of audits pursuant to this agreement, these documents will be made available to the people responsible for these audits.

Art. 8 Amendments to the agreement

The parties agree to adjust the strategic objectives and the action plan if the financial hypotheses set forth in this agreement do not materialise or if the national organisational, legal or regulatory framework hinders the achievement of said objectives and/or actions.

The parties agree to the principle of adjusting the financial framework in the event that the transfer of the FNR's headquarters to the Cité des Sciences in Belval should engender substantial and lasting additional costs.

The provisions of this agreement and its Appendices may only be amended by way of one or more riders signed by a duly authorised representative of each of the parties.

An amendment proposed by the FNR must be sent to the Minister in written form. Within a period of three months of notification by the FNR, the Government shall decide, upon a proposal from the Minister, how to react to the request.

Art. 9 Spreading of knowledge

Without prejudice to the confidentiality agreements made with third parties, each party is entitled to inform third parties of the purpose of the works covered by this agreement and of the state of advancement and results thereof.

- either by circulating general reports, summaries in aggregated forms on any medium including electronic media,
- or in any other level of detail subject to the written permission of the other party.

Art. 10 Applicable law and competent jurisdiction

This agreement is subject to Luxembourg law and any dispute associated with this agreement shall be subject to the exclusive jurisdiction of the Luxembourg courts in the Grand Duchy of Luxembourg.
Executed in Luxembourg, on

For the FNR,

The President of the Board of Directors

The General Secretary

in the same number of copies as parties

For the State, represented by the Government,

The Minister for Higher Education and Research

The Minister of Finance
1. Strategic objectives

Present context
For more than 10 years, public research has received a very high level of support from the public and political actors. In the future it will be the responsibility of all the research actors to collectively demonstrate that these investments can produce results in terms of the academic, economic, societal and cultural impact. The FNR needs to assume its role by supporting high-quality research which creates an impact. Its mission is also to structure research through the recruitment and support of the best researchers. In addition, its mission of promoting research and scientific culture is central to ensure the continuous support of the public for the research cause. It should also be noted that the majority of the doctorates obtained in Luxembourg are financed by the FNR, which commits it to ensuring that the doctoral study is of good quality.

Medium-term vision for Luxembourg research
The FNR's primary aim, alongside all the partners, is to successfully consolidate a system of public research which, over the next five years, in some areas of excellence will have achieved both national and international visibility and a leading scientific reputation. This vision will be realised if Luxembourg is able in these areas of excellence to attract and keep the most outstanding talent both in terms of the researchers and the uses of the research and if the best international teams, both in the public and private sector, endeavour to collaborate with the Luxembourg teams.

The rise in the highest quality research activities in Luxembourg contributes to the country's reputation, engenders innovative ideas, attracts the best researchers and provides better training for young researchers. All this is necessary in order to obtain long-term economic results, for example, through cooperation with businesses. At the same time, high-quality research has a positive societal effect since society, decision-makers and users derive lasting benefits from new knowledge and know-how, and the researchers can assist the political actors and government bodies in a consultative role.

FNR's strategic objectives for the 2014-17 period

<table>
<thead>
<tr>
<th>Strategic objective 1:</th>
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</thead>
<tbody>
<tr>
<td>To promote quality and scientific excellence in research</td>
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</tbody>
</table>

The FNR's leading mission is to invest public funds and promote quality and excellence in research. Quality and excellence of research are prerequisites to the international visibility that attracts highly qualified researchers. International cooperation is an important aspect of this strategy because it makes it possible to gauge the quality of Luxembourg research at international level. Part of this strategy
also involves the implementation of international principles when evaluating projects (peer review), scientific integrity and free access to publications and scientific data.

**Strategic objective 2:**

To strengthen research engendering an economic and societal impact

- **Sub-objective 2.1**
  
  To promote economic exploitation of the research results and cooperation between public research and the private sector.

- **Sub-objective 2.2**
  
  To strengthen research in its societal role: act towards and with society by stressing the impact and value of the research.

Science in the broad sense aims to create new knowledge. However research, considered as a global enterprise, also aims to provide a tangible contribution to the development of society and the economy. Beyond the notion of quality, the FNR purports to support research which can have an economic and societal impact.

The FNR therefore wants to strengthen collaboration between research and the economy in the future. A lasting and responsible enhancement of research results will contribute to diversification and thereby to reviving the economic sector.

The societal impact, meanwhile, will result in a society which benefits from the knowledge of the researchers, where political figures and public institutions consult researchers, and which creates good prospects for innovation and research, and ultimately to a society of knowledge which lends the way to a sustainable future.
Strategic objective 3:

To strengthen the efficiency and durability of the Luxembourg public research system. To invest in human capital

Sub-objective 3.1

To provide more specific support for the research teams which demonstrate steady and continuously good quality work over time in order to achieve a critical mass in a limited number of fields of excellence.

Sub-objective 3.2

To successfully attract and support the best doctorate positions by offering them attractive working conditions and by developing doctoral training of a high quality, which is suited to the needs of the research, society and the economy.

The public research system in Luxembourg is still at the development and structuring stage. The FNR can only have one ambition and that is to construct a public research system in our country, which is able within some priority thematic fields, to rival the best international teams on a scientific level. In order to achieve this objective it is of vital importance to be able to attract and keep the most outstanding researchers. International competition is high in this area and the FNR is developing programmes so that experienced researchers can establish themselves in Luxembourg under very good conditions. The consequences for the research system could be highly positive. In fact the best researchers attract other excellent researchers, international collaboration and additional funding.

Similarly, it is very important to selectively support the most effective teams already in place and to organise the future centres of excellence which will draw attention to Luxembourg research at international level.

With the legislative reform of the FNR, the introduction of collective AFR offers a unique opportunity to develop high-quality doctorate training alongside the institutions. The FNR here again aims to create the potential to attract the most outstanding graduates from all over the world to Luxembourg. The doctoral students may in future provide the true vigour to our research system.
2. 2014-17 Action Plan

In order to achieve the strategic objectives, the FNR will continue to implement its multiannual programmes described in Appendix 3 and will carry out the following priority actions over the 2014-17 period.

**Strategic objective 1:**

**To promote quality and scientific excellence in research**

1.1. In all multiannual programmes, the FNR will endeavour to maintain an effective ex-ante evaluation system in accordance with the *merit review* international principles adopted in 2012 by the *Global Research Council*. Over the 2014-17 period, the FNR will submit selection procedures and criteria to be evaluated in association with external experts. The evaluation report with the recommendations will be available by 1 January 2017.

1.2. The promotion of international cooperation will be conducted through the INTER programme, which currently consists of three segments: (1) the mobility programme, (2) bilateral cooperation, and (3) multilateral cooperation (ERA-net, joint programming, cooperation under chapter 185 of the Treaty on European Union). The FNR will update its international strategy as experience is gained and will continue to prioritise bilateral cooperation. It will submit its future participation in multilateral cooperation (notably *ERA-Net*, Joint Programming, *COST*) for critical assessment. Only cooperative projects demonstrating real added value will be maintained.

1.3. The FNR will take the initiative of setting up a common structure for scientific integrity on a voluntary basis with the University and the Public Research Centres. Referral to the rules and procedures enacted by this common structure will form part of the contractual arrangements set out in the agreements made between the FNR and its beneficiaries. The implementation of this common structure will be subject to ministerial approval.

1.4. With view to defining the policy for funding scientific publications on the basis of principles concerning the transition towards free access of scientific publications (*Open Access*), taking into consideration the recommendations made by *Science Europe*, the FNR will consult with the Ministry, the Public Research Centres and the University. This consultation will culminate in the establishment of a national strategic plan. Within the framework of this national strategic plan, the FNR will examine the introduction of appropriate instruments to contribute to the funding of scientific publications stemming from the research projects which it subsidises.

1.5. The priorities stipulated in the RESCOM instrument will be tightened. This programme will be principally orientated towards supporting scientific events of a truly international scope.

1.6. The FNR will continue to participate in international organisations, particularly umbrella organisations which finance research, particularly *Science Europe* and the *Global Research Council*. It will reduce its involvement in terms of representation on European Commission bodies (*Horizon2020, National Contact Point*,…).
1.7. The FNR will establish a regular process of information and exchanging of viewpoints and ideas with its beneficiaries.

1.8. In the funding of the research projects, the FNR will cover the overheads in an amount equal to or greater than 20% of the direct costs excluding sub-contracting costs. This arrangement applies solely to programmes to fund research projects (in particular CORE, INTER and OPEN).

**Strategic objective 2:**

To strengthen research engendering an economic and societal impact

**Sub-objective 2.1**

To promote economic exploitation of the research results and cooperation between public research and the private sector.

2.1.1. The existing systems to support public-private collaboration (AFR-PPP and CORE-PPP) will be strengthened and promoted more. A dedicated budget will be allocated to them on an annual basis.

2.1.2. Based on the Proof-of-Concept pilot programme, a regular programme will be developed to attach value to the results of the research. This programme will also support personnel with dual skills in the scientific and commercial fields in order to back up the activities to develop the results of the research and the transfer of technology to research institutions.

2.1.3. The FNR will explore the possibility of setting up "industrial chairs" or even "applied research chairs" within the research institution as in the PEARL programme. The scientific fields of these chairs will be defined in agreement with the industrial partners and/or other users of the research such as the services sector, health care or education, and will be co-financed by the latter. The holders of these chairs will be selected by the FNR according to the normal criteria for scientific excellence. However, they must demonstrate proven experience in cooperation with the private sector and/or public services.

**Sub-objective 2.2**

To strengthen research in its societal role, acting towards and with society by stressing the impact and value of the research.

2.2.1. In terms of promotion of scientific culture, the following activities will be maintained: Mr Science, Science Festival, Researchers’ Days, Chercheurs à l’école, science.lu, training programme for scientific coordinators, researchers and journalists.

2.2.2. Through the PSP subsidy programme, the FNR will continue to support initiatives to promote science and research. An option will be introduced to support a
limited number of projects over a more significant period of up to three years in order to support initiatives which may have a real structural impact.

2.2.3. In order to establish lasting links between researchers and political decision-makers, the FNR will explore the possibility of an exchange programme between researchers and political figures (members of parliament, members of the Council of State, etc.) in the style of the Pairing Scheme set up by the Royal Society in the United Kingdom.

2.2.4. The FNR will develop a strategy to cultivate the philanthropic approach and sponsorship towards specific target groups (individuals and organisations). The medium-term aim is to create interest among influential personalities in society and ensure their (financial, but more importantly moral) support on a lasting basis for the research cause (research “ambassadors”).

**Strategic objective 3:**

To strengthen the efficiency and durability of the Luxembourg public research system. To invest in human capital

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**Sub-objective 3.1**

To provide more specific support for the research teams which demonstrate steady and continuously good quality work over time in order to achieve a critical mass in a limited number of fields of excellence.

3.1.1. The ATTRACT and PEARL programmes will be awarded the highest priority. These subsidies will be confined to research teams which demonstrate work of a high quality and sustained excellence over time. By way of exception, such subsidies may be employed to launch a new field, provided it is clearly established that the project has a mobilising effect on the scientific community.

3.1.2. The NCER pilot programme is intended to combine the most effective teams based around a research theme with a long-term socio-economic impact.

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**Sub-objective 3.2**

To successfully attract and support the best doctorate students by offering them attractive working conditions and by developing doctoral training of a high quality, which is suited to the needs of the research, society and the economy.

3.2.1. Collective AFR allocations will be introduced gradually subject to the adoption of the related legislative arrangements. These collective allocations will be allocated taking into consideration the quality of the proposed research and training programme.
3.2.2. The number of individual AFR grants will be progressively reduced. In the future, individual grants will only be awarded to candidates who are unable to receive collective grants, particularly AFR-PPP public-private partnerships.

3.2.3. Funding of post-doctorate students by the AFR will be suspended apart from specifically flagged projects, including notably public-private partnerships (AFR-PPP).

3.2.4. The FNR will take part in a pilot study on the professional career paths of young researchers (*career tracking*).
3. Evaluation, monitoring and indicators

**Monitoring**

In the annual reports referred to in Article 5.1., the FNR evaluates the degree of achievement of the action plan using qualitative and quantitative criteria, based notably on the indicators shown below.

- **By instrument of support**
  - Number of applications submitted to the FNR
  - Number of expert reports commissioned by the FNR
  - Average number of expert reports by project
  - Number of projects selected for funding
  - Budget committed
  - Costs of the expertise reports and evaluation of applications

- The same indicators specifically for projects with
  - industrial partners or other research users
  - international research partners

**Indicators of achievement of strategic objectives**

In the self-evaluation report and the final report referred to in Article 5.2, the FNR evaluates the level of achievement of the strategic objectives using qualitative and quantitative criteria, based on the indicators shown below.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Measurement methods</th>
<th>Indicator</th>
<th>Time-frame</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic objective 1</strong>&lt;br&gt;To promote quality and scientific excellence in research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of system for evaluating and selecting CORE projects according to&lt;br&gt;  - International principles of the merit review adopted in 2012 by the Global Research Council&lt;br&gt;  - International benchmarking</td>
<td>External evaluation</td>
<td>The evaluation methods used by the FNR comply with international best practices</td>
<td>2015</td>
</tr>
<tr>
<td>Scientific quality of projects supported by the FNR, by&lt;br&gt;  - Bibliometrics&lt;br&gt;  - Contributions to international conferences&lt;br&gt;  - Doctorate theses&lt;br&gt;  - Scientific prizes&lt;br&gt;  - Follow-up research projects resulting from projects supported by the FNR&lt;br&gt;  - New international collaboration projects</td>
<td>External bibliometrics study&lt;br&gt; Evaluation of completed projects supported by the FNR</td>
<td>Projects supported by the FNR generate a scientific impact which exceeds the national average</td>
<td>2016</td>
</tr>
</tbody>
</table>
### Strategic objective 2
To strengthen research engendering an economic and societal impact

<table>
<thead>
<tr>
<th>Impact of research projects supported by the FNR</th>
<th>Summary report drawn up by the FNR based on evaluation reports of supported projects and based on the reports produced by the expert committees.</th>
<th>A growth in the number of projects subsidised by the FNR can be noted which gives rise to tangible results in terms of exploitation or cooperation with industrial partners or with other users of the research results.</th>
</tr>
</thead>
</table>
| *Collaborative projects with industrial partners*  
*Economic exploitation (patents, licenses, spin-offs)*  
*Collaborative projects with other users of the research results* |  | early 2017 |
| Visibility of Luxembourg research and activities of the FNR in promoting scientific culture among the general public. | National telephone poll on the public perception of sciences, research and the activities of the FNR. | The notoriety of the FNR’s activities is constant. early 2017 |

### Strategic objective 3
To strengthen the efficiency and durability of the Luxembourg public research system. To invest in human capital.

| Impact on recipients of PEARL and ATTRACT grants on the system of public research:  
*International influence: Projects involving international collaboration - organisation of international conferences, roles in international organisations*  
*Institutional impact: Management of departments, doctorate establishments or research units*  
*Scientific production: Bibliometrics, scientific prizes*  
*Training: Management of doctoral theses and management tasks*  
*Collaboration with industrial partners or other users of the results of the research, visibility among national players* | Summary report drawn up by the FNR based on project evaluation reports and based on the reports produced by the expert committees. Opinions of external experts | The PEARL and ATTRACT grant recipients will contribute a large share to the influence and visibility nationally and internationally of Luxembourg research. 2016 |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary report drawn up by the FNR based on project evaluation reports and based on the reports produced by the expert committees. Opinions of external experts</td>
<td></td>
<td>2016</td>
</tr>
</tbody>
</table>
Appendix 2: Financial framework

1. Nomenclature used

- **Commitment** = Expense. In accordance with Article 10 of the amended law of 31 May 1999, which created a national research fund in the public sector, the FNR’s accounts are drawn up according to commercial accounting rules. Consequently, expenses are recognised as soon as they are definite in their principle and determined in their amount even in cases where they have not yet been paid. The distinction between commitments and payments is particularly important in the case of the FNR, where most of the commitments (projects subsidised) give rise to payments which are staggered over several years.

- **Payment** = funds taken out of resources.

- **Remittance** = funds entering resources.

2. Multiannual budget: Expenses (commitments)

The annual data summarised below is purely for information purposes. The budgets are adopted annually by the FNR’s Board of Directors. Only the multiannual maximum commitments have a contractual value in accordance with Article 4 of this agreement.

<table>
<thead>
<tr>
<th>Programmes and priority actions affected (including evaluation expenses and related contributions)</th>
<th>Expenses 2014-17 Annual average</th>
<th>Multiannual maximum commitments (in accordance with Art. 4.1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic objective 1</strong></td>
<td>CORE, INTER, OPEN, RESCOM, scientific integrity, scientific publications</td>
<td>22,540,000</td>
</tr>
<tr>
<td><strong>Strategic objective 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sub-objective 2.1</strong></td>
<td>Valorisation, AFR-PPP, CORE-PPP, industrial chairs</td>
<td>5,160,000</td>
</tr>
<tr>
<td><strong>Sub-objective 2.2</strong></td>
<td>PSP, SIS, FNR Awards, Communication, Philanthropy</td>
<td>1,722,500</td>
</tr>
<tr>
<td><strong>Strategic objective 3</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sub-objective 3.1</strong></td>
<td>PEARL, ATTRACT, NCER,</td>
<td>10,160,000</td>
</tr>
<tr>
<td><strong>Sub-objective 3.2</strong></td>
<td>AFR</td>
<td>13,326,250</td>
</tr>
<tr>
<td><strong>Operating costs</strong></td>
<td></td>
<td>4,091,250</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>57,000,000</strong></td>
</tr>
</tbody>
</table>
3. Multiannual budget: Estimated payments

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programmes and priority actions (A)</td>
<td>71,030,000</td>
<td>71,620,000</td>
<td>57,220,000</td>
<td>58,450,000</td>
<td>258,320,000</td>
</tr>
<tr>
<td>Operating costs (B)</td>
<td>3,927,000</td>
<td>4,573,000</td>
<td>3,879,000</td>
<td>3,986,000</td>
<td>16,365,000</td>
</tr>
<tr>
<td><strong>TOTAL (A+B)</strong></td>
<td>74,957,000</td>
<td>76,193,000</td>
<td>61,099,000</td>
<td>62,436,000</td>
<td>274,685,000</td>
</tr>
</tbody>
</table>

4. Multiannual budget: Remittances from State income and expenditure budget

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>State remittances</td>
<td>52,000,000</td>
<td>60,000,000</td>
<td>60,000,000</td>
<td>60,000,000</td>
<td>232,000,000</td>
</tr>
</tbody>
</table>

The difference between payments and State remittances will be covered by the FNR's banking assets.
Appendix 3: Summary description of FNR programmes

Strategic objective 1
To promote equality and scientific excellence in research

CORE
CORE is a traditional programme for the funding of research projects. Proposed projects are submitted by the research institutions (bottom-up approach) and are part of the national research priorities defined by the Government (top-down approach). The projects are selected on the basis of their scientific quality.

INTER
The objective of the INTER programme is to strengthen international cooperation and increase the impact of research activities in Luxembourg by promoting research projects which combine Luxembourg and foreign researchers. The programme is currently in three segments: (1) the international mobility programme, (2) bilateral cooperation, and (3) multi-lateral cooperation. The projects are selected on the basis of their scientific quality.

RESCOM (Support for Research Communication)
The objective of the RESCOM instrument is to promote communication and exchange between researchers, notably by subsidising scientific events of an international scope.

OPEN
The OPEN programme allows researchers to submit research projects whose themes are not covered by the fields of the CORE programme and therefore make it possible to identify research groups which are competitive at international level outside national priorities. The projects are selected on the basis of their scientific quality. This programme will be suspended from 2015.

Strategic objective 2
To strengthen research engendering an economic and societal impact

Valorisation Programme
The purpose of the valorisation programme is to encourage the transfer of research results into economically viable innovations. The FNR can support feasibility studies and the realisation of prototypes and pilot systems for the purpose of projects with a high level of potential innovation. The project will be selected on the basis of the economic potential of the innovation and the proposed exploitation plan. The FNR may also support people whose expertise is needed to reflect the transfer of the results of the research into economically exploitable innovative projects.
AFR-PPP (Public Private Partnership)
The PPP segment of the AFR programme quite specifically supports trainee researchers who carry out their research as part of a cooperation between a public research body and an industrial partner.

CORE-PPP (Public Private Partnership)
The PPP segment of the CORE programme supports in particular research projects carried out as part of a cooperation between a public research body and an industrial partner.

Industrial Chairs
The objective of a new part of the PEARL programme, the Industrial Chairs variant, is to start up continuous cooperation between a research body and one or more companies and/or other users of the research (services, healthcare or education) in an area of high strategic priority for the parties in question. This cooperation will be based on joint investment by one or more companies, the FNR and the research body.

SIS (Science in Society)
The FNR wants to strengthen the link between sciences and society which is why it promotes scientific culture as one of its priority areas. This promotion aims to create awareness among the whole population, decision-makers and young people alike who are the citizens and researchers of the future. The objective is to create acceptance and comprehension of the role of sciences and research as creators of knowledge, innovation and to spark enthusiasm among young people about scientific careers. It is for this reason that the FNR offers platforms to assist researchers in promoting their activities, organises its own promotion activities in order to increase the visibility of sciences and research, and also provides financial support to researchers and scientific teachers/mediators.

PSP (Promoting Science to the Public)
The objective of the PSP funding instrument is to strengthen the exchanges between science and society. The programme supports projects which create awareness among the public about scientific topics and projects which make research activities in Luxembourg visible. PSP supports

- researchers so they can pass on their knowledge to pupils, students and the general public and enter into dialogue with these target groups.
- teachers, private individuals and non-profit organisations so they can carry out projects for pupils, students and the general public which will give them an overview of sciences and scientific work.
Strategic objective 3
To strengthen the efficiency and durability of Luxembourg public research - To invest in human capital

PEARL
The PEARL programme aims to contribute to developing a truly critical mass and international visibility of research priorities in Luxembourg both in quantitative and qualitative terms. The principal aim of PEARL is to offer a flexible and highly attractive tool to institutions so they can attract more experienced and established researchers who are recognised at international level. These parties will transfer and develop their research programmes to Luxembourg and thereby contribute to accelerating the development of national priorities.

ATTRACT
The ATTRACT programme aims to strengthen the excellence of Luxembourg research by attracting researchers of an excellent scientific level who are able to draw upon recognised professional experience in research. The programme offers researchers not yet established in Luxembourg the opportunity to set up their own research in a public research body in Luxembourg which is prepared to accommodate them with a jointly submitted project.

NCER (National Centre of Excellence in Research)
The objective of the NCER programme is to support the development of public research in areas of strategic interest in order to derive a socio-economic return in the medium to long term. It aims to strengthen cooperation between institutions and to concentrate research activities based around a common scientific and socio-economic challenge. The objective of the programme is to increase the critical mass of public research in Luxembourg and to achieve greater visibility at international level.

AFR (Aides à la Formation-Recherche)
The objective of AFR is to support the best researchers who are studying at doctorate and post-doctorate levels. The legislative reforms underway provide the possibility of "collective" AFR in the future.

In the event of any conflict between the English and French versions, the French version shall prevail.