



LE GOUVERNEMENT  
DU GRAND-DUCHÉ DE LUXEMBOURG

# 2006 IMPLEMENTATION REPORT

For

THE NATIONAL PLAN FOR INNOVATION AND FULL EMPLOYMENT

**(Unofficial English translation)**

The official French version can be downloaded from  
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*Preliminary Remarks*

This implementation report covers the measures taken up by the Government, following the major objectives set out in the National Plan for Innovation and Full Employment in 2005. It uses the integrated guidelines numbering system of the Plan.

## **ACRONYMS**

|                |   |
|----------------|---|
| <b>ADEM</b>    | Labor Administration  |
| <b>CASES</b>   | Cyberworld Awareness and Security Enhancement Structure                       |
| <b>CNFPC</b>   | National Center for Continuing Vocational Training                            |
| <b>CNSAE</b>   | National Committee for Administrative Simplification in favour of Enterprises |
| <b>CRSN</b>    | National Strategic Reference Framework  |
| <b>DIRD</b>    | Gross domestic expenditure on R & D   |
| <b>EES</b>     | European Employment Strategy  |
| <b>EIG</b>     | Economic Interest Grouping  |
| <b>ESA</b>     | European Space Agency   |
| <b>ESC</b>     | Economic and Social Committee   |
| <b>ESF</b>     | European Social Fund  |
| <b>FEDER</b>   | European Regional Development Fund  |
| <b>GDP</b>     | Gross Domestic Product  |
| <b>GMI</b>     | Guaranteed Minimum Income   |
| <b>ICT</b>     | Information and Communications Technologies                                   |
| <b>NRF</b>     | National Research Fund  |
| <b>NRP</b>     | National Reform Program   |
| <b>NPPN</b>    | National Plan for the Protection of Nature                                    |
| <b>PPP</b>     | Public-Private Partnership  |
| <b>PRC</b>     | Public Research Center  |
| <b>R&amp;D</b> | Research and Development  |
| <b>SNCI</b>    | National Loan and Investment Company  |
| <b>SMW</b>     | Statutory Minimum Wage  |
| <b>STATEC</b>  | Luxembourg Central Statistics and Economic Analysis Office                    |

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# 1. Introduction

## 1.1 Aligning with the Lisbon Strategy

The Lisbon process, launched under Portuguese presidency in 2000, was to “*make the EU the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion*”. It was to have enabled European economies to change into knowledge-based economies capable of affirming themselves in a new globalized world.

Unfortunately, the mid-term review in 2005 carried out under the Luxembourg presidency gave very poor marks to progress in attaining the Lisbon objectives. Between 2000 and 2005, results were very disappointing and the EU was even further away from reaching goals set for 2010. In an attempt to correct the situation, the European Council redirected the Lisbon strategy in the spring of 2005, baptizing the new effort “Lisbon 2” and the “new partnership for growth and employment”. The main thrusts of this new initiative were shifting the emphasis back to growth and employment, an overall simplification of the plan’s strategy and making the strategy more a part of each member state’s responsibility by causing them to draw up national reform programs. The new governance cycle has now been set at three years, beginning with 2005 and will be renewed in 2008 by means of a new strategic plan. Each member state therefore had to submit a three-year plan in the autumn of 2005. Over the course of 2006 and 2007, two implementation reports for this strategic plan must be drawn up by member states.

In the spring of 2006, the European Council requested that a certain number of specific priority actions be set in motion before the end of 2007 and these priorities must now be present in the implementation reports drawn up by the member states. The priorities consist mainly of investing in knowledge and innovation, freeing up the potential of companies, especially SME, increasing employment possibilities and moving towards an integrated European energy policy that targets rational use of resources.

In the autumn of 2005, the Luxembourg Government submitted its strategic plan to the European Commission as part of the new governance cycle. The plan was entitled “National Plan for Innovation and Full Employment”<sup>1</sup>. This plan is the responsibility of the Ministry of the Economy and Foreign Trade as the national coordinator of the Lisbon Strategy. It was discussed by the Tripartite Coordination Committee and adopted by Parliament. The plan was then evaluated by the European Commission, which confirmed that it identifies and addresses the major challenges facing Luxembourg in the future. Overall, the Government has reacted favorably to the recommendations and comments submitted by the European Commission. However, the Commission remarked that certain actions are not presented in sufficient detail. This is correct, as on the date the plan was submitted, negotiations with the social partners were still underway.

It has been determined that it would be useful to put certain points into perspective and to provide supplemental information to address the analysis made by European Commission

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<sup>1</sup> For more detail, see the following site: <http://www.odc.public.lu/publications/pnr/index.html>

services<sup>2</sup>. As stated, concerning the actions listed in the National Plan for Innovation and Full Employment, the Government was still in discussion with the social partners in the autumn of 2005. The October 2005 submission date for the Plan fell exactly in the middle of the diagnostic phase of these discussions. The tradition of social dialogue in Luxembourg is such that reforms are preceded by a very in-depth diagnostic phase that since 2003 has been supported by OECD studies<sup>3</sup>, the Fontagné report<sup>4</sup> and numerous consultations with the professional chambers<sup>5</sup>. This is followed by intensive discussion with the social partners.

This report is the first implementation report. It retraces the measures adopted by the Government following the major objectives set in 2005 in the National Plan for Innovation and Full Employment using the integrated guidelines numbering system of the Plan. It also includes the new political measures undertaken since then, especially those arising following the Tripartite Coordination Committee in April, 2006.

## **1.2 Implementation on the national level**

On 28 April 2006, the Tripartite Coordination Committee produced a balanced package of measures working from the principle “*restore the balance and provide for the future*”<sup>6</sup>. The Government and social partners pinpointed a certain number of imbalances essentially concerning questions of public finance, the labor markets situation and inflation.

The Government and social partners determined the major thrust for new policies to be implemented as part of the country’s modernization effort aimed at sustaining long-term economic growth and competitiveness. The main targeting areas include higher education and national education, research and innovation, the energy policy and transportation and telecommunications infrastructure.

The situation was not deemed to be in a state of crisis, but rather one that requires determined action promoting the re-establishment of fundamental balances in the economy. The Government and social partners agreed on a set of measures, breaking down into six major

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<sup>2</sup> EUROPEAN COMMISSION, Report on the Lisbon national reform programs 2005, CPE, Brussels, 22 November 2005 and EUROPEAN COMMISSION, Communication from the Commission to the Spring European Council: Time to move up a gear. Country chapters, Brussels, 25 January 2005. During the country reviews by the Economic Policy Committee in Brussels on 13 February 2006, the representatives of the Luxembourg government made several remarks and discussed several points of disagreement concerning the assessment that was made by the European Commission in its Spring Report to the European Council.

<sup>3</sup> OECD, Economic Analyses – Luxembourg, volume 2006/9, Paris, July 2006.

[http://www.oecd.org/about/0,2337,fr\\_2649\\_34111\\_1\\_1\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/about/0,2337,fr_2649_34111_1_1_1_1_1_1,00.html)

<sup>4</sup> FONTAGNE L., Compétitivité du Luxembourg: une paille dans l’acier, Economic Policy Perspectives n°3, Ministry of the Economy and Foreign Trade, March 2005.

[http://www.odc.public.lu/publications/perspectives/PPE\\_3.pdf](http://www.odc.public.lu/publications/perspectives/PPE_3.pdf)

<sup>5</sup> For more details about the social partners positions’ relating to the Fontagné report, see OGB-L/LCGB, Pour un modèle social sans faille - Prise de position commune de l’OGB•L et du LCGB relative au rapport Fontagné, <http://www.cepl.lu/ceplweb/F200.htm> ;

CGFP, Avis relatif au Rapport Fontagné <http://www.cgfp.lu/documents/> ;

UEL, Compétitivité de l’économie luxembourgeoise : Commentaires relatifs au rapport du professeur Fontagné et propositions quant au plan d’action national en faveur de l’emploi et de l’innovation,

[http://www.uel.lu/membres/upload/doc121/presentation\\_fontagne.pdf](http://www.uel.lu/membres/upload/doc121/presentation_fontagne.pdf)

<sup>6</sup> Ministry of State, Tripartite Coordination Committee Notice, Luxembourg, 28 April 2006

work areas, featured below<sup>7</sup>. These reforms all arose from an analysis of the bases of long-term development of the economy and were drawn up with a view to achieving consensus on the national level. As such, they should be useful in adapting and providing longevity to the social model and fit perfectly into the framework of the guidelines set in the fall of 2005. They center on the issues of innovation and full employment, education and training, integration of the Luxembourg economy into the European and international economies, creating an attractive economic environment and a stable macroeconomic framework. All of this is to be accomplished under the aegis of the principles of social corporate responsibility and the sustainable development concept.

1. Controlling inflation: the Government and social partners are convinced that it is necessary to lower the high level of inflation in Luxembourg and they have agreed upon a set of measures that are intended to better control inflation, especially core inflation. Some examples of measures undertaken include the voluntary price agreements with various economic sectors, a comparative indicator for prices in the “Greater Region”, the de-indexation of contracts concluded with the state through limiting the repercussions of indexation on only payroll volume included in the contracts, an analysis from the perspective of European Competition law on the rules and practices of import lobbies that are weighing on the business supply policies, a revitalization policy for competition, a careful approach to the adaptation of administered prices, neutralization of some taxes and excises for the automatic wage indexation system, changes in the application of indexed-linked scales for the period 2006-2009 a de-indexation of the fixed contribution for education and the sums paid by the National Family Allowance Fund (temporarily until 2008).

2. Balancing the budget: The Government and social partners insist on the necessity of reaching a situation close to a balanced budget as quickly as possible, and no later than 2009. This adjustment effort must conform to the provisions of the preventive section of the Stability and Growth Pact that requires member states to reduce their structural deficits by at least 0.5% of GDP. This requirement becomes more intensive during periods of positive economic growth. In April 2006 the Tripartite Coordination Committee confirmed that the deterioration of the budget situation could essentially be explained by too rapid growth of public expenditures. Consequently, the budgetary consolidation effort will concentrate on expenditures, while placing equal importance on the revenues portion of the budget, with the State’s ultimate strategic budget objective being to bring about a sustainable reduction in growth tendencies of public expenditure and to avoid a resurgence of a structural deficit in public finances. The draft budget for 2007 provides for limiting growth in central administration expenditures to 3.6% as compared to the 2006 budget, implying a reduction of the ratio between public expenditures and GDP of around 1 percentage point. The Tripartite Agreement will limit “automatic” growth of a large part of public expenditure by tweaking the automatic indexation system and spreading out the adjustment to annuities and pensions set for 1 January 2007 over two years. In addition, public expenditure practices will be rendered more efficient, especially in the area of public investments and administrative operating expenses. These measures, together with a favorable economic environment should result in a reduction to 0.9% of GDP in 2007. Assuming that the economic environment remains positive, budgetary guidelines set in the tripartite agreement imply that the medium-term budget objective of 0.8% of GDP in structural terms could be attained in 2008, with a balanced budget again in 2009.

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<sup>7</sup> It should be noted that the Notice of the Tripartite Coordination Committee issued in April 2006, provides many more details with respect to these six areas. In this section, only the major points are listed, accompanied by various examples.

3. Implementation of a set of complementary measures to promote competitiveness of companies: The Tripartite Coordination Committee agreed on a set of measures intended to increase levels of competitiveness of Luxembourg companies in the following areas: energy, evolution of wages, actions to support exports, State governance, infrastructures, creation of companies and innovation and R & D activities.

The Government is aware of the importance of supply line security and of the need to reduce the cost of energy to promote national competitiveness. These items must be achieved with an eye to energy efficiency.

The Government and social partners agreed that wage policy should be in line with changes in the overall productivity levels in the Luxembourg economy in the medium term. They have reiterated their commitment to a wage policy that takes into consideration specific situations of different sectors of the economy and companies and that is guided in full autonomy by the concerned partners. Social contributions are the joint responsibility of the Government and the social partners. The Government nevertheless will act to maintain the level of indirect costs of work at their current levels.

In order to bolster Luxembourg's exports to emerging markets in Asia and Latin America, the Government will optimize the resources available to it, such as access to insurance and financing for exports, the representation network of the Grand Duchy abroad, etc.

The Government wishes to facilitate relations between companies and the various administrations. It is committed to rapidly establishing an action plan for bringing about administrative simplification that sets out concrete measures. The integration of European directives in the area will be accelerated and will be carried out according to the principle "transpose the directive, all of the directive and only the directive".

The Government is conscious of the need to continue to develop high performance infrastructure. This involves accelerating the implementation of a sector plan for economic activities areas and creating government land reserves, implementing new incubators for companies, improving public transportation, developing high speed optic networks and providing better connectivity with large international networks.

In order to develop an environment that promotes the creation of companies, the status of company directors will be made more attractive. The Government will implement a policy of promoting entrepreneurial spirit in companies and will accompany the changes in company ownership in an adequate manner, bringing the *Société Nationale de Crédit et d'Investissement (SCNI – National Loan and Investment Company)* and the *Société luxembourgeoise de capital-développement pour les PME (CD-PME - Luxembourg SME Capital Development Company)* into play.

The Government will continue to pursue its policy of supporting innovation and research, key factors in competitiveness. It will create a favorable environment for establishing new research activities in Luxembourg. It will accelerate the implementation of adequate facilities for the *Cité des Sciences* in Belval-Ouest and for public research centers. Coordination between the public and private R & D financial support mechanisms will be optimized in order to manage acquisition of common skills and to co-finance shared R & D programs and projects and to enhance user access to these mechanisms. It will draw up a national multi-annual program to promote innovation and the creation of innovative companies.



4. Redress the labor market situation: The Government and social partners feel that the main challenge regarding changes to unemployment legislation and to the rising numbers of people risking a fall into structural unemployment consists in providing resident job seekers with necessary qualifications and skills. The effectiveness of active employment policies will be improved by early and individual integration of job seekers, especially vulnerable groups, into the job search process. The Government and social partners agree that the ultimate goal of all active employment policies should be to get people into or back into the competitive labor market. The instruments of training and work programs for the unemployed that have real employment perspectives will be put to use.

With regard to the policy of retaining employment, the Tripartite Coordination Committee agreed on the principle of reinforcing the active policy of keeping wage earners in the labor market. This policy specifically favors the concept of employment security over that of job security. The goal is to avoid to the greatest degree possible people going into unemployment, even assuming that their job in their original company is being eliminated, but also to promote early transition to new jobs in order to keep workers off the unemployment rolls.

The Tripartite Coordination Committee decided to replace the current procedure for authorizing overtime work in order to simplify it, to reduce the administrative load for companies and to eliminate this task for Government agencies. The new procedure will involve simple prior notification of overtime hours, with the condition that the hours are approved by any existing delegation or, for companies with fewer than 15 employees, that the employees are all in agreement. The notification will serve as authorization for the overtime hours.

5. Introduction of a single status for employees per the meaning of the law dated 24 May 1989 on work contracts: The Government and social partners have agreed to merge the status of all private sector workers and employees to achieve a single status for all employees in the private sector. They will refer to the status of private sector employees in achieving this merger, especially the provisions for continuing salaries in the event of illness for the duration of such illness. Achieving single status will not involve additional financial charges for the economy as a whole. The Government and social partners have stated that problems specific to the various sectors should be resolved as part of negotiations concerning achieving single status, which are expected to be completed at the end of 2006.

6. Social Security measures: The Government and social partners will create a policy review group to consider this issue. Its objective will be to draw up proposals to ensure the long-term viability of pension schemes and to analyze the various measures that could be considered to guarantee this long-term viability. They will also look at how to adapt the pensions system to changes linked to new conditions of professional career development, the aging of the population and its impact on time worked over peoples' lives. While no definitive decisions have been taken by the social partners, they favor all measures that promote what is useful and necessary to prevent a deficit in the Health Fund<sup>8</sup>. The Tripartite Coordination Committee

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<sup>8</sup> If additional resources should prove necessary, the social partners would agree to an increase in taxes on tobacco and hard alcoholic beverages, which would occur without impacting the price index. They would also analyze the possibility of removing ceilings rather than introducing a general increase in contributions.

is in favor of a reform in the accident insurance system based largely on the opinion issued by the Economic and Social Council (ESC)<sup>9</sup>.

On 1 January 2006, 39.6% of the total resident population of Luxembourg was a foreign national. In order to provide foreign nationals with the right to express themselves on the subject of the major guidelines in society and the economy, the Government submitted a bill in October 2006 pertaining to Luxembourg nationality in which the possibility of double nationality was broached. One of the Government's objectives in this initiative is to change the equilibrium of the political economy.

## **2. Governance and Assuming Responsibility**

### ***2.1 Active involvement on the part of the social partners and civil society***

It is useful to consider difficulties generally encountered by governments while implementing structural reforms. Various studies by the OECD have shown that resistance to structural reforms is linked to the fact that uncertainty about the future benefits expected from such reforms is often greater than uncertainty regarding the costs incurred. Therefore one of the most important challenges in re-launching the Lisbon Strategy consists in giving better explanations to citizens about the possible advantages of such a policy to Luxembourg in upcoming years.

Consequently, it is crucial that the nation comes to own the reforms. At the same time it is essential that all come to the same diagnostic of the situation in order for reforms to be successfully implemented. The Government therefore ensured that the reforms undertaken as part of the National Plan for Innovation and Full Employment be drawn up in the wake of extensive consultations. The initial stages of this process were begun in 2003 and since then the social partners have been asked to participate actively in drawing up the reforms package within the framework of the Tripartite Coordination Committee.

The tripartite sessions resulted in a balanced package of measures. The first meeting of the Tripartite Coordination Committee occurred on 31 October 2005 following the diagnostic stage. It was held after the publication of the report on competitiveness of the Luxembourg economy at the end of 2004 and the "limited competitiveness" tripartite meetings of 3 February and 20 April 2005. This meeting was followed by subsequent meetings on 18 November and 13 December 2005. Discussions continued during numerous bilateral meetings with the social partners occurring in January, February, March and April 2006 and ultimately produced an agreement on 19 April 2006. The Government met with its social partners on 28 April 2006 to approve the recommendations issuing from the Tripartite Coordination Committee. The Prime Minister gave a detailed presentation of the reforms on 2 May 2006, during the Government's statement on the economic, social and financial situations of the country to Parliament<sup>10</sup>.

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<sup>9</sup> The social partners note the Government's intention of reforming this system, including the provisions concerning accidents while on the way to work and promoting stronger solidarity between employers with regard to social contributions. Employer representatives stress that any reform should be accomplished within the context of solidarity already inherent to the system. The unions support the Government in its initiative.

<sup>10</sup> For more information, see the Internet site for the Government of the Grand-Duchy of Luxembourg: <http://www.gouvernement.lu/functions/search/resultHighlight/index.php?linkId=5&SID=4a801159b007b8f86fe469d97c1fc6fb> and [http://www.gouvernement.lu/gouvernement/etat\\_nation2006/2006\\_fr/index.html](http://www.gouvernement.lu/gouvernement/etat_nation2006/2006_fr/index.html)

The social partners were also involved in drafting this implementation report. During the bilateral meeting of 22 June 2006 between the Lisbon Strategy coordination managers from the concerned ministries and administrative departments and the European Commission entities, consultations were also held with the Economic and Social Council (CES)<sup>11</sup>.

The Parliamentary Commission for the Economy, Energy, the Post Office and Sports discussed the conclusions of this report on 17 October 2006. A public hearing dedicated to the implementation of the National Plan for Innovation and Full Employment was held on 24 October 2006 in Parliament in order to ensure the involvement of civil society in the subject. The session was aired on Chamber TV in order to promote the widest possible diffusion of the proceedings<sup>12</sup>.

The Parliament also participated in drafting the main outlines of the National Plan for Innovation and Full Employment, as well as its transposition into national law and in the follow up of the implementation of the reforms.

In Luxembourg therefore, the major guidelines and concrete measures of this project were drafted in wide concert with the executive, legislative and social partner entities of the country.

## **2.2 Ensuring Public Awareness is a Key Objective**

A major challenge in rebooting the Lisbon Strategy, now known as “Lisbon 2” consists in providing quality explanations for why getting the policies implemented is advantageous to securing a good future for Luxembourg.

The Government maintains a particularly strong interest in this challenge since re-launching the Lisbon Strategy in 2005 and the publication of the National Plan for Innovation and Full Employment. It is striving to achieve an objective of informing the general public and the players in the economy “actively” about the Lisbon Strategy. To accomplish this, several communications tools enter into play, as described below:

- Public events, such as colloquiums, conferences, and other activities that are accorded high visibility<sup>13</sup> in the media are held periodically. One example of this is the colloquium entitled “The Road to Lisbon”, which was organized for the first time in October 2004 and presented from a European perspective. Following the event’s major success, a second edition of the event will occur in November 2006<sup>14</sup>. The colloquium aims to bring together research professionals, decision makers and professionals in the field to discuss issues such as the link between research, development and innovation competitiveness, technology transfers, initial and continuing education, the spread and impact of ICT, immaterial capital, knowledge management and intellectual property rights.
- The Luxembourg competitiveness watchdog *Observatoire de la Compétitivité* put an Internet site on line in 2005 in order to centralize the plethora of information concerning the Lisbon Strategy, as well as to give it heightened visibility before the

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<sup>11</sup> [http://www.odc.public.lu/actualites/2006/06/visite\\_cion/index.html](http://www.odc.public.lu/actualites/2006/06/visite_cion/index.html)

<sup>12</sup> Televised transmission of the public sessions of Parliament: [http://www.chd.lu/fr/web\\_TV/default.jsp](http://www.chd.lu/fr/web_TV/default.jsp)

<sup>13</sup> For more details see: <http://www.odc.public.lu/actualites/index.html>

<sup>14</sup> <http://www.tudor.lu/cms/lisbonne2006/publishing.nsf/id/accueil?opendocument>

general public<sup>15</sup>. This site gives observers a rapid overall view of the Lisbon Strategy on both the national and European levels. It also acts as a communications platform for the entire range of players concerned by the implementation of the National Plan for Innovation and Full Employment.

### **2.3 Providing a thorough follow-up on reforms**

Progress achieved in implementing the National Plan for Innovation and Full Employment should be the subject of efficient a follow-up, reporting and evaluation processes. The follow-up should be based on both qualitative and quantitative actions, as well as on evaluations of resources expended and results achieved. To this end, the Government has acquired several follow-up tools.

In the first place, the ad hoc Lisbon structure, which was established at the inter-ministerial level in 2005 for drawing up the National Plan for Innovation and Full Employment, was closely involved in the implementation follow-up. This was done in order to optimize the coordination of the various measures undertaken, to ensure that consultation procedures were followed and to guarantee the assimilation by all of the 2006 implementation report. The *Observatoire de la Compétitivité* is in charge of coordinating and drafting the implementation report.

Secondly, it has turned out that some structural indicators from Eurostat have a tendency of not taking into full account the specificities of Luxembourg<sup>16</sup>. In view of this critique, it proved to be advantageous to widen the scope of statistical follow-up in order to better grasp the level of competitiveness of Luxembourg. Another goal of this is to render the debate on the issue more objective by relying on a rigorous follow-up and evaluation process. Thus, in order to make a rigorous “quantitative” monitoring of the proposed reform measures possible, a “Competitiveness Scoreboard”<sup>17</sup> was suggested in 2004 by the Tripartite Coordination Committee. The social partners were closely involved in this effort. The scoreboard was updated in September 2006 by the *Observatoire de la Compétitivité*<sup>18</sup>. It will be updated periodically, contingent upon availability of data, and will serve as an instrument of economic policy<sup>19</sup>.

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<sup>15</sup> <http://www.odc.public.lu/>

<sup>16</sup> One example of this is the fact that cross-border workers are not counted in the employment rate. This is a purely national concept with residence as a criterion. However, domestic employment in Luxembourg includes a cross-border population of 38%, and 50% of new jobs created recently have gone to persons in this category.

<sup>17</sup> See Appendix 4 for more details on this subject. In order to properly follow progress achieved by each member state through statistical indicators, one must account for situations specific to each country. This is equally true in the case of Luxembourg and indicates the requirement for a scoreboard with a broader scope to better account for national specificities, one that will be able to highlight certain gaps related to the structural indicators of the Lisbon Agenda. This Competitiveness Scoreboard must be seen as a dynamic tool and as such is subject to periodic adaptations. Additional meetings held periodically with the social partners will occur in order to optimize this state instrument for assistance in decision making.

<sup>18</sup> Ministry of the Economy and Foreign Trade, *Bilan Compétitivité 2006*, Luxembourg, 13 September 2006. [http://www.odc.public.lu/actualites/2006/09/13\\_bilan\\_compete/index.html](http://www.odc.public.lu/actualites/2006/09/13_bilan_compete/index.html)

<sup>19</sup> Parallel to this Competitiveness Scoreboard, the Economic Interest Grouping (EIG) Luxinnovation is also closely following changes in the scoreboard concerning innovation and R & D activities in Luxembourg and the Ministry of the Environment is monitoring indicators for sustainable development. These two sets of indicators are fully compatible with the Competitiveness Scoreboard, which is composed of a core group of indicators to which different sets of specific indicators are associated. One must pay particular attention to achieving consistency with regard to the overall comparison approach being used, as well as to the definitions used within

### Frame 1: Competitiveness Scoreboard – 2006 Update

The Competitiveness Scoreboard is based on several dozen indicators, split out into ten categories as follows: Macroeconomic performance, Employment, Productivity and labor costs, Market Operations, Institutional and Regulatory framework, Entrepreneurship, Education and Training, Knowledge-Based-based Economy, Social cohesion and Environment.

The indicators are divided into three different zones, depending on the position of Luxembourg with relation to the European average (using countries for which data are available) that serves as a benchmark. If a score for Luxembourg is at least 20% better or equal to the *EU-x* average, the indicator is classified as green, or favorable. If a score for Luxembourg is 20% worse or equal to the *EU-x* average, the indicator is classified as red, or unfavorable. When a score for Luxembourg is between +20% and -20% of the *EU-x* average, the indicator is classified orange, or neutral. Changes in the performance of the Grand Duchy are also analyzed over time.

The recent update of the Competitiveness Scoreboard, containing the most recent data available from 2004 and 2005, together with the systematic comparison with results from the 2004 version shed more light on the level of competitiveness of the Luxembourg economy. Compared to the European average *EU-x*, Luxembourg has seven more indicators in the green zone than in 2004. Overall, it is clear that there are fewer indicators in the red or orange zones than in the green zone. Unfortunately, while indicators in the red zone have gravitated to the orange or green zones, a detailed analysis of the data shows some indicators in the red zone have gotten worse. On one hand, a slight improvement may be noted overall in the Scoreboard between 2004 and 2006, although this improvement essentially concerns indicators in the Knowledge-based Economy category, which experienced improvement in all indicators. Luxembourg appears therefore to have progressed in the right direction with regard to this subject. On the other hand, it is worrisome to see that in the Employment category, two out of five indicators have worsened. In addition, some fundamental macroeconomic indicators such as inflation, unemployment, salaries, productivity, public finance and others have recently deteriorated in the period under consideration.

A summary of all the base indicators appearing in the ten categories done by the *Observatoire de la Compétitivité* included calculations of an overall competitiveness indicator that reflect a very favorable position for the Luxembourg economy, placing it third in the EU-25 group, unchanged with relation to 2004.

Source: Ministry of the Economy and Foreign Trade, *Observatoire de la Compétitivité*

Thirdly, the analysis of the impact of reforms on growth and employment is a very important task. It is accordingly necessary to develop and apply micro and macro economic evaluation methods for policies, although actually accomplishing this task has proved to be relatively difficult.

As an example, STATEC tried in May 2006 to evaluate the measures emanating from the Tripartite Coordination Committee on growth and employment. Its calculations are based on

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these different sets of indicators that must be compatible with each other. For example, it is necessary to be sure of the principle of uniqueness of the indicators, which implies that each base indicator use the same benchmarks and data, regardless of the set to which it belongs.

the decisions taken by the Government deemed to be quantifiable<sup>20</sup>, with results compared to the central scenario used by STATEC in the spring forecast, which did not take reform measures into account.

Overall, it has been confirmed that the impact of the reforms in macroeconomic terms has been neutral on growth and employment. Indeed, the effect on available household income is pre-empted by the whittling of savings and changes in salaries.

Because this is nonetheless one of the first attempts of its kind to evaluation certain situations, the methodologies used will naturally change over time and results should be considered temporary<sup>21</sup> and interpreted with prudence. The macroeconomic model used by STATEC to carry out this type of simulation currently seems to be based too much on demand. It should be centered more on supply in the future as this is a very important aspect for a small open economy such as Luxembourg's.

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<sup>20</sup> Non-quantifiable items were not included in the simulations. For a rough draft of the simulations, see. STATEC, *L'Economie luxembourgeoise en 2005 et évolution conjoncturelle récente*, Luxembourg, May 2006, pp. 24-27.

<http://www.statistiques.public.lu/fr/publications/conjoncture/noteConjoncture/index.html>

<sup>21</sup> In the wake of numerous opinions and commentaries heard over recent months on the subject of the methodology used in simulations, a current version of the model and the impact made by the reform measures will be presented to the general public on 9 and 10 November 2006 during the colloquium “*The Road to Lisbon*”, organized by the *Observatoire de la Compétitivité*, in collaboration with STATEC and the Henri Tudor Public Research Center.

### 3. Broad economic policy guidelines

#### 3.1 Macroeconomic policies to promote growth and employment

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| IG 1 - Guarantee the economic stability for sustainable growth |
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The budget of the administration went into deficit in 2004 and remained there in 2005. In 2006, cumulative structural financing requirements for the three sub-sectors were estimated at 1.5% of GDP. In April 2006, the Government and the social partners, meeting in concert with the tripartite committee, agreed to a series of measures to re-balance the budget as rapidly as possible and no later than 2009.

The Tripartite Coordination Committee affirmed that “*the worsening of budgetary equilibrium is essentially due to a too rapid growth in expenditures. The emphasis in the area of budgetary consolidation will be on the expenditures side, although action will continue on the revenues portion*”. The principal budgetary consolidation measures approved by the Government and social partners include the following:

- Increase efficiency in public spending by lowering current operating expenses as part of total public expenditure and by limiting the number of new government workers.
- Modulation of the automatic indexation system resulting in a major slowing of the “automatic” increases of a considerable part of public expenditure.
- Optimization of the State’s capital expenditures, of which the relative portion measured against GDP will still remain clearly above the average of the Member states of the EU.
- Deferment and scaling back of increases to annuities and pensions set to go into effect on 1 January 2007. Annuities and pensions will be increased by 1% on 1 July 2007, then by 1% on 1 July 2008.
- Increase the rate of contributions for dependent persons paid by insured persons. On 1 January 2007, it rises from 1% to 1.4%, while the State’s contribution remains frozen at the same level in nominal terms.

As shown in the table below, these budget consolidation measures together with a favorable economic environment will bring the public deficit below 1% in 2007:

**Table 1: The Administration’s budget situation**

| As a % of GDP                           | 2004 | 2005 | 2006<br>(estimate) | 2007<br>(forecast) |
|---|------|------|--------------------|--------------------|
| <b>Financing balances by sub-sector</b> |      |      |                    |                    |
| <b>Public Administration</b>            | -1.1 | -1.0 | -1.5               | -0.9               |
| Central Administration                  | -2.5 | -2.3 | -3.2               | -2.9               |
| Local Administrations                   | -0.1 | -0.2 | -0.1               | -0.1               |
| Social Security                         | +1.6 | +1.5 | +1.8               | +2.1               |

Source: Notification to the Commission on 1 October 2006 of deficit and public debt data from 2004-2006, and draft budget for 2007

In accordance with the framework set out by the Tripartite Accord, the budget consolidation effort will continue beyond 2007 in order to re-establish a balanced budget situation as quickly as possible, and no later than 2009. Returning to a balanced budget and keeping public debt very low are essential conditions for allowing the State to stabilize economic

activity through unfavorable periods in the economy as well as to conserve relatively favorable conditions at the outset in terms of aging of the economy and the pressures that this phenomenon brings on public finance.

Containing inflation is one of the principal priorities of the 28 April 2006 Tripartite Coordination Committee accord. The Government and social partners agreed on a group of measures aimed at better controlling inflation, especially core inflation, as listed below:

- Voluntary pricing agreements between different economic sectors
- A comparative price indicator for prices in the Greater Region
- De-indexation of contracts concluded by the State by limiting the repercussion of indexation on only the payroll aspects of these contracts
- Analysis of rules and practices of import lobbies that are weighing on business supply policies from a European competition law perspective
- A policy of revitalization in the area of competition
- A prudence policy in terms of adapting administrated prices
- Neutralization of some taxes and excise taxes from the perspective of the automatic wage indexation system
- A modulation in the application of index-linking over the period of 2006-2009
- Temporary (till 2008) de-indexation of the flat rate educational payments and sums paid by the National Family Allowance Fund

In concert with the employer organizations and the Luxembourg Consumers Union (*Union luxembourgeoise des consommateurs* (ULC)), the Government launched preparatory discussions for drawing up a “Plan for Controlling Inflation” (*Plan de maîtrise de l’inflation*).

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| IG 2 - Safeguard economic and budgetary sustainability, a prerequisite for more jobs |
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The budget consolidation measures approved by the Government together with the social partners will restore equilibrium in public finances in the medium term, meaning no later than 2009.

These measures aim chiefly at braking growth in public expenditures, while working to further offset costs through the revenues effort. The objective of implementing this budget strategy is for the Government to bring about structural improvement in public finances. In view of the high degree of volatility in public revenue that is characteristic in a small and extremely open economy, budget consolidation by means of controlling expenditures is an essential requirement for avoiding a resurgence of structural deficits in the future. In addition, consolidation by expenditures allows Luxembourg to maintain fiscal and parafiscal pressure that is relatively favorable when compared internationally and thus conducive to job creation, which is a further essential factor in guaranteeing a balanced budget in the medium term for the social security sector.

Luxembourg’s public debt ratio of less than 10% of GDP is one of the lowest in the European Union and the country has strong financing reserves for the pension system representing over 25% of GDP. These characteristics give Luxembourg a favorable position from the outset for meeting the economic and budgetary challenges related to an aging population, challenges that are explicitly acknowledged by the Government.



Thus, in the seventh update of the stability program, the Government introduced long term projections showing that equilibrium between revenues and expenditures for the general pension scheme of the private sector and the special regimes in the public sector are secure until 2020. However, beginning in 2020 the impact of an aging population will make itself felt to the fullest degree. If no policy changes are made, expenditures in the pension system will exceed revenues and the financing reserve of the pension system will gradually begin to be whittled down.

In order to prepare Luxembourg for dealing with the consequences of an aging population, the Tripartite Coordination Committee concluded in April 2006 that *“the Government and social partners will proceed with the creation of a study group whose task will be to draw up proposals for ensuring the long-term sustainability of pension schemes and to analyze the various measures that could be adopted to guarantee long-term viability and to adapt the pension scheme to changes occurring in the course of professional careers, to the aging of the population and to its impact on the duration of time spent working in a person’s life.”*

### 3.2 Microeconomic reform aimed at increasing growth potential

IG 7 - Increase and improve investments in research and development, in particular in the private sector, with a view to establishing a European area of knowledge

#### OBJECTIVE: Increase R&D activities

##### Public sector

The Government's R & D and innovation policy, as formulated in the government program, in addition to its will to fully subscribe to the Lisbon Strategy—emphasized by its intention to increase public allocations for R & D to 1% of GDP—confers a preminent position to this policy in the general context. The creation and subsequent development of the University of Luxembourg in 2003 to provide a new and supplemental player in the arena constitutes an enhancement of premium importance to the national research and innovation system.

**Table 2: Changes in budget allocations to R&D (2004-2008)**

| Year                                | 2004 | 2005 | 2006  | 2007<br>(forecast) | 2008<br>(forecast) |
|-------------------------------------|------|------|-------|--------------------|--------------------|
| Allocations to R&D<br>(Units: Mn €) | 72.3 | 92.8 | 111.6 | 140.0              | 185.0              |
| % of GDP                            | 0.29 | 0.34 | 0.38  | 0.44               | 0.54               |

Source: Ministry of Culture, of Higher Education and Research

In view of these significant changes in allocations over recent years and even greater changes to come in the future, the Government held a Council meeting in June 2005, when it decided to request that the OECD<sup>22</sup> carry out a critical evaluation of the nation's current research and innovation mechanism. This report, published in May 2006, places particular importance on the public research segment without failing to account for the overall context and for interaction with the private sector. It identifies the principal strengths and weaknesses in the current environment and makes specific recommendations for optimizing the system and for acquiring a better capability to guide future national policy in the subject. To improve coordination between the various political players a Coordination Committee, co-chaired by the minister for the economy and foreign trade and the minister for culture, higher education and research, has been formed. Its objective is to favor a horizontal approach to R&D activities.

The National Research Fund (NRF) launched a long-term forecast by theme in January of 2006<sup>23</sup> with the ultimate goal of pinpointing research subjects of socio-economic interest for Luxembourg that could involve all of the players concerned, public and private, as well as civil society. The NRF devised a program in December 2005 entitled "Promoting International Cooperation" (INTER). The goal of the program is to promote international

<sup>22</sup> OECD, OECD review of Luxembourg's innovation policy, Paris, 24 May 2006. In view of the significant changes in the research and innovation landscape in Luxembourg, especially the establishment of the University and the Government's commitment to invest more in R & D and innovation in upcoming years, a certain number of conclusions come out in this report. For more details see Appendix 3 and the following website: [http://www.gouvernement.lu/salle\\_presse/actualite/2006/05/31ocde/index.html](http://www.gouvernement.lu/salle_presse/actualite/2006/05/31ocde/index.html)

<sup>23</sup> <http://www.fnrforesight.lu/>

scientific cooperation, create synergies between Luxembourg and foreign research centers and to provide a better approach to resolving certain cross-border issues and subjects.

Providing for interaction between science and innovation is one of the current primary considerations for decision-makers. The law of 1987 that created public research centers (PRC) provides for PRC cooperating in scientific and technical as well as technology transfer between the public and private sectors, counseling companies that are introducing new technologies activities and promoting the creation of new economic activities. In order to further secure the links between public and private sectors, the Government is developing new measures in this area, especially public-private partnerships (PPP).

The year 2004 marks a change in the PRC financing logic. In the transition toward a multi-year financing model, based on a multi-year scientific and technological work plan and a strategic paper, which is governed by conventions and performance contracts and formalized by a list of performance indicators used to follow up on strategic, technological and scientific ambitions of the research centers, the financing structure of PRC underwent a pilot transitory phase between 2004 and 2006. The project-by-project financing system, used until the end of 2003, involved a considerable administrative effort and had inherently limited flexibility. This model was replaced beginning in 2004 with a system of financing by strategic avenue of approach, grouping the different research activities in a research facility in a given year on the basis of multi-year work plans. Using this logic, more ex-post facto evaluations will be made and progress will be measured with relation to the initial research projections as laid out in the multi-year programs for centers. This strategic avenue of approach financing involves more significant third-party financing that varies from center to center and depends on the type of activity. Financing requirements can reach to 40%. A final note: the National Loan and Investment Company (SNCI) has put in place the “University of Luxembourg / PRC” facility in order to facilitate financing of projects originating from public R & D systems.

In September of 2006, the Government approved a multi-year founding contract between the State and the University of Luxembourg. In application of the law of 12 August 2003 creating the University of Luxembourg, the development of the University is the subject of a founding contract extending over several years negotiated between the State and the University. The contract, concluded for a period of four years, applies to the general policy of the university, its strategic choices, its objectives and its activities in the areas of teaching, research, student mobility and administration. It specifies the seven research concentrations considered to be priorities for the period including 2006-2009. These are information security and reliability, materials sciences, life sciences, European law and Commerce law, international finance, educational sciences and Luxembourg studies. In the area of budget, it is stated in the contract that the State agrees to finance the activities of the University through an annual budget allocation that will increase annually, reaching the sum of 72 million euros in 2009.

The year 2005 was also memorable through the accession of Luxembourg in the European Space Agency (ESA) as a full member. Membership in the ESA will give impetus to developing the competitiveness of the industry and research centers of all sectors of the economy linked to space technologies. Technological R & D in the aeronautical and spatial field and the application of the results of these efforts constitute a significant stake both at the national level and the European level for space policy and the implications on numerous sectors of the economy, especially telecommunications.

### Private sector:

Policies aimed at bolstering and increasing physical capacities of R & D in Luxembourg are beginning to bear fruit. Two major industrial companies have recently decided to establish new research facilities in Luxembourg. Currently, private research is concentrated only in a few companies<sup>24</sup>. These new investments will contribute to positioning the portion of industrial companies' research over a wider base. Overall, the number of financing requests for private research projects has increased. From 2004 to 2005 the number of research projects submitted to the Government that were subsequently processed increased by 5.88%.

### **OBJECTIVE: Increase the pool of human resources**

Human resources in science and technology play a basic role in the development of R & D and innovation. In this sense, the national scholarships system for doctorate and post-doctorate candidates seeking training-research scholarships is currently undergoing a reform to better respond to the current challenges of the national research and innovation policy in the given context, following a major increase of over 50% in terms of individual scholarship amounts in 2005.

An effort will be introduced to provide additional motivation to encourage mobility of young researchers between the public and private sectors and to reinforce cooperation links by means of human resources between the two sectors in the area of research and innovation. It should be noted that training-research scholarships may be allocated independently of candidates' nationality for research work representing a direct interest to Luxembourg. The reform of the system follows the recommendations the European Commission proposed in the Code of Conduct and in the Charter for recruiting research personnel that aims to eliminate the very often excessively precarious situation of researchers in Europe. It seeks to create basic conditions for recruiting and retaining high value researchers in environments that promote the development of performance and productivity.

In February 2006 a study group was set up and tasked with transposing into Luxembourg law the directive 2005/71/CE relating to an admissions procedure for scientific research specific to nationals from other countries. The study group is comprised of representatives of the Ministry of Culture, Higher Education and Research, the Ministry of Foreign Affairs and Immigration, the Ministry of Labor and Employment, the Ministry of the Economy and Foreign Trade and the Social Security Ministry. It is expected to complete its work by the end of 2006.

A supply of human resources is also essential to ensure the development of R & D activities in companies. With regard to mobility of researchers, a recent Grand-Ducal regulation specified several modifications to the measures applicable for employing foreign workers in Luxembourg, while adoption of the new legislation on immigration is still pending. It will no longer be necessary for non- Community researchers who stay in Luxembourg for a period under three months as part of scientific exchanges or research work to obtain a work permit. In addition, the procedure for obtaining work permits has been simplified. It is no longer necessary to obtain a bank guarantee prior to receiving a work permit, which accelerates the process.

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<sup>24</sup> See Ministry of the Economy and Foreign Trade, *Bilan Compétitivité 2006*, Luxembourg, 13 September 2006, p.112. [http://www.odc.public.lu/actualites/2006/09/13\\_bilan\\_compete/index.html](http://www.odc.public.lu/actualites/2006/09/13_bilan_compete/index.html). The ten largest companies represent 70.8% of domestic research and development expenditures by companies, the 20 largest companies account for 79.6% and the fifty largest companies 89.1%. In other words, 10% of firms perform 80% of private investment in R & D while 90% of firms that perform R & D only account for 20% of total investment.

Luxembourg launched a campaign called “Why not Researcher?” under the European initiative “Researchers in Europe” and assembled participants in teaching, research and the promotion of science, on both the political and executive level, in order to coordinate initiatives already existing in the area by providing them greater visibility, as well as launching an awareness and information campaign about opportunities for researchers in Luxembourg in both the public and private sectors. One segment of the campaign, the “Researchers in School” action focused on visits by researchers to schools. This was an effort to promote the profession of researcher rather to highlight science itself. The possibility of meeting people in the profession gave a face to researchers and made tangible beings of them to students aged between 15 and 18. For this action, Luxembourg researchers working in Luxembourg, as well as researchers from other European countries were invited to join in on the initiative. Based on experience from the 2005 campaign, follow-up actions were developed with schools and youth in Luxembourg and abroad so as to increase young peoples’ interest in the area and to promote exchanges connected with their experience with science and technology.

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| IG 8 - Facilitate all forms of innovation |
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**OBJECTIVE: Promote the creation and development of new companies**

In promoting direct foreign investment, the Government has bolstered the network of offices of the *Board of Economic Development* (BED) abroad. In September 2006, a new office was established as part of the Luxembourg consulate in Shanghai, China. This office will consolidate and enlarge contacts with China, a country of premier importance. Since early 2006, a new office has been operational in the United Arab Emirates, in Dubai. This office is bolstering links with the Arab nations in a particularly prosperous and dynamic region.

In order to increase the capacity of accommodating young start-ups, the incubator *Ecostart* in Foetz is in the process of expansion. Ongoing construction has been forecasted for completion in the first quarter of 2007. In parallel, the Government approved a draft law for the construction of a new incubator at Belval-Ouest.

Technological clusters that operate within the national innovation agency LuxInnovation GIE were extended to the PRC. The ESC of the Greater Region published a report in May 2006 concerning the technological clusters. The study, entitled “*Structures des clusters dans la Grande Région*”, developed a certain number of recommendations and measures to implement in order to facilitate collaboration between existing structures in the Saar-Lor-Lux region.

**OBJECTIVE: Promote the concept of intellectual property**

The Government has undertaken several awareness actions, including an exposition as part of the Science Festival, instructive workshops for young people at the Science Festival, and the tele-training platform on intellectual property (DIPS), training intended for professionals in companies.

**OBJECTIVE: Spread the use of ICT by all players in the economy**

The company LuxTrust S.A. was established in November 2005 as a partnership of the Luxembourg Government, which holds 66% of share capital, and some prime players of the private sector in Luxembourg. LuxTrust is a certification authority that issues and manages extremely high level security electronic certificates to meet the heightened security requirements of electronic business for the Government, the financial sector and other players in the Luxembourg economy, while keeping an international orientation through the adoption of internationally recognized standards.

In an effort to reduce digital divide in the area of information security, citizens, SME and administrations have been targeted in awareness campaigns carried out by the CASES structure<sup>25</sup>. This effort was bolstered by an approach for adolescents and an *e-learning* platform for citizens and SME. An observation post was implemented to monitor IT threats and projects financed by the Government contribute to the de-mystification of threats and to the adoption of adequate protection measures by all persons concerned. This public key infrastructure (PKI) will be used to secure electronic communications paths and to ensure interoperability between different economic agents, by means of strong authentication procedures and an electronic signature with a certain legal constraint.

The Government, through the *eLuxembourg* service, is pursuing its efforts to make available sector and theme content, while keeping to the accessibility standards.

**OBJECTIVE: Develop high performance and fully integrated infrastructures in international electronic communications networks**

With regard to developing broad band and mobile networks, there is a gradual progression toward a third generation environment, called 3G. Around 90% of the population of the country can currently access 3G networks in place.

The goal of improving international and national connectivity capacities is being pursued through the implementation of an organization with the following objectives:

- The construction, operation, management and the optimization of one or several primary Internet access centers
- Development, optimization and operation of one or several fiber optic networks linking the country to primary Internet access centers located outside Luxembourg's borders
- Development, optimization and operation of a fiber optics network linking domestic Internet access centers to primary domestic centers, and the administration and management of the resources associated with these networks.

Two facts have emerged following the implementation of a proactive approach in management of the radio-electric spectrum:

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<sup>25</sup> *Cyber world awareness and security enhancement structure*

- On one hand, with regard to innovative use of radio frequencies in the area of wireless connectivity, two established operators, SES ASTRA and CEGECOM, joined together in July 2006 to apply for a fourth Luxembourg 3G license to be operated under the name of ASTRALIS. This license is for a new branch of complementary UMTS services, Convergence Satellite UMTS services, through collaboration with or links to other players. Currently, three lines of services are in development: 1. an interactive television system operating through a digital set-top-box that is linked by Bluetooth to a mobile device; 2. a line of services intended to give drivers access to new wireless applications, in a way similar to GPS technology; 3. the development of an alternative network for providing communications in disaster situations. The first services are expected on the market in 2009.
- Additionally, it can now be stated that transition to the digital arena is nearly complete, in view of the optimal utilization of freed capacity resulting from the transition process. Initially freed capacity is utilized to transmit more television programs on ground-based digital networks. Later, these capacities will be made available for other services such as DVB-H and TVHD.

**OBJECTIVE: Adopt the regulatory requirements applicable to the media to promote circulation of content independent of the technology in use**

In this area, it is important to note that the revision of the so-called “Television Without Borders” European Directive is underway.

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| IG 10 - Strengthen the competitive advantages of Europe’s industrial base |
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Plans for the reconversion of the new industrial wasteland were begun in the autumn of 2005.

**OBJECTIVE: Acquire better understanding of competitiveness**

The Government completed two sector studies that will assist in strengthening the industrial base of the country.

The first study concentrated on the logistics sector. The report, entitled « *La logistique basée sur le fret aérien au Luxembourg : situation actuelle et potentiel de développement* », was completed in November 2005 and was used to identify strengths and weaknesses in the sector and to outline a certain number of measures to extend this part of the economy in Luxembourg.

The second study centered on the biotechnology sector and was carried out in 2005. Its goal was to evaluate and to clarify development opportunities in Luxembourg in the area of biotechnologies applicable to the health segment of the economy.

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| IG 11 - Encourage the sustainable use of resources and strengthen the synergies between environmental protection and growth |
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There are several sector master plans in different stages of drafting to be used as coordination instruments on the national level and between sectors having an impact on the country and land use planning.

The draft sector master plan for Transportation<sup>26</sup> is to be completed at the end of 2006 or the beginning of 2007. Draft sector master plans for Housing and Preservation of larger Countryside and Forest areas are to be completed by the end of 2007. Preparatory work for the Commercial Zone sector plan has been begun. A study group is expected to be established in the autumn of 2006 for this project.

### **OBJECTIVE: Promote a balanced environmental policy**

The Government has drawn up as a priority two instruments to be used in promoting a balanced environmental policy. These include the first action plan for reducing CO<sub>2</sub> emissions entitled “*Changement climatique: agir pour un défi majeur*” (Climate change: Action in the face of a Major Challenge) and the National Plan for the Protection of Nature (NPPN).

The measures transmitted in the action plan “*Changement climatique : agir pour un défi majeur*” are organized around two considerations: limiting the dependence on fossil fuels by accelerating their replacement with renewable energy sources such as thermal energy production and the search for energy savings, by means of increasing energy efficiency. The action plan includes regulatory measures, voluntary accords, grants and taxes and awareness, training and counseling initiatives<sup>27</sup>.

The National Plan for the Protection of Nature (NPPN) is a political action program in the area of protection of nature for the period 2007-2011. Its aim is to achieve the UE goal of putting an end to the erosion of biodiversity. To do so it proposes preservation and conservation measures relating to species and habitats in order to resolve the problems persistently encountered in the area of protection of nature and conservation of biodiversity. In addition, it should serve as a guideline for other concerned sectors. Priority measures were identified through consultations with the main players operating in the realm of nature protection. An outline plan for the text of the NPPN is currently in drafting. The schedule for the project indicates submittal to the Government Council in December 2006, following the consultation process with concerned players in the domain, with subsequent launching in early 2007.

The National Sustainable Development Plan (1999) called for the establishment of a national network of zones of nature protection interconnected with ecological corridors called the “National Biodiversity Network” by 2010. Five per cent of the nation’s territory is to be classified as “nature reserves” and five per cent of the country’s forest land designated as “untouchable forest” between now and 2010.

In addition to the measures laid out in the programs described above, a certain number of activities and projects of the *Centre de Ressources des Technologies pour l’Environnement* (CRTE: Environmental Technologies Resources Center), a structure shared between the Government and the Henri Tudor PRC, seeks to achieve the goal of promoting sustainable consumer patterns and above all that of eco-efficiency<sup>28</sup>.

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<sup>26</sup> See also IG 16 and Appendix 1

<sup>27</sup> Further details concerning these measures appear in Appendix 2. Measures included in this action plan also partially cover the implementation of guidelines expressed in the principle “Promote a competitive energy policy”, as well as under the principle “Promote sustainable consumer patterns” in IG 11.

<sup>28</sup> More precisely, this involves activities whose objectives are to reduce the impact on the air, land and water segments of the environment that result from human activities. This is to be done by implementing RDI (Researcher Development Initiative) projects aiming at sustainable management of natural resources and energy.



## **OBJECTIVE: Promote a competitive energy policy**

Since the autumn of 2005, progress has been achieved in the area of energy policy.

In August 2006 the Government submitted two bills to Parliament dealing with the organization of the electricity and natural gas markets. These bills are the transposition of European Directives 2003/54/CE for electricity and 2003/55/CE for natural gas that target an accelerated establishment of the domestic energy market. The two bills also transpose two directives relating to security of supply of electrical power and natural gas (directives 2005/89/CE and 2004/67/CE). The application of this new legislation will provide economic players with non-discriminatory access to markets as well as greater transparency, it will increase competition in the markets and will positively influence supply reliability. As such, it provides full potential for increasing competitiveness within the Luxembourg economy.

## **OBJECTIVE: Promote eco-efficiency**

The Government continues to consider the increase in energy efficiency and the development of new and renewable sources of energy a priority.

To this end it concluded a voluntary accord with the Luxembourg Federation of Industrialists (FEDIL) to improve energy efficiency in Luxembourg's industries. The accord was extended in 2002 and ends in 2007. The Government intends to roll over the voluntary accord and to widen the scope of this instrument of energy efficiency endorsement to other sectors of the economy.

A draft Grand-Ducal regulation on the energy performance of buildings is now in the review process. This regulation largely transposes the European directive on the energy performance of buildings (2002/91/CE). The objective of the regulation is to ultimately make all buildings less wasteful of energy resources and to set out the basis for sustainable energy savings that spans the entire life cycles of these buildings. Furthermore, it will serve as a federating clause for the creation of sustainable local and regional jobs in the construction sector.

Since 1994 the Government has actively promoted the development of the cogeneration concept, both through providing guaranteed remuneration for electricity produced and by offering investment grants for installations of this type. In view of the transposition of the European directive concerning the promotion of cogeneration activities (2004/8/CE), 1994 legislation was fundamentally revamped and a new regulation that furthers the promotion of cogeneration is about to be submitted for consideration.

In addition to the aid schemes for energy savings and the use of renewable energy sources,<sup>29</sup> as well as the ecological grants<sup>30</sup> that remain in effect form a large part of the endorsement policy for renewable energy sources, the Government gave impetus to the use of biofuels by introducing tax rebates for these fuels as of 1 January 2006 and, as a result, also transposed directive 2003/30/CE intended to promote the use of biofuels and other renewable fuels in transportation.

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<sup>29</sup> The Grand-Ducal regulation dated 3 August 2005 that institutes an aid scheme for physical persons promoting rational use of energy and optimizing renewable energy sources.

<sup>30</sup> The Grand-Ducal regulation dated 3 August 2005 that institutes an ecological grant to encourage use of electricity produced through windmills, hydraulic means biomass or biogas.

The Government has set January 2008 as the date to complete a full review of its renewable energies promotion and its energy efficiency processes. To prepare this stage, it began preparations to eventually formulate an overall energy strategy that accounts for supply, competitiveness and eco-efficiency requirements, and that are more based on market instruments.

**OBJECTIVE: Promote sustainable patterns of consumption**

Various consumer protection organizations have carried out a series of consumer education actions that were co-financed by the Government.

The Government has conferred the general task of disseminating consumer information to the Luxembourg Union of Consumers, which gets annual co-financing for this purpose from public sources. This role harks back to the European Consumers Center through its segment on cross-border consumer issues, which also benefits from State financial support. These two structures will be present at the *Oekofoire*, an event whose objective is to provide information to citizens about lifestyles favoring sustainable consumer patterns. Actions centering on information, awareness and training to promote rational use of energy and renewable energy were undertaken and will continue, especially targeting municipalities, construction professionals and secondary education students. The Government is collaborating actively with Agenda Europe, publishing information about sustainable consumer lifestyles intended for students in their final year of school in secondary education programs.

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| IG 12 - Extend and deepen the internal market |
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**OBJECTIVE: Promote accurate and timely transposition of directives and proper functioning of the internal market**

The Government has carried out a more rigorous monitoring of European legislation to be transposed into national law, carrying on regular discussions at various intervals about changes in the transposition deficit. Over the last months it has acquired a mechanism that aims to guarantee the immediate transposition of directives that impact the internal market and also all Community directives, via a circular from the Prime Minister to the members of the Government Council in July 2006. The role of the delegate Minister of Foreign Affairs with regard to follow-up and coordination concerning this mechanism on the national level was strengthened and confirmed by the circular.

This mechanism, for which the various elements are currently in the process of full implementation, aims at substantially reducing the transposition back-up by July 2007 and at avoiding the occurrence thereafter of new delays. It has already improved coordination and follow-up in the transposition process on the national level.

Regular contact and information exchange with Parliament have also been improved.

These efforts resulted in Luxembourg reducing its transposition deficit by 4.4% when the National Plan for Innovation and Full Employment was introduced at the end of 2005 to 3.4% at the end of September 2006, with the number of directives to be integrated into national law dropping from 72 to 55.

Nevertheless, there must be continued concerted efforts to achieve the objective of the maximum deficit of 1.5% continuously stressed by the European Council.

With regard to the SOLVIT network, the national representative carried out a screening with the results to appear in a summary report at the end of 2006. Perspectives for simplifying administrative processes will be evaluated on the basis of this report. Furthermore, the representative has committed to stronger promotion of SOLVIT to the general public<sup>31</sup>.

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| IG 13 - Ensure open and competitive markets inside and outside Europe, reap the rewards of globalization |
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The competition authorities are pursuing as principals their legal mission of scrutinizing the cases relating to violations of articles 81 and 82 of the Treaty, independently of articles 3 to 5 of the 2004 law on competition concerning private arrangements and abuse of dominant position.

The Competition Council issued several opinions to the Luxembourg Regulation Institute (ILR) in the area of sector analyses of files, using information provided by the Competition Inspection service. This concerns the review of telecommunications markets to evaluate the competitive character of this market, to identify dominant operators if any and to hem in appropriate existing regulation. These analyses were provided for by the law dated 30 May 2005 relating to electronic communications networks and services and resulted in acquiring expertise in the sector that could subsequently be of use.

Outside of their legal responsibilities, the competition authorities are attempting to assume their responsibilities with regard to the National Plan for Innovation and Full Employment, which include performing market and sector studies, reviewing regulations with a view to eliminating barriers to accessing markets and other obstacles and restrictions to the free play of competition. In view of the scope of the task and the limited resources available, for the moment they are restricting their work to evaluating the independent professional sector.

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| IG 14 - Create a more competitive business environment and encourage private initiative by improving regulations |
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The Government has given priority to the simplification of administrative formalities that hamper results and initiative in SME, and has implemented a National Committee for Administrative Simplification (*Comité national pour la simplification administrative en faveur des entreprises*, CNSAE) to benefit companies.

Initially, the CNSAE analyzed current administrative burdens incumbent on companies, producing the list of the ten largest administrative burdens. It will present the current status of this review to the administrations in question and draw up an action plan.

Later it appeared useful to examine the need for and efficiency of legislative projects on both the national and Community levels that entailed administrative burdens for companies. In facing this challenge, the CNSAE set out a system and analysis methodology of the new texts containing administrative burdens for companies and recommended a model of a permanent analysis structure for administrative simplification to benefit companies.

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<sup>31</sup> For more information see: <http://www.eco.public.lu/attributions/dg2/solvit/index.html>

## **OBJECTIVE: Increase impact studies and analyze flows**

With regard to developing impact studies, the flow analysis procedure has authors of texts fill in an updated impact evaluation sheet in the early stages of their work. The secretariat of CNSAE will also receive files relating to companies in order to formulate an opinion on administrative burdens.

The CNSAE, together with the Ministry of Public Administration and Administrative Reform, is offering a training program for probationer officials that include general and specialized training. It also is providing continuing training for State and Municipal civil servants centering on improved regulations and administrative simplification on the municipal and national levels, as well as a new impact evaluation sheet and new responsibilities for authors of legislative and regulatory texts.

CNSAE has identified the following four prerequisites for administrative simplification, to be used on proposals for simplifying existing or other texts: a unique identifier, modern legislation in the area of data protection, electronic certification and identification and data sharing and exchange between administrations.

In addition, the following items were mapped out:

- As part of an initial consultation set up by CNSAE, a position was adopted concerning the reform and simplification of the law dated 2 August 2002 for the protection of persons with regard to the processing of personal data, resulting in a bill based on substantial simplification of required formalities and the clarification of some provisions of the law;
- The list with the major problems identified concerning particularly the following areas: impact statements, direct and indirect taxation, social security, accounting, health and safety, statistics, protected establishments, waste, the public markets, data protection, the food sector and transportation;
- A survey of SME was carried out on the perception companies have of satisfying administrative obligations and procedures;
- Suggestion sheets made available to companies as well as ministries, administrations and other parties allow them to identify difficulties in all areas and of make specific recommendations for improvement;
- Thresholds for exemptions in dispatches and arrivals for the statistical reports system INTRASTAT have been increased;
- Rendering statistics dealing with companies usable electronically;
- Translation into German of the procedures guide related to security in the food web;
- A schedule of statistics that may be consulted on the STATEC web site;
- The drafting of a scoreboard for proposals and actions in the area of administrative simplification benefiting companies;
- A “Unique identifier” note, which subsequently gives CNSAE a mandate for coordinating work in this subject;
- An Internet site dedicated to administrative simplification for the benefit of companies<sup>32</sup>.

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<sup>32</sup> [www.simplification.lu](http://www.simplification.lu) et [www.entreprises.public.lu](http://www.entreprises.public.lu)

The following are in the process of being accomplished: The virtual single window interface concept for centralizing and assembling the various administrative procedures in a single location. This will also give companies a single contact person and thus eliminate them having to go through several different administrative entities; The setting up of a Center for balance sheets (*Centrale des bilans*) and coordinated chart of accounts allowing companies to automate responses in statistical survey questionnaires; a forms registry to provide administrative aid in reducing the number of forms to be filled out by companies.

Lastly, as part of the “Electronic Assistance to Industrial Sector Companies” project, the Government began to analyze the administrative procedures to be followed by companies in the industrial sector in May 2006. This analysis extends from set up to current management. An action plan will be drawn up by the end of 2006<sup>33</sup>.

**OBJECTIVE: Codify legislative texts**

The Consumer Code is in the final phase of completion and will be submitted for adoption by the Government Council before the end of 2006.

**OBJECTIVE: Optimize information exchange between administration bodies and companies**

Virtual single-window interfaces, whose objective is to facilitate access to public services, will be presented according to the logic of the requestors of these services, independent of the complexity of the processes they are setting in motion.

Self evaluation of the public administration processes followed, if need be, by a reshaping of procedures and the regulatory framework justifying them, will result in shortening administrative delays and reducing costs of procedures for both requestors of services and public administrations.

With regard to the “electronic assistant”, progress achieved in coming up with the pilot project will result in getting the system on line in the second half of 2007. Initially, a limited number of procedures are targeted by this project.

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| IG 15 - Promote a more entrepreneurial culture and<br>create a supportive environment for SME <sup>34</sup> |
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**OBJECTIVE: Promote an effective entrepreneurial policy**

In June 2006, for the first time in many years a national “company visit day” was set up. A total of 25 companies hosted 10,000 visitors. The visitation day was organized with the aid of the Government. This event will be held again so as to promote a positive image of companies and SME with the general public.

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<sup>33</sup> The analysis, in its initial phase, will be limited to the company set up procedure and to the areas of responsibility of the Ministry of the Economy and Foreign Trade.

<sup>34</sup> For more information on this subject also see Frame 2.

**OBJECTIVE: Improve connectivity between Luxembourg and the European and international environments**

The Government has stressed the importance of maintaining high quality links to European railroad networks because major interdependencies exist between Luxembourg and the Greater Region, but also with the remainder of the countries in Europe.

Thus the TGV East links Luxembourg to Paris as of June 2006 with four round trip voyages per day. The renovated TGV trains have replaced express trains running between the two capitals<sup>35</sup>.

The project Eurocap-Rail is attempting to extend the Strasbourg – Luxembourg branch of the TGV East-Europe to Brussels that would result in a Brussels-Luxembourg-Strasbourg rail connection, serving the three institutional headquarters of the EU. Studies concerning the renovation and modernization of infrastructure between the Belgian border and the city of Luxembourg have been undertaken. This case is being worked on in close coordination with Belgian authorities in order to be able to submit a common file to the European Commission.

In addition, the new terminal for the national airport, under construction since December 2003, will provide clear optimization of passenger flows as soon as it opens in 2007, thus providing a response to the requirement of modernizing airport infrastructure by adapting to the current and future economic context.

Parallel with projects in the European and international arena, the achievement of infrastructure projects announced on the cross-border and national levels has been continued. Thus, a new rail line that links the Luxembourg airport and the European Kirchberg sector, which is in full expansion, to the national rail network is being planned for the medium term.

The Government reiterates its resolve to put in a light tramway that will pass through the center of Luxembourg to link up with the peripheral stations and highly urbanized neighborhoods, or where major development is projected in the medium and long term. For this an analysis has been undertaken to study changes in structural indicators and mobility, different concepts and plotting for routes of a possible extension of the rail network in the City of Luxembourg. A technical feasibility study was undertaken both from the perspective of establishing rail lines in the urban environment and making the link to the existing rail network and to projected new stations. The issue of estimating the number of passengers in terms of a modal split and a brief financial analysis of different scenarios were also undertaken. The conclusions of this study were presented to the press on 3 March 2006. The preferred project will provide the double benefit of increasing the attractiveness and capacity of public transportation in the city of Luxembourg and reducing toxic emissions by significantly reducing the number of buses circulating in the town center.

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<sup>35</sup> TGV trains will continue to use standard rail tracks until June 2007. As from June 2007, they will be able to use the new high speed line constructed between Vaires-sur-Marne (Île de France) and Baudrecourt (Lorraine), resulting in a gain of 75 minutes with respect to travel times between the French and Luxembourg capitals compared with before.

The Government's objective in the area of freight transportation is that as of 1 January 2007 rail borne freight should become more than a simple alternative to private operators and road carriers. However, the sector must strategically redirect itself and be able to demonstrate stand-alone profitability. Since the freight business is in structural deficit, a recovery program must be implemented urgently to ensure viability of the sector. This program will include strategic repositioning, operational improvements and access to costs comparable to those in the private market.

Following the analysis of various scenarios to ensure the longevity of the freight business, the *Tripartite Ferroviaire*, comprising the Luxembourg Government, Union representatives and Luxembourg Railroad management - CFL (*Chemins de Fer Luxembourgeois*) - agreed in 2005 that a stronger partnership with Arcelor provided benefits in implementing the strategic repositioning that is essential to CFL's freight business.

As a result, the *Tripartite* approved a joint venture between CFL and Arcelor, to be called CFL-Cargo, in which CFL will retain the majority of shareholder's equity. The venture will be based on a business plan and operational concept devised by the two companies. The new company will begin operations at the end of 2006.

The Government also began operating a railway-highway freight link between two platforms located respectively in Boulou (France) and Bettembourg (Luxembourg) using the low floor wagons developed by Modalohr.

In the initial phase, the railway-highway link will operate only one round trip voyage per day, for about 350 days per year. This will mean that 30,000 heavy trucks will be transported each year. This service will go on line in the first quarter of 2007.

Subsequently, the project's objective is to pursue the expansion of the service by strengthening results obtained in order to arrive progressively at a proper rhythm.

Several initiatives were initiated in the area of freight corridors in order to improve rail transportation of merchandise through increased use of this form of transport. Luxembourg supports these initiatives and participates in the development of the following freight corridors: Rotterdam - Lyon, known by the acronym "ROLY"; Antwerp - Basel; BELIFRET (the precursor in Europe takes its name from the first letters of the countries that are traveled through: Belgium, Spain, Luxembourg, Italy and France).

**OBJECTIVE: Carry out a proactive policy in connectivity of electronic communications networks**

A diagnosis of the international connectivity status of country networks that was ordered in 2005 confirmed the Government's stance with regard to its continued efforts to improve electronic communications infrastructure. In July 2006, the Government introduced a new bill pertaining to information highways. The goal of the project is to improve Luxembourg's international connectivity by introducing a very high speed network between the center of Luxembourg and the primary Internet access centers abroad. This is a general economic policy measure that benefits companies established in Luxembourg as well as consumers, who should see Internet access costs drop even further. A second measure achieved in this area is the marketing of frequencies that allow *Wimax* and *Tetra* type mobile phone connections.

## Frame 2 – Implementation of a European Charter for small companies

### I. Priority areas for 2005-2006

#### Measures to aid companies, especially for start-ups and transfer of ownership

- The *International University Institute of Luxembourg (IUIL)*, in collaboration with the *University of Luxembourg*, has created an electronic platform entitled the *Business Plan Toolbox*. It is an online aid intended for future business, micro-enterprises and SME entrepreneurs. It acts as a support services center for their processes, provides help in formulating business plans and complying with the essential administrative formalities. The “My Project” module accompanies users through the different steps beginning with rough description of the project through to financial planning for it. A virtual guide is present that contains the necessary information from responding to questions and providing solid examples. The online coaching module puts users into contact with experts in different domains and with managers or SME owners. This functionality is now offered to students of the Faculty of Sciences, Technology and Communications (STC) at the University of Luxembourg who are doing their company project and in the future will be available to all users of the *Business Plan Toolbox*. The “single form” module facilitates the administrative processes entrepreneurs must overcome in their efforts. (IG 8).
- The Portal “Single-window interface for companies”, which was chosen as a standard of good practice at the 2006 Charter Conference, is an online platform that serves as an interface for communications between companies, the public administration and company organizations. This portal is intended to become interactive by allowing companies to carry out secure electronic transactions with the Ministries and Administrations. (IG 14).

### II. Other areas

#### Education and Training for Entrepreneurial Spirit in Companies

- The integration of company management modules for entrepreneurial activities in the curricula of the STC School of the University of Luxembourg, was drawn up as follows for all departments: One 60-hour module for the 4<sup>th</sup> year of industrial engineer studies; One 45-hour module for the 1<sup>st</sup> year of bachelor studies; One 30-hour module for the qualifying master degree. Students do not sit for traditional style examinations, but rather are formed into groups and required to draw up a business plan using the site [www.businessplan.lu](http://www.businessplan.lu). This initiative is part of the policy adopted by the European Commission through its study group “Entrepreneurship in higher education especially within non-business studies” (IG 8).
- Drawing up case studies on Luxembourg SME has been formalized. These case studies are teaching tools used in secondary, superior and continuing education courses beginning with the school year 2006/2007<sup>36</sup> (IG 8 and 15).
- The concept e-learning “*Strategic marketing and marketing management techniques*” was put into practice. The project’s objective is to “translate” an existing syllabus into an interactive e-learning concept. The course has become more interactive and dynamic through the involvement of events, interviews and audio visual sequences, graphics, case studies on Luxembourg SME and self-evaluation exercises. This e-learning course is used at several levels including long distance consultations (e-learning); additional information on [www.businessplan.lu](http://www.businessplan.lu) ; the inclusion of some parts in the STC School coursework and the integration of continuing education training modules continues in terms of company management (IG 8 and 15).

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<sup>36</sup> This project also appears in the policy adopted by the European Commission – see the conference titled “*Entrepreneurship Education in Europe*” organized by DG Enterprise and Industry in Oslo (*content/curriculum/non-business-studies how to increase the use of European case studies*)



- The non profit association *Jonk Entrepreneuren* was set up in Luxembourg in 2005 and brings together representatives from the business world and education sector, especially SME owners. The association is based on a public-private partnership of which 48.5% of the yearly budget originates from the public sector and 51.5% from the private sector. Its mission is to encourage young people to be creative and initiate them into professional life by means of a partnership between the business and educational sectors in which they can manage actual miniature businesses and delve into other projects and programs in economics educational programs. Participants receive aid from volunteer counselors from the business world who place strong emphasis on the ethical aspect of business. The non profit association's principle activities include organizing visits and placements with companies, a pool of professional advisers and coaches who help set up mini-companies at the secondary school level and drafting business plans at the University level, as well as a mini-company Forum (IG 15).
- *Gründercup* Luxembourg 2005-2006 is a combination of training for setting up a business and managing a business in a simulated business set up competition. Winners of the competition can measure their skills against other students in the inter-regional *Gründercup* (IG 15).
- The Greater Region *Gründercup* was held in June 2006 via a partnership among the Universities of Trèves, Sarrebruck and Luxembourg. The event's objective was to set up a fitness club. The concept development process and the business plan were followed by a computer simulation session. The simulation was very close to reality and was based on business plans drawn up earlier in study groups. The virtual competition market evolves over the course of each of the competition's eight phases and participants must adapt the management of their fitness center accordingly. The next Greater Region *Gründercup* will be held in May 2007 (IG 15).
- *L'Institut de Formation de la Chambre de Commerce* and the IUIL (*Institut Universitaire International Luxembourg*), in close coordination with the *Chambre des Métiers* and HEC-Liège (Belgium) have been organizing a new training module called "Company Management for Professional Staff and Directors" since October 2005. The training has a major coaching segment that features an individual assistance mechanism by professional experts whose objective is to take the manager or director through the drafting of an action plan for the candidate's company project (IG 8 and 15).

#### Less challenging and more rapid registration

- The administrative hurdles faced by companies have been considerably reduced by the introduction of the interactive internet site internet at the Ministry of small and medium-sized businesses, tourism and housing and through the ISO 9000 certification of the approvals department there. Files are now processed in a uniform manner, rapidly and efficiently. Attaching a follow-up sheet to each file means that each business set-up application must be responsibly processed by reviewers. (IG 9 and 14).

#### Better legislation and better regulation

- The National Committee for Administrative Simplification to benefit companies (CNSAE) was named the good practices model for 2005, during the *Charte à Luxembourg* conference (IG 10 and 14).
- A new impact evaluation sheet for legislative and regulatory measures aims to analyze associated administrative burdens engendered by a project. In the future, this sheet is to accompany all draft bills and Grand-Ducal regulations. (IG 14).

## 4. Guidelines for employment policies<sup>37</sup>

The Government and social partners diagnosed a certain number of imbalances in their Tripartite Coordination Committee meetings between 31 October 2005 and 19 April 2006, including the labor markets situation. In the conclusions of the Tripartite Coordination Committee on 28 April 2006 full employment remains the primary objective of employment policy. In order to achieve equilibrium in this area, it is necessary to both invest in maintaining salaried positions and increase efficiency of the unemployment compensation system.

IG 17 - Implement employment policies aiming at achieving full employment, improving quality and productivity at work and strengthening social and territorial cohesion

### **OBJECTIVE: Measuring full employment: a wider employment rate criteria**

The employment rate, which expresses the percentage of the resident population in working life, increased in 2005<sup>38</sup>. While the national employment rate stood at 60.9%, that of resident aliens was 67.2%. In 2005, the figure for male employed persons (both citizens and foreign nationalities) was 73.3%, following a slight drop in 2004. In contrast, the rate of women on the job was 53.7% in 2005, compared to 51.9% in 2004.

In 2005, employment rates of persons between 55 and 64 years old rose significantly: it went from 30.4% in 2004 to 31.7% in 2005. This change is largely due to strong growth in the employment rate of women in this age group. The employment rate for men in this category however, remained unchanged.

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<sup>37</sup> This part of the implementation report was written chiefly by the Ministry of Labor and Employment (which served as the coordinator), the Ministry of National Education and Professional Training, the Ministry of Equal Opportunities, the Ministry for Family and Integration and the Minister of Social Security.

<sup>38</sup> Although the Lisbon 2 Strategy recommended to Luxembourg that the employment rate be increased in order to augment the supply of labor on the national level, to revitalize growth and to ease social and public expenditure, these findings must be put into perspective. Internal labor—meaning the total number of persons working on Luxembourg territory—increased between 2004 and 2005 by 2.9%, one of the highest growth rates in Europe. In its second opinion released in 2003 on the Broad Economic Policy Guidelines of the Member States and the Community (BEPG), the ESC critiques this apparent contradiction. The labor supply features three components: indigenous, cross-border and immigrant persons. Cross-border workers are completely excluded from employment rate statistics. This rate is a purely national resident concept. Yet the rate of cross-border workers in internal employment is 38%, and 50% of new jobs created in the recent past have been taken by cross-border workers. Thus the ESC critiqued the validity of this indicator in the case of Luxembourg. The indicator “*is not representative of macroeconomic realities in Luxembourg and lends itself even less as a macroeconomic employment objective, which should be serving as a basis for setting employment policy.*” In contrast, employment rates for the young, women and older persons are useful tools for understanding how to use human resources in the economy.

**Table 3: Employment rates, persons 15-64 years old (in %)**

| Status                     | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|----------------------------|------|------|------|------|------|------|------|------|------|
| Total population           | 59,7 | 60,1 | 61,6 | 62,7 | 63,0 | 63,9 | 62,2 | 62,5 | 63,6 |
| Luxembourg citizens        | 57,0 | 58,3 | 59,6 | 61,6 | 59,1 | 60,9 | 59,0 | 60,1 | 60,9 |
| Foreign citizens           | 64,3 | 63,1 | 64,9 | 64,4 | 68,6 | 69,3 | 66,7 | 65,8 | 67,2 |
| Men                        | 74,0 | 74,5 | 74,4 | 75,0 | 74,9 | 75,7 | 73,3 | 72,8 | 73,3 |
| Women                      | 45,2 | 45,6 | 48,7 | 50,1 | 50,9 | 51,8 | 50,9 | 51,9 | 53,7 |
| Male Luxembourg citizens   | 72,3 | 73,4 | 73,3 | 75,0 | 71,3 | 73,1 | 70,3 | 70,5 | 70,5 |
| Male Foreign citizens      | 76,9 | 76,2 | 76,1 | 75,1 | 80,4 | 79,7 | 77,4 | 76,1 | 77,2 |
| Female Luxembourg citizens | 41,1 | 42,6 | 45,4 | 46,7 | 47,1 | 48,2 | 47,5 | 49,4 | 51,1 |
| Female Foreign citizens    | 51,8 | 50,2 | 53,5 | 54,6 | 56,4 | 57,1 | 55,8 | 55,3 | 57,2 |

Source: STATEC, LFS (break in the series in 2003)

### **OBJECTIVE: All players assume responsibility**

Full employment in Luxembourg is a challenge that requires the intervention of a large number of players. The determination and implementation of a national strategy for the achievement of full employment can only be accomplished through shared efforts of the legislative and executive branches, the social partners, business milieus and people looking for jobs. Sharing responsibilities is an essential requirement for winning in the war against unemployment.

In the first place, a multitude of public entities are directly concerned. It is a question of setting up an appropriate framework for jobs and the fight against unemployment, then acting as an interface between supply and demand in labor. In addition to the Ministry of Labor and Employment and the Jobs Administration (ADEM), which often are confronted downstream with policies and actions different from their own in the area, other public entities are concerned such as the Ministry of National Education and Professional Training, the Ministry for the Family and Integration, the Ministry of the Economy and Foreign Trade and the Ministry of Social Security.

Even then, the best training and employment policies will not meet with success if the persons targeted by them are unmotivated and put out little effort while benefiting from these resources. Nor will it work if companies offer no internships and / or jobs to this resident labor force. Neither can companies consider working persons as throw-away objects to be disposed of during times of either structural or conjunctural economic problems.

Sharing responsibility should therefore have two sides to it: on one hand, the interplay between the various public institutions and on the other hand, that between the public administrations and the social partners with respect to those seeking and offering work.

The agreement hammered out in the Tripartite Coordination Committee on 28 April 2006 is based on this logic and sets well-defined objectives for all players previously named.

**OBJECTIVE: Re-evaluation of assuming responsibility for school children outside of classroom hours**<sup>39</sup>

The implementation of the “*maisons relais*” concept involving reception centers for school-age children aims to promote access of parents and especially women to the labor market by taking children in and educating them outside of classroom hours. By doing this, the measure will contribute to bolstering employment policy actions and to the fight against poverty and social exclusion<sup>40</sup>.

These reception centers aim at giving parents access to work, which will increase household income and by providing care and educational services in the centers during work hours, will eliminate the educational disadvantage children suffer from.

It follows that by these results the achievement of the “*maisons relais*” concept will contribute to promoting a solid approach to work life cycles and to young people and their parents attaining social inclusion, which clearly illustrates the mutual reinforcing occurring between the Lisbon Strategy and the struggle for social inclusion.

With regard to achievements in the area of creating space in the “*maisons relais*” structures since the adoption of the National Plan for Innovation and Full Employment<sup>41</sup>, it should be noted that between 2005 and July 2006, the number of spaces available in these centers grew by 8.88%. The total projected spots for 2009 equal an increase of 20.47% with relation to the places available in 2005.

At present, some “*maisons relais*” are in operation five days per week between 06h00 and 20h00. Ten centers offer additional services such as care for handicapped children. New synergies are introduced by implementing platforms for cooperation that bring together parents and school staff.

Since 2005, the *Qualiflex* project, the successor of *Fogaflex*, offers training to personnel that have some degree of practical experience, allowing collaboration among persons with diplomas in the field within the “*maisons relais*”. Furthermore, registered reception centers benefit from administrative simplification advantages for renovations and additions, as well as for operational issues in the centers.

<sup>39</sup> This is also an implementation measure of the European Youth Pact.

<sup>40</sup> Concerning the struggle for social inclusion, refer to points 2.1.3 and 2.4 of the national strategic report on social protection and inclusion (RNS 2006-2008). In general, in the framework of part 2 of this report (RNS 2006-2008) relating to the National Action Plan for Social Inclusion, refer to the developments described in Part 1. “*Overall View*”, under point 1.2. “*Strategic Approach*” and to the key information outlined in point 1.3. “*Key Information*” of RNS (2006-2008), which establishes the links existing between the Lisbon Strategy and the Social Inclusion Plan.

<sup>41</sup> In 2005, there were 8,000 places available in Government registered “*Maisons relais*” structures.

**OBJECTIVE: Meeting more of the cost for young people and flexible instruments for getting in and out of the labor market** <sup>42</sup>

Current legislation provides for unemployment indemnities to youths leaving school following an internship period of 26 weeks. In so far as the Government hopes to avoid cases of leaving school early by eliminating all factors that could be deemed incentives for doing so, it has been proposed that the unemployment benefits for youths in this case be ceased.

In exchange for this, the young people in question must be looked after, either through an active measure promoting jobs or in the framework of reform projects currently under consideration in the Government. This reform consists of a new bill concerning professional training courses introduced at the National center for continuing vocational training (CNFPC). The courses are directed at young people who do not meet the criteria for entering the professional sections of technical secondary education. This concerns young people not possessing the skills for accessing the labor market and those who have left school early. Unskilled youths who have left school will perform volunteer service.

Since the two above projects provide for indemnities should these youths need them, social cases can be avoided.

Here the link should be made between the new requirements of ADEM to offer an individual activation agreement to each young person no later than their third month on the rolls and the changes to legislation on the measures promoting jobs for young people that tend to favor instruments that include genuine prospects for employment.

**OBJECTIVE: Continued adaptation to the social security system**

In the area of social security, in accordance with the decisions of the Tripartite Coordination Committee in April 2006, the Government and social partners will create a policy review group whose objective will be to draw up proposals to ensure the long-term viability of pension schemes, to analyze the various measures that could be considered to guarantee their long-term viability and to adapt the pensions system to changes linked to new conditions of professional career evolutions, the aging of the population and its impact on time worked over peoples' lives.

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| IG 19 – Ensure inclusive labor markets, enhance work attractiveness and make work pay for job-seekers, including disadvantaged people and the inactive |
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**OBJECTIVE: Improve the effect of activating measures benefiting employment**

The underlying philosophy of the legislative reform on the payment of unemployment benefits as approved by the Tripartite Coordination Committee is that unemployed people be stirred to action as soon as possible by inciting them to seek and accept new work immediately. What should be avoided is that, with the prospect of guaranteed income, they slide into a passive mode leading sooner or later to dependence on social aid.

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<sup>42</sup> This is also an implementation measure of the European Youth Pact.

Thus the time spent by job seekers using active measures such as internships in companies to find jobs is taken into consideration in calculating the period required before the right to full unemployment benefits is acquired. In other words, the end of this period is considered equivalent to the involuntary loss of a job. For many persons there is fluctuation between seeking employment using these tools and periods of unemployment. Against a backdrop of an active labor policy, people who benefit from job-seeking aids but procure no employment contract at the end of this aid period will not be eligible for unemployment benefits until after the end of the period that benefits expires. As for unemployed persons, they must prove that they are trying to find jobs.

The conditions required for being considered eligible for unemployment benefits have also been changed with regard to the residence clause, and the time benefits can be paid can no longer exceed the total length of time worked.

Bill number 5144 on unemployment has been amended to read “Bill to Contribute to the Re-Establishment of Full Employment”. The bill will lay down a legal basis for occupying unemployed persons that are difficult to find jobs for using social initiatives for employment for an undetermined period of time. Active transitional measures for accessing the labor market will be available exclusively in companies in the competitive sector that have genuine employment opportunities, while permanent measures will be available in social initiatives benefiting jobs and will exclusively target incompressible unemployment.

### **OBJECTIVE: Make work pay**

In the context of discussions on how to make work pay, an analysis of active labor policy as part of the guaranteed minimum income mechanism leads to the following:

- Activating all beneficiaries of minimum revenue mechanisms that are eligible for measures provided by this mechanism can get households that benefit from the mechanism revenue greatly superior to the limits set by the system<sup>43</sup>. Multiple activations can, for some households, reduce the financial appeal of the labor market and can constitute a serious obstacle to job seeking on this market.
- Active labor market measures involving work for the collective good do not encourage the adoption of positive attitudes with regard to the labor market. The chance of getting back into the market is greater for persons who participate in active measures close to real job conditions<sup>44</sup>.

Working from these facts, which are in line with the “Key measures for 2005-2006” used in the segment “Make Work More Attractive” in the 2005 update of the Nations Action Plan for Social Inclusion approved in 2003, and also in line with that plan’s section titled “Make Work Pay”, the following specific measures were taken as a part of the GMI mechanism.

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<sup>43</sup> For example, a household with two adults can receive GMI benefits totaling €1,606.41. If 2 active measure mechanisms of the GMI or one active measure income is combined with a full-time salary, the household has twice the income allowed for the social minimum threshold, to wit €3,006.84.

<sup>44</sup> For example, for 41.5% of company internship type measures that expired in 2005, the cause the internship ended was that the intern entered the job market, whereas this was the reason for only 15.9% of the persons with an assignment for which the benefit has been awarded.

1. Per household: *the ceiling* for active labor market measures is a total of 40 hours per week, including the hours worked to fulfill the obligation of a normal work contract by one or several members of a given household. In practice, this means that a household that comprises several members that are eligible for active insertion programs may benefit to the maximum for this type of activity at full time, or if it so happens for two household members at part-time, and if one 40 hours per week activity is set up for a household member, or if the total of 40 hours per week is already reached by one or several work contracts, an activation initiative benefiting other household members is no longer taken.
2. For recipients of the GMI who are able to enter the job market: *Priority routing* toward the active labor market measures that are bridges to the job market. This inclusion approach is also stressed in the report on the national strategy for social protection and social inclusion appearing in 2006<sup>45</sup>. In application of item 2, the following measures are being promoted:
  - Internships in companies provided for in article 10(1) c of the amended law of 29 April 1999 establishing the right for all of a minimum guaranteed income. In application of the new guidance, the company internship serves as a preliminary probationary period after which a subsidized work contract is to be concluded. As such, the internship may not exceed a period of six months.
  - The subsidized work contract provided for in article 13 (paragraph 3) of the law dated 8 June 2004 that amends the law cited previously. The article cited earlier states that the National Solidarity Fund may assume some costs incurred in the hiring by a private sector company or non-merchant organization of a person in the insertion program on the basis of a determined or undetermined length contract. This does not include the State or Municipal entities. The amount of aid may not exceed the statutory minimum wage for an unqualified adult person and the *length* of this grant may not exceed 36 months, or 42 months in the case of women as an under-represented sex. This provision entered into force in August 2004. While, from August to December 2004, only nine subsidized work contracts were concluded, in 2005 this number rose to 125. In the first half of 2006, 115 new contracts were signed.

### **OBJECTIVE: Reinvigorate the solidarity economy concept**

The solidarity economy concept, approved jointly by the Ministry for Family and Integration and the Ministry of Labor and Employment, states that a solidarity economy should meet the following 8 criteria:

1. the existence of a solidarity economy project
2. freedom to become member
3. democratic management system

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<sup>45</sup> This approach is announced in measure 9 of the National Plan for Social Inclusion (2003), for which the objective was to double the portion of internships in companies with relation to the total of active labor measures under the GMI mechanism. The exact object of measure 9 was to raise the percentage of company internships with respect to the total number of active labor initiatives from 2% in 2001 to 4% in 2005. This goal was achieved, even significantly exceeded, as at the end of 2005, internships accounted for 13% of active labor market measures.

4. accessible services
5. the principle of legal autonomy
6. the principle of a minimum wage
7. the principle of major economic risk-taking
8. the principle of specific financial management.

The Government interviewed associations desiring to establish economic solidarity initiative and subsequently received applications for 18 projects. On the basis of the 8 criteria listed above and of project feasibility, six of these projects for which the goals were to meet the needs of the population having no coverage by government or merchant sector entities were selected and presented as line items on 2006 budget proposals. These budget proposals also included the establishment of a “mini promotion agency” for economic solidarity as contemplated in the plan.

Due to budgetary constraints, the funds required to carry out the six projects and establishing the mini agency were not forthcoming. Since a budget policy requiring moderation is in effect, the reinvigoration of the economy by means of financial participation as announced in the plan cannot be achieved until the end of 2007.

The revival of the solidarity economy was also blocked by the appearance in 2006 of deep conceptual differences between the players on the ground with whom the inter-ministerial study group indicated in the plan should have been cooperating closely to achieve the stated goals. Because of the differences, it was decided to defer establishing the study group.

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| IG 20 – Improve matching of labor market needs |
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**OBJECTIVE: Analyze and optimize the functioning of the Labor Administration**

In May 2005, the Government officially requested the OECD to draw up a detailed analysis of ADEM operations.

The analysis will address the existence of strategies, interaction among the different departments, multi-disciplinary issues, training of personnel, the role of management, the organizational chart, efficiency of services to unemployed persons, the degree of individual treatment provided to users, cooperation with companies, collaboration with the interim worker sector and social initiatives benefiting employment.

The appropriate departments of the OECD conducted interviews in February and March 2006 with the social partners and members of Parliament. They came to Luxembourg at the end of June 2006 as well. In accordance with the procedures in place, a preliminary report is due in November 2006 and the final report will be ready at the beginning of 2007.

While awaiting a more fundamental reform of ADEM so as to render it more effective, the Tripartite Coordination Committee has taken certain early decisions likely to improve the response to the requirements of the labor market, such as intensifying relations between ADEM and companies in the interim work sector with respect to recruitments.



**OBJECTIVE: Retain jobs**

Keeping people in jobs constitutes one of the three pillars of the employment segment of the bill transposing the tripartite agreements of 28 April 2006.

The philosophy of keeping people employed consists of realizing at the earliest stage possible of potential economic difficulties, either related to the economy or due to structural problems, affecting a company and putting all entities concerned on the alert to deal with the consequences.

To this end, the Economic situation Committee (*Comité de conjuncture*)<sup>46</sup> will centralize information about layoffs and, following an economic and social audit from the company in question if necessary, will request that the social partners discuss the implementation of a job retention plan.

The Government, with a view to assisting the social partners in this process, will provide a certain aid structure to accompany the agreements reached, either financial intended for the employees concerned, such as paying for the cost of training, reconversion or consulting, or aid to the companies, including those who pick up these persons thus avoiding that they go on the unemployment rolls. The aid could be in the form of simplification of the procedure for a temporary labor loan, a possible reduction of contributions to early retirement, hiring subventions, etc.

All the measures set out in job retention plans are intended to avoid negotiations involving the onset of a social plan. If however, all options have been exhausted and no job retention plan authorized by the Minister responsible for employment has been formulated during the six months prior to the beginning of social plan negotiations, discussions must first center on the same subjects that would arise in the event of a job retention plan or be rendered null and void.

Only afterwards can negotiations center on the introduction of any financial compensation measures.

**OBJECTIVE: Set out new forms of labor organization**

Regarding the introduction of new forms of labor organization, a convention concerning the legal format for telecommuting was signed in March 2006 by the Luxembourg social partners. This agreement is the outcome of negotiations carried out following the framework agreement on telecommuting signed in July 2002 by the European Social Partners. The inter-professional agreement is concluded in view of its declaration of a general commitment on the part of Luxembourg companies for a period of three years.

**OBJECTIVE: Continue to carry out positive actions in the area of equality of the sexes**

The Government, in an attempt to influence the reduction of professional segregation and the wage gap between men and women, as well as attempting to increase feminine employment

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<sup>46</sup> <http://www.cdc.public.lu/>

through good practice examples, has continued to grant subventions to companies in the private sector that invest in the accomplishment of measures whose objectives are to increase the employment rate of women, to fight against professional segregation, to eliminate the wage gap, to promote the reconciliation between family life and work, to fight against sexual harassment and to promote equality between men and women. Any company that carries out a survey on the situation of women and men can receive financial aid from the State under the framework of a positive actions program for companies in the private sector

In addition, based on the results of a survey currently being conducted by STATEC, the efforts expended to reduce the wage gap between men and women are being continued<sup>47</sup>.

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| IG 22 - Ensure employment-friendly labor costs<br>developments and wage-setting mechanisms |
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One of the measures of the Tripartite Coordination Committee of 28 April aims at changing the way in which stipends, salaries, pensions and annuities are indexed<sup>48</sup>. To this end, the law dated 27 June 2006 that adapts certain application methods of the automatic wage indexation system and stipend scale is intended to slow the rise in inflation and consequently the increase in labor costs to companies and the administration. These measures are limited in time—from 2006 to 2009—they consist chiefly of adapting the application methods to the automatic wage indexation system by carrying over the next application figures.

In the event that the current hypotheses about changes in inflation should come true, the deadline for adjusting stipends, salaries, pensions, annuities and other income and sums generally adapted to the automatic wage indexation system will differ in methods set by the legislation in force before the signing of the law for the years 2006, 2007, 2008 and 2009.

The next adjustment to stipends, salaries, pensions and annuities will occur on 1 December 2006. The adjustment triggered by a new threshold of the automatic wage indexation system in 2007 will be carried out on 1 January 2008. However, if the average the price of Brent crude exceeds \$63 per barrel between July 2006 and December 2007, this adjustment will be deferred until 1 March 2008. The adjustment triggered by a new threshold in 2008 will be carried out on 1 January 2009. However, if the average the price of Brent crude exceeds \$63 per barrel between January and December 2008, this adjustment will be deferred until 1 March 2009. No other adjustment to stipends, salaries, pensions and annuities will occur over the period 2006 to 2009 through the additional triggering of one or more of the thresholds of the automatic wage indexation system<sup>49</sup>.

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<sup>47</sup> See IG 18, OBJECTIVE: The struggle to reduce the wage gap between men and women.

<sup>48</sup> And other indemnities, as well as all sums generally adapted by reference to article 11, paragraph 1 of the amended law of 22 June 1963 setting the State employees consumer index-linked stipends that revolves around consumer prices with a base of 100 on 1 January 1948. Also see IG 11.

<sup>49</sup> Changes to the system of indexing salaries to the cost of living through the automatic wage indexation system will be finalized by neutralizing certain taxes and other levies in the consumer price index published on the basis of 100 on 1 January 1948. This mechanism refers to taxes and levies linked to public ecological and health objectives.

**OBJECTIVE: Promote the consistency and effectiveness of adopting lifelong learning strategies**

In order to increase consistency and effectiveness in the realm of lifelong learning policy, the Government has worked out a consistent strategy concept incorporating the mechanisms in place, as well as a multi-annual action plan comprising quantifiable objectives and supplementary measures for achieving these goals.

The strategy for lifelong learning is based on the following objectives:

1. Increase the basic qualifications and skills level for the adult population
2. Meet job market requirements in terms of qualifications and skills
3. Make the workplace a learning location
4. Set up or develop learning locations to promote basic training
5. Promote social and professions insertion of disadvantaged and poorly qualified persons.

The principal measures for achieving these objectives are stipulated as follows in the National Action Plan for Lifelong Learning: establish an individual right to continuing training, set up a procedure for validating skills and knowledge acquired and stimulate the demand for training among individuals and companies.

A set of measures for preventing academic failure and for increasing skill levels have been outlined in the framework of the National Action Plan for Social Inclusion<sup>50</sup>. In an environment where 37% of students have foreign nationalities, the educational system, for which the languages are French and German and not the Luxembourg language, faces distinct challenges. It has been confirmed that the main factors contributing to academic failure or leaving school early are the complex linguistic situation and the socio-professional status of parents and makeup of families.

**OBJECTIVE: Adapt the education and training systems to new requirements in the area of skills**

Reforming training content, introducing quality assurance, setting up a skills validation concept and bringing European references and instruments are all necessary for obtaining a consistent strategy for lifelong learning systems.

These are measures that should ensure quality education and training at the initial training level and that meet the new requirements in the skills area, while facilitating and motivating access by adults to education and training.

With an eye toward meeting the new skill requirements, the Government will pursue its single-minded policy of integrating information and communications technologies into initial

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<sup>50</sup> The strategy and measures outlined in the National Plan for Social Inclusion meet the objectives and challenges outlined in the National Plan for Innovation and Full Employment, to wit optimizing access to initial professional training and promoting academic success.

training programs. It will use existing skills and resources to seek out innovative training paths that better reconcile job, family life and studies in the framework of adult education and training by setting up self-training and blended learning programs.

**OBJECTIVE: Certification of skills acquired in the area of informal education<sup>51</sup>**

Since the launch of the 2006-2007 pilot phase for certification of skill levels, a certain number of certifications in the area of informal education have been granted by the Consulting Commission for training of leaders and managers in the leisure field. A dozen or so youth organizations participated in this pilot project. A steering committee assembles representatives of the Government, ADEM and business executives performed monitoring and follow-up in view of adopting necessary changes to the pilot project, which will conclude in 2007 with an external evaluation.

**OBJECTIVE: Increase the number of informal apprenticeship possibilities<sup>52</sup>**

The Government has launched several initiatives to increase informal apprenticeship opportunities<sup>53</sup>:

- Encourage young people to get vacation jobs: introduce an Internet site<sup>54</sup> containing a database of available jobs as well as other useful information such as pertinent legislation, preparing a CV, useful addresses, etc.
- Develop volunteer service: The Government Council is promoting a bill on volunteer work to amend the law dated 28 January 1999 that includes a specific measure, the “volunteer work as guidance”. This measure targets disadvantaged young people and has the objective of either motivating them to complete their scholastic education or professional training, or to support them by offering a personalized professional guidance program.
- Facilitate the spread and effective use of information technologies and communication of information

In conclusion, two Internet sites<sup>55</sup> were set up in 2006 to facilitate young persons’ access to information.

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<sup>51</sup> This is also an implementation measure of the European Youth Pact.

<sup>52</sup> This is also an implementation measure of the European Youth Pact.

<sup>53</sup> These also respond to the points raised in IG 18 on the segment concerning greater assumption of young peoples’ issues.

<sup>54</sup> <http://www.doit4you.lu/>

<sup>55</sup> Youthnet is the portal for Youth in the Grand Duchy of Luxembourg: a training agenda and important news for volunteers and professionals working with young people. Youth.lu, the youth pages for Luxembourg: agenda for leisure activities, information about competitive examinations and resources for project finance. For more information, see: <http://www.youthnet.lu/> and <http://www.youth.lu/>

## 5. Coordination between the National Reform Program and Structural Funds

According to the European Commission on 23 January 2006<sup>56</sup>, contributions of all structural funds in Luxembourg for the purposes of meeting Lisbon Strategy objectives over the 2000-2006 period is nearly 50% of funds used. The contribution should become even greater for the 2007 – 2013 programming period.

Luxembourg's National Strategic Framework Reference (NSFR) will be the common framework for all players who will collaborate in implementing the cohesion policy for the 2007-2013 period under the headings of regional competitiveness and employment. The budget envelope for the 2007-2013 period is split into the ESF and FEDER funds and amounts to €0.5 billion<sup>57</sup>.

### 5.1 The European Regional Development Fund (FEDER)

#### 5.1.1 Economic and social reconversion in the regions

The Objective 2 program (2000-2006) for economic and social re-conversion of some of the country's regions contributes in particular to the following guidelines:

- IG 7 Increase and improve investments in research and development, in particular in the private sector, with a view to establishing a European area of knowledge
- IG 8 Facilitate all forms of innovation
- IG 9 Facilitate the spread and effective use of ICT and build a fully inclusive information society
- IG 10 Strengthen the competitive advantages of Europe's industrial base
- IG 11 Encourage the sustainable use of resources and strengthen the synergies between environmental protection and growth
- IG 15 Promote a more entrepreneurial culture and create a supportive environment for SME

Many projects concern the areas of water, waste and wild lands that result from the spirit of IG 11, as well as economic development and innovation. The overall package for the Objective 2 program (2000-2006) amounts to €4 billion.

The new program for 2007-2013, still under discussion, will likely concentrate even more on the IG, even if the total FEDER contribution is to be reduced.

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<sup>56</sup> Earmarking n°59

<sup>57</sup> The budgetary allocations between the FEDER and ESF funds are currently in negotiations and will be set in upcoming months.

### **5.1.2 Cross-border and trans-national cooperation programs (Interreg)**

The Interreg III cross-border and trans-national programs are complementary in their strategic conception to the principal mainstream interventions of Objective 2 and 3 structural funds and they also contribute to implementing in their manner to the central objectives of the Community regional policy.

The future program period places high importance on the new Objective 3 "European territorial Cooperation" by placing it the *main-stream* rank and improving the financial award that goes with it. With regard to cross-border cooperation, the new program period will support the emergence of a Greater Region common program, while the NWE program will be even more grounded on the Lisbon and Göteborg strategies.

The ESPON program (*European Spatial Planning Observation Network*), whose Coordination Unit is located at Esch-sur-Alzette, contributes to improved assimilation of territorial imbalances and improved spatial operations in the Community through its analyses et recommendations.

## **5.2 The European Social Fund (ESF)**

Luxembourg authorities had already stressed using the ESF more as a finance tool for funding the European Employment Strategy (EES) at the mid-term revision of the 2000-2006 programming period.

As a result, the ESF will assume the same importance in the implementation of the employment segment of the revised Lisbon Strategy and more precisely of the priorities defined by the National Plan for Innovation and Full Employment for Luxembourg

In the employment arena, the structure of unemployment in Luxembourg and its related fluctuations reveal ease in re-employing people who have acquired base qualifications. However, unemployment rates of unskilled persons in general, and especially in some categories of job-seekers such as young people and older workers, need a specific, priority by the ESF, to get them to participate more in the job market.

In addition to the structural items, actions co-financed by the ESF should also assist wage-earners threatened by unemployment as in sectors or companies undergoing restructuring. This can be done through anticipatory and intelligent management of upcoming changes.

In general, it has been proposed that the ESF contribute to improving the capacity of the economy to handle change, both at the level of companies and employees. Continuing education and life-long training play an essential role in this concept.

Priorities for the NSFR in terms of employment, which set the framework for ESF intervention in Luxembourg during the 2007-2013 programming period, are as follows:

- Improve access to employment and sustainable inclusion in the labor market
  1. Increase the employment rate
  2. Facilitate the insertion of young people into the labor market
  3. Bring an active labor policy to people that are removed from the labor market
- Increase the adaptability of workers in companies
  1. Improve anticipatory management of economic change
  2. Adapt skills and know-how of employees to the requirements of the market
  3. Support innovative mechanisms for career transitions
- Strengthen human capital
  1. Bring together universities, research centers and companies, especially in the areas of innovation and research
  2. Modernize the organization and conditions of labor
  3. Support actions undertaken by the social partners.

### ***5.3 The European Agricultural Fund for Rural Development (FEADER)***

The Government is very attached to a vision of agriculture based on multi-functional agriculture that is both competitive and sustainable, concerned about applying ecologically defensible production and cattle raising methods that take into account rules for protection and well-being of animals. This type of agriculture produces healthy and high quality food, is spread throughout the territory and can maintain the countryside and natural areas. The rural development program (PDR) for 2007-2013, which will be established on this basis, will combine this vision of European agriculture with the sustainable development objectives set out by the European Council in Gutenberg in 2001, as well as with the objectives targeted by the Lisbon 2 Strategy in the areas of growth and employment. The table below illustrates examples of national strategies that contribute to implementing the National Plan for Innovation and Full Employment. Around 25% of the total contribution of FEADER will be reserved for Area 1, around 65% for Area 2 and 10 % for Areas 3 and 4 for the Regional Development Plan for 2007-2013.

**Table 4: Examples of national strategy that contribute to the implementation of the National Plan for Innovation and Full Employment**

| National Strategy for the Rural development programming period (2007-2013)  | National Plan for Innovation and Full Employment  |
|---|---|
| <b>AREA 1</b> (Improve competitiveness in the agricultural and forestry areas)  |   |
| Encourage investments in bio-energy, rational use of energy and protection of the environment   | IG 11: Encourage the sustainable use of resources and strengthen the synergies between environmental protection and growth                                    |
| Encourage young people to take up, set up and develop farms, vineyards and plant production businesses. Aid farms in order to assist in the restructuring and modernization of the sector, as well as to establish new operations | IG 15: Promote a more entrepreneurial culture and create a supportive environment for SME   |
| Encourage investment in innovation and the rational use of innovative techniques  | IG 8: Facilitate all forms of innovation  |
| Training and information measures assisting in the implementation of the PDR measures   | IG 17: Implement employment policies aiming at achieving full employment, improving quality and productivity at work and strengthening social and territorial |
| <b>AREA 2</b> (Improve the environment and countryside)   |   |
| Promote a multitude of environment-friendly services and agricultural practices that protect threatened native animal and plant species in forest and agricultural locations  | IG 11: Encourage the sustainable use of resources and strengthen the synergies between environmental protection and growth                                    |
| <b>AREA 3</b> (Improve quality of life in rural areas and promote diversification)  |   |
| Promote the adoption and spread of ICT  | IG 9: Facilitate the spread and effective use of ICT and build a fully inclusive information society  |
| Develop valuation of resources and the supply and use of renewable energy sources   | IG 11: Encourage the sustainable use of resources and strengthen the synergies between environmental protection and growth                                    |
| Assist in setting up and developing micro-companies; Promote the entry and re-insertion of women in the labor market  | IG 15: Promote a more entrepreneurial culture and create a supportive environment for SME   |
| Improve the conditions for entry and re-insertion of women in the labor market  | IG 18: Promote a lifecycle approach to work   |
| Train and inform persons living in rural areas. Train persons working in forest industries  | IG 23: Expand and improve investment in human capital   |



## Appendix 1: Evaluation Grid (Projected)

| Goal                                   | Priority Action Areas<br>(Conclusions of the European Council, March 2006) | IG Number | Code    | Description   | Status   | Forecasted Timeline          | Budget                         | Indicators  |
|--|--|-----------|---------|---|--|------------------------------|--------------------------------|---|
| Increase and improve R & D investments | Investment in knowledge and innovation                                     | 7         | MI-7-01 | Increase R&D expenditures from 2003 rate of 1.66% of GDP <sup>114</sup> | Stated in the 2005 National Reform Program (NRP)   | 2008, 2010<br><br>2008, 2010 |                                | R&D as a % of GDP<br><br><u>2008</u> : 2.4%<br><u>2010</u> : 3%<br><br>Number of researchers per 1,000 jobs<br><br><u>2008</u> : 9<br><u>2010</u> : >10 |
| Increase and improve R & D investments | Investment in knowledge and innovation                                     | 7         | MI-7-02 | Increase public funds allocated to R&D                                  | Stated in the 2006 Implementation Report (IR) <sup>115</sup><br><u>2004</u> : 0.29%<br><u>2005</u> : 0.34% | 2007, 2008                   | 2007: €140 mn<br>2008: €185 mn | R&D as a % of GDB<br><u>2006</u> : 0.38%<br><u>2007</u> : 0.44%<br><u>2008</u> : 0.54%  |

<sup>114</sup> In the National Plan for Innovation and Full Employment (2005), DIRD (Domestic Spending on Research and Development) as a % of GDP totaled 1.78% in 2003.

Due to the re-evaluation of GDP, this figure changed in 2003 to 1.66%.

<sup>115</sup> 2006 Implementation Report

| Goal   | Priority Action Areas<br>(Conclusions of the European Council, March 2006) | IG Number | Code    | Description  | Status                             | Forecasted Timeline  | Budget  | Indicators   |
|--|--|-----------|---------|--|------------------------------------|--|---|--|
| Increase and improve R & D investments         | Investment in knowledge and innovation                                     | 7         | MI-7-03 | Finance the activities of the University of Luxembourg (annual allocation)   | Stated in the 2006 IR              | 2009   | Targeted annual budget allocation of €72 mn in 2009 : |  |
| Increase and improve R & D investments         | Investment in knowledge and innovation                                     | 7         | MI-7-04 | Working group completed review of specific visa procedures for third country nationals working in the field of scientific research | Stated in the 2006 IR              | End of 2006  |   |  |
| Facilitate all forms of innovation             | Investment in knowledge and innovation                                     | 8         | MI-8-01 | Increase hosting capacity for new start-up   | Stated in the 2006 IR              | First quarter of 2007  |   |  |
| Facilitate the spread and effective use of ICT | Investment in knowledge and innovation                                     | 9         | MI-9-01 | Monitor changes in the propagation of high-speed internet capabilities in households   |                                    | 2008, 2010   |   | Proliferation of high-speed internet capabilities in households<br><br><u>2002</u> : 4%<br><u>2004</u> : 11%<br><u>2005</u> : 39.5%. |
| Facilitate the spread and effective use of ICT | Investment in knowledge and innovation                                     | 9         | MI-9-02 | Implementation of electronic exchange mechanisms based on advanced electronic signatures and precise authentication of actors      | Underway<br>Completion status: 60% | First half 2007: professional sector<br><br>Second half. 2007 grand public |   | Number of certificates used<br><br>% of services released for secure transactions  |

| Goal                                       | Priority Action Areas<br>(Conclusions of the European Council, March 2006) | IG Number | Code     | Description  | Status  | Forecasted Timeline  | Budget   | Indicators   |
|--|--|-----------|----------|--|---|--|--|--|
| Encourage the sustainable use of resources | Unlocking business potential, especially of SMEs                           | 11        | MI-11-01 | Implement a working group to draft a Commercial zone sector plan | Stated in the 2006 IR   | Autumn 2006  |  |  |
| Encourage the sustainable use of resources | Making an end to the biodiversity impoverishment 2010                      | 11        | MI-11-02 | Draft a National Plan for the protection of nature (PNPN)        | To be completed in 2007 according to Article 51 of the law dated 19 January 2004 for the protection of nature | Submit to Government Council in December 2006.<br><br>Kick-off in early 2007 | 2006 budget: €49,000   |  |
| Encourage the sustainable use of resources | Making an end to the biodiversity impoverishment 2010                      | 11        | MI-11-03 | Set up a national biodiversity network                           | <u>2006</u> : 33 zones declared to be zones of national interest (1.32% of the country's territory)           | Objective for 2010: 5% of national territory classified natural reserve      | 2007 budget: €100.000 (Land use plans)<br><br>€75.000 (classification files) | Sustainable Development Indicators (SDI) Area of territory classified as protected |

| Goal                                       | Priority Action Areas<br>(Conclusions of the European Council, March 2006) | IG Number | Code     | Description   | Status   | Forecasted Timeline                    | Budget  | Indicators  |
|--|--|-----------|----------|---|--|--|---|---|
| Encourage the sustainable use of resources | Making an end to the biodiversity impoverishment 2010                      | 11        | MI-11-04 | Set up a national network of forests developing unhindered by man through regular scientific monitoring (integral forest reserve) | 5 integral forest reserves declared totaling 659 hectares, with 7 projects either designated reserves or pending projects<br>Total: 895 hectares | Objective for 2010: 5% of forest lands | 2007 budget: €74,000 (monitor changes in area of integral forest reserves)<br>€45.000 € (protection and settlement of natural environment)<br>Beginning with 2008 budget €250,000 € (classification files per year) | SDI Area of territory classified as protected         |
| Encourage the sustainable use of resources | Moving towards an efficient and integrated EU energy policy                | 11        | MI-11-05 | Revamp the process for promoting renewable energy sources and energy efficiency   | Announced in the Climate Change Action Plan, approved in the Government Council in April 2006  | 1 January 2008                         |   |   |
| Encourage the sustainable use of resources | Moving towards an efficient and integrated EU energy policy                | 11        | MI-11-06 | Reduce greenhouse gas emissions by 28% with respect to reference year 1990 per the Kyoto protocol <sup>116</sup>                  | Reference year: 1990=100   | 2010                                   |   | Total greenhouse gas emissions<br><u>2004</u> : 100.2 |

<sup>116</sup> Also see Appendix 2: “*Changement climatique : agir pour un défi majeur*” Action Plan for a detailed range of measures taken to achieve the Kyoto Balance.

| Goal   | Priority Action Areas<br>(Conclusions of the European Council, March 2006) | IG Number | Code     | Description   | Status                 | Forecasted Timeline | Budget | Indicators  |
|--|--|-----------|----------|---|------------------------|---------------------|--------|---|
| Extend and deepen the internal market          | Unlocking business potential, especially of SMEs                           | 12        | MI-12-01 | Substantially reduce the transposition deficit for directives   | Stated in the 2006 IR  | July 2007           |        | <u>11-2005</u> : 4.4%<br><u>09-2006</u> : 3.4%<br><br>Long-term objective for maximum deficit levels after 2007: 1.5% |
| Create a more competitive business environment | Unlocking business potential, especially of SMEs                           | 14        | MI-14-01 | Analysis of administrative procedures required of companies in the industrial sector  | Stated in the 2005 NRP | End of 2006         |        |   |
| Create a more competitive business environment | Unlocking business potential, especially of SMEs                           | 14        | MI-14-02 | Draft the Consumer Code   | Stated in the 2005 NRP | End of 2006         |        |   |
| Create a more competitive business environment | Unlocking business potential, especially of SMEs                           | 14        | MI-14-03 | Electronic assistant for companies in the industrial sector to optimize information exchange between the administration and companies | Stated in the 2005 NRP | Second half 2007    |        |   |

| Goal   | Priority Action Areas<br>(Conclusions of the European Council, March 2006) | IG Number | Code     | Description   | Status                               | Forecasted Timeline | Budget | Indicators  |
|--|--|-----------|----------|---|--------------------------------------|---------------------|--------|---|
| Create a more competitive business environment | Unlocking business potential, especially of SMEs                           | 14        | MI-14-04 | <p>Implementation of an administrative reform by means of fundamental changes in operations and organization of the ministries and state and semi-public administrations</p> <p>Projects underway:</p> <p>Centralized management of ICT</p> <p>General mapping of process</p> <p>Auto evaluation of processes (CAF)</p> <p>Introduction of a shared collaborative management system (electronic document management and workflow) common to all administrations</p> | Underway<br>(Progress achieved: 10%) | 2006-2010           |        | <p>Percentage of processes evaluated</p> <p>Time taken to process one matter by the administration</p> <p>Workload corresponding to the processing of an matter</p> |

| Goal   | Priority Action Areas<br>(Conclusions of the European Council, March 2006) | IG Number | Code     | Description  | Status   | Forecasted Timeline  | Budget   | Indicators  |
|--|--|-----------|----------|--|--|--|--|---|
| Create a more competitive business environment   | Unlocking business potential, especially of SMEs                           | 14        | MI-14-05 | Make available content or services to citizens and companies by means of Internet or Extranet portals<br><br>Projects underway:<br>Single window interface for companies<br>Single window interface for citizens<br>Sector portals | Underway<br>(Progress: 15% complete)                                       | Progressive implementation between 2005 and 2010 of +/- 500 services (State and Municipal administrations) |  | Number of services available online<br><br>Time needed to process one service |
| Expand, improve and connect European infrastructures and complete priority cross-border projects | Unlocking business potential, especially of SMEs                           | 16        | MI-16-01 | Link-up of Luxembourg to the TGV-East-European   | First phase in service since 26 June 2006                                  | 2 <sup>nd</sup> phase operational in June 2007   | €17.4 mn (value 408.6 of the French TP01 index for the month of June 1997) |   |
| Expand, improve and connect European infrastructures and complete priority cross-border projects | Unlocking business potential, especially of SMEs                           | 16        | MI-16-02 | Project Eurocap Rail – Railway link Strasbourg – Luxembourg – Brussels   | Studies on renovation and modernization of fixed installations is underway | Completion in 2014   | €15 mn   |   |
| Expand, improve and connect European infrastructures and complete priority cross-border projects | Unlocking business potential, especially of SMEs                           | 16        | MI-16-03 | Construction of a new terminal for the national airport  | Construction began in December 2003  | Set to come on line in 2007  | €62 mn   |   |

| <b>Goal</b>  | <b>Priority Action Areas</b><br>(Conclusions of the European Council, March 2006) | <b>IG Number</b> | <b>Code</b> | <b>Description</b>  | <b>Status</b>   | <b>Forecasted Timeline</b>   | <b>Budget</b>       | <b>Indicators</b> |
|--|---|------------------|-------------|---|---|--|---------------------|-------------------|
| Expand, improve and connect European infrastructures and complete priority cross-border projects | Unlocking business potential, especially of SMEs                                  | 16               | MI-16-04    | Extension of rail system within the City Luxembourg by putting a tram in operation  | Presentation to the public and to local and national entities in March 2006.                  | Completion schedule:<br>Phase I through 2012<br>Phase 2 in the medium term<br>Phase 3 in the long term | €22 mn<br>(Phase 1) |                   |
| Expand, improve and connect European infrastructures and complete priority cross-border projects | Unlocking business potential, especially of SMEs                                  | 16               | MI-16-05    | Linkup of the Luxembourg Airport and of the Kirchberg quarter to the railway system | Detailed preliminary design completed in August 2005 – Construction of new terminal has begun |  | €12 mn              |                   |
| Expand, improve and connect European infrastructures and complete priority cross-border projects | Unlocking business potential, especially of SMEs                                  | 16               | MI-16-06    | Operate a highway-railway link for transporting freight                             | Work in progress  | Begin operations in the first quarter of 2007  | €7 mn               |                   |



| <b>Goal</b>  | <b>Priority Action Areas</b><br>(Conclusions of the European Council, March 2006) | <b>IG Number</b> | <b>Code</b> | <b>Description</b>                                      | <b>Status</b>  | <b>Forecasted Timeline</b>   | <b>Budget</b>              | <b>Indicators</b>              |
|--|---|------------------|-------------|---|--|--|----------------------------|--------------------------------|
| Expand, improve and connect European infrastructures and complete priority cross-border projects | Unlocking business potential, especially of SMEs                                  | 16               | MI-16-07    | Set up a railway freight company to be called CFL-Cargo | Work in progress   | Complete by the end of 2006  |                            |                                |
| Implement employment policies aiming at achieving full employment                                | Increasing employment opportunities   | 17               | E-17-01     | Increase the employment rate                            | Stated in the 2005 NRP   | 2010   |                            | The employment rate            |
| Promote a life-cycle approach to work  | Increasing employment opportunities   | 18               | E-18-01     | Meet more of the cost for employing young people        | Reform of legislation promoting youth employment<br><br>Reform of national continuing professional training centers, Volunteer service | Bills submitted to Parliament<br><br>Votes on the issues expected in the course of 2007. | MTE, MENFP<br>MIFA budgets | Youth unemployment rate        |
| Promote a life-cycle approach to work  | Increasing employment opportunities   | 18               | E-18-02     | Attempt to reduce the wage gap between men and women    | STATEC study currently underway  |  |                            | Wage gap between men and women |

| Goal                                  | Priority Action Areas<br>(Conclusions of the European Council, March 2006) | IG Number | Code    | Description   | Status  | Forecasted Timeline   | Budget  | Indicators  |
|---------------------------------------|--|-----------|---------|---|---|---|---|---|
| Promote a life-cycle approach to work | Increasing employment opportunities  | 18        | E-18-03 | Implement the concept of caring for school age children after classroom hours by means of the “ <i>maisons relais</i> ” concept | Implementation of the measure as a part of the law dated 8 September 1998 governing relations between the State and organizations working in the social domain, both family and therapeutic topics.<br><br>Underway | Number of spaces for:<br><u>2005</u><br>8000<br><u>July 2006</u><br>8711<br><u>2009</u><br>9638 | Participation in funding by the State by means of the MIFA budget | Number of spaces available in the children centers, Employment rate of the population between 15-64 |
| Promote a life-cycle approach to work | Increasing employment opportunities  | 18        | E-18-04 | Outline flexible models for leaving active working life   | Discussions between the Ministry of Social Security and the social partners   | Beginning of discussions set for Fall of 2006.  |   | Actual age of persons entering retirement, Employment rate of older workers                         |

| <b>Goal</b>                    | <b>Priority Action Areas</b><br>(Conclusions of the European Council, March 2006) | <b>IG Number</b> | <b>Code</b> | <b>Description</b>   | <b>Status</b>   | <b>Forecasted Timeline</b>   | <b>Budget</b>            | <b>Indicators</b>   |
|--------------------------------|---|------------------|-------------|--|---|--|--------------------------|---|
| Ensure inclusive labor markets | Increasing employment opportunities   | 19               | E-19-01     | Improve effectiveness of measures benefiting employment                                  | Reform of the legislation on unemployment and on measures favoring youth employment. (Bill transposing the conclusions of the Tripartite Coordination Committee of 28 April 2006) | Vote on the project expected at the end of 2006.   | Employment Fund          | Unemployment rate, youth unemployment rate, length of time on rolls, length of time benefits received |
| Ensure inclusive labor markets | Increasing employment opportunities   | 19               | E-19-02     | Ensure that persons separated from the labor market can get professional careers         | Bill contributing to the re-establishment of full employment (formerly the bill concerning unemployment)  | Amen-<br>dements<br>submitted to<br>Parliament<br><br>Vote on the<br>project<br>expected in<br>2007. | Employment Fund          | Long-term unemployment rate   |
| Ensure inclusive labor markets | Increasing employment opportunities   | 19               | E-19-03     | Establish ceilings for the active measures of the RMG system (guaranteed minimum income) | Measures are being implemented through the provisions of chapter II of the RMG law  | Continuous implementation  | National Solidarity Fund | Number of decisions concerning ceilings taken by SNAS   |

| <b>Goal</b>   | <b>Priority Action Areas</b><br>(Conclusions of the European Council, March 2006) | <b>IG Number</b> | <b>Code</b> | <b>Description</b>   | <b>Status</b>  | <b>Forecasted Timeline</b>                       | <b>Budget</b>            | <b>Indicators</b>   |
|---|---|------------------|-------------|--|--|--|--------------------------|---|
| Ensure inclusive labor markets                        | Increasing employment opportunities   | 19               | E-19-04     | Priority guidance of RMG recipients toward the SE and 13(3) measures                     | Measures are being implemented in the framework of the provision of chapter II of the RMG law      | Continuous implementation                        | National Solidarity Fund | Portion of SE measures / total of active RMG measures, Number of 13 (3) contracts concluded |
| Ensure inclusive labor markets                        | Increasing employment opportunities   | 19               | E-19-05     | Reinvigorate the solidarity economy by helping to finance solidarity economy initiatives | Measures postponed because of budgetary constraints  | No concrete steps before the end of 2007         | MIFA budget              | Number of projects receiving financial support / Amount of funds allocated                  |
| Improve matching of labor market needs                | Increasing employment opportunities   | 20               | E-20-01     | Optimize operations of the Public Employment Service (ADEM)                              | Audit underway by OECD personnel   | Preliminary report due in November 2006          | MTE budget               |   |
| Promote flexibility combined with employment security | Increasing employment opportunities   | 21               | E-21-01     | Retain jobs  | Bill transposing the conclusions of the Tripartite Coordination Committee accords of 28 April 2006 | Vote on the project expected by the end of 2006. | Employment Fund          | Number of job retention plans   |
| Promote flexibility combined with employment security | Increasing employment opportunities   | 21               | E-21-02     | Introduce new forms of work organization   | Discussions with the social partners   |  |                          |   |

| <b>Goal</b>   | <b>Priority Action Areas</b><br>(Conclusions of the European Council, March 2006) | <b>IG Number</b> | <b>Code</b> | <b>Description</b>  | <b>Status</b>  | <b>Forecasted Timeline</b> | <b>Budget</b> | <b>Indicators</b>   |
|---|---|------------------|-------------|---|--|----------------------------|---------------|---|
| Promote flexibility combined with employment security                           | Increasing employment opportunities   | 21               | E-21-03     | Increase the percentage of women at work  | Evaluation of the positive action program underway   |                            | MEGA budget   | Number of positive actions per year<br>number of persons affected per year,<br>number of measures carried out in targeted areas |
| Ensure employment-friendly labor costs developments and wage-setting mechanisms | Increasing employment opportunities   | 22               | E-22-01     | Indexation of wages, salaries, pensions and other indemnities as well as all sums generally adapted by reference to article 11, paragraph 1 of the amended law dated 22 June 1963 linking the scheme for government worker stipends to the consumer price index with the basis of 100 on 1 January 1948 | These measures are not permanent and consist primarily in applying modalities of the sliding wage scale of salaries by deferring the next adjustment to incomes. | 2006-2009                  |               |   |

| Goal   | Priority Action Areas<br>(Conclusions of the European Council, March 2006) | IG Number | Code    | Description  | Status  | Forecasted Timeline   | Budget                          | Indicators                       |
|--|--|-----------|---------|--|---|---|---------------------------------|----------------------------------|
| Expand and improve investment in human capital | Investment in knowledge and innovation                                     | 23        | E-23-01 | Institute an individual right for continuing education | Educational leave<br><br>Bill for individual training leave | Amended law dated 4 October 1973 establishing educational leave<br><br>Vote expected at end of 2006 | MIFA budget<br><br>MENFP budget | Number of applications submitted |

| Goal   | Priority Action Areas<br>(Conclusions of the European Council, March 2006) | IG Number | Code    | Description   | Status  | Forecasted Timeline  | Budget                                       | Indicators                       |
|--|--|-----------|---------|---|---|--|--|----------------------------------|
| Expand and improve investment in human capital | Investment in knowledge and innovation                                     | 23        | E-23-02 | <p>Establish a procedure for validating acquired knowledge</p> <p>and</p> <p>create a national qualifications framework</p> | <p>University education</p> <p>Professional training (Bill)</p> <p>2<sup>nd</sup> qualifications and apprenticeship option for adults</p> <p>In process of being drawn up</p> | <p>Law dated 12 August 2003 establishing the University</p> <p>Vote expected in 2007</p> <p>Implemented as of 1999</p> <p>2007</p> | <p>University budget</p> <p>MENFP budget</p> | Number of applications submitted |

| Goal   | Priority Action Areas<br>(Conclusions of the European Council, March 2006) | IG Number | Code    | Description   | Status  | Forecasted Timeline  | Budget       | Indicators   |
|--|--|-----------|---------|---|---|--|--------------|--|
| Expand and improve investment in human capital                             | Investment in knowledge and innovation                                     | 23        | E-23-03 | Stimulate demand for training among individuals and companies | Information:<br><a href="http://www.lifelong-learning.lu">www.lifelong-learning.lu</a><br><br><i>Lifelong guidance</i> concept bill to reform professional training<br><br>New online training tools such as the <i>e-bac</i> | From 2003<br><br>Vote set for 2007<br><br>Academic year of 2006-07   | MENFP budget | Participation in the lifelong guidance mechanisms<br><br>Participation in mechanisms |
| Adapt education and training systems in response to new skill requirements | Investment in knowledge and innovation                                     | 24        | E-24-01 | Move to a skills-based teaching system                        | Definition of bases for skills and re-evaluation of curricula   | Primary education: implementation as from the 2006-07 academic year<br>Post primary education: progressive implementation as from the 2007-08 academic year<br><br>Pilot project | MENFP budget | Qualification levels, Certification rates and performance of students                |



| Goal | Priority Action Areas<br>(Conclusions of the European Council, March 2006) | IG Number | Code | Description | Status   | Forecasted Timeline  | Budget | Indicators                                |
|------|--|-----------|------|-------------|--|--|--------|---|
|      |  |           |      |             | Introduction of a quality assurance concept<br><br>Implementation of ICT in educational and training systems | in post-primary education.<br>Drafting of a bill for the establishment of a quality agency (2007)<br>Portal at site <a href="http://www.myschool.lu">http://www.myschool.lu</a> as from 2001<br>New projects as from the 2006-07 academic year |        | Access to ICT and use of online services. |

Note: This table is a summary of “quantifiable” measures included in the National Plan for Innovation and Full Employment (2005) and its implementation report (2006).

## Appendix 2: Measures to Promote Achieving the Kyoto Objectives

|   | Goal   | Priority Action Areas<br>(Conclusions of the European Council in March 2006) | Description   | Status  | Forecasted Timeline                       | Budget  | Indicators   |
|---|--|--|---|---|---|---|--|
| 1 | Promote a balanced environmental policy – improve the Kyoto greenhouse gas emissions balance | Achieve the Kyoto objectives   | Introduce a climate change contribution on fuels by means of a progressive increase in excise taxes                             | Bill submitted on 18 September 2006                         | First increase of taxes on 1 January 2007 | Expected revenue for 2007: ±€9.3 mn<br>Expected revenue for 2008: ± €3.3 mn | SDI (Sustainable Development Indicators) for the six main greenhouse gas emissions |
| 2 |  |  | Reform of the tax on vehicles according to environmental criteria   | Bill submitted on 18 September 2006                         | Takes effect on 1 January 2007            | 2007 budget: Budget surplus of ± €36 mn                                     | SDI for the six main greenhouse gas emissions                                      |
| 3 |  |  | Review of tax deductions for company vehicles and for travel costs  | Action Plan approved in the Government Council (April 2006) |   |   | SDI for the six main greenhouse gas emissions                                      |
| 4 |  |  | Double the modal split to attain 25% funding for public transport by 2020, Investments in infrastructure projects               | Multi-year scheduling of Rail Fund                          |   | ± € bn  | SDI for ground transportation  |
| 5 |  |  | Eurovignette agreement: Promote use of more sub-classes based on the EURO classification rather than simply increasing use fees | Action Plan approved in the Government Council (April 2006) |   |   | SDI for ground transportation  |

|    | <b>Goal</b> | <b>Priority Action Areas<br/>(Conclusions of the European Council in March 2006)</b> | <b>Description</b>  | <b>Status</b>   | <b>Forecasted Timeline</b> | <b>Budget</b>                                 | <b>Indicators</b>                             |
|----|-------------|--|---|---|----------------------------|---|---|
| 6  |             |  | Financial contribution by Luxembourg for the progressive implementation of a European rail freight only network | Action Plan approved in the Government Council (April 2006)               |                            | €7 mn (Rail fund)                             | SDI for ground transportation                 |
| 7  |             |  | Transposition of the bio-fuel directive   | Action Plan approved in the Government Council (April 2006)               | 2007                       |   | SDI for the six main greenhouse gas emissions |
| 8  |             |  | RUBIN Project on the evaluation and promotion of bio-fuels use  | Action Plan approved in the Government Council (April 2006)               | 2006-2008                  | 2007 budget: 12,580 €<br>2008 budget: 7,200 € | SDI for the six main greenhouse gas emissions |
| 9  |             |  | Ecologic driver's training course   | Action Plan approved in the Government Council (April 2006)               |                            |   | SDI for the six main greenhouse gas emissions |
| 10 |             |  | Promote alternative transportation modes  | Draw up an action plan in the framework of the transportation sector plan | Launch in September 2006   |   | SDI for ground transportation                 |
| 11 |             |  | Integration of environmental criteria in public acquisitions markets for new vehicles – draw up specifications  | Action Plan approved in the Government Council (April 2006)               |                            |   | SDI for the six main greenhouse gas emissions |

|    | <b>Goal</b> | <b>Priority Action Areas<br/>(Conclusions of the European Council in March 2006)</b> | <b>Description</b>  | <b>Status</b>   | <b>Forecasted Timeline</b> | <b>Budget</b>   | <b>Indicators</b>             |
|----|-------------|--|---|---|----------------------------|---|-------------------------------|
| 12 |             |  | Increase the use of natural gas and alternative energy sources in vehicles, such as natural gas powered buses and fuel cells  | Action Plan approved in the Government Council (April 2006)   |                            | 200,000 €par an (Financing for the Kyoto mechanisms )                             | SDI for ground transportation |
|    |             |  | Introduce new legislation for thermal insulation of buildings   | Grand Duchy draft regulation concerning energy performance in residential buildings   | Effective on 1 June 2007   |   | SDI for energy intensity      |
| 13 |             |  | Continue aid schemes for energy savings and use of renewable energy sources in the housing sector, re-emphasizing the following items: high energy savings houses, remediation of existing dwellings, fixtures and fittings and heat production based on renewable energy sources | Grand Duchy regulation dated 3 August 2005 instituting an aid scheme for physical persons in the area of promoting rational energy use and the enhanced use of renewable energy sources |                            | 2007 budget: €10 mn   | SDI for energy intensity      |
| 14 |             |  | Develop an energy remediation program for public buildings  | Action Plan approved in the Government Council (April 2006)   | Timetable 2007-2012        | 2007-2012 : €30 mn (Ministry of Public Works, Administration of Public Buildings) | SDI for energy intensity      |
| 15 |             |  | Draw up concrete directives and energy concepts in constructing new public buildings  | Action Plan approved in the Government Council (April 2006)   | Beginning in mid-2006      |   | SDI for energy intensity      |

|    | <b>Goal</b> | <b>Priority Action Areas<br/>(Conclusions of the European Council in March 2006)</b> | <b>Description</b>  | <b>Status</b>   | <b>Forecasted Timeline</b>   | <b>Budget</b>                         | <b>Indicators</b>        |
|----|-------------|--|---|---|--|---------------------------------------|--------------------------|
| 16 |             |  | Incorporate new energy performance standards in the PAG   | Action Plan approved in the Government Council (April 2006) |  |                                       | SDI for energy intensity |
| 17 |             |  | Systematic guidance of the Land Use Master Plan and the IVL sector plans to conform with climate change requirements  | Action Plan approved in the Government Council (April 2006) |  |                                       | SDI for land use         |
| 18 |             |  | Reform of electrical energy production regulations using renewable energy sources based on the results of the potentials study done by the Energy Agency                                  | Action Plan approved in the Government Council (April 2006) | Draft Grand Duchy regulation to be submitted to the Government Council in early 2007 |                                       | SDI for energy intensity |
| 19 |             |  | Inject biogas in the natural gas networks– evaluate feasibility of a biogas support system  | Pilot project   | 2007   | €3 mn (Environmental Protection Fund) | SDI for energy intensity |
| 20 |             |  | Reform of regulations concerning electrical energy production based on co-generation, with the accent on profitability and an overall reduction of subsidies for co-generation facilities | Action Plan approved in the Government Council (April 2006) | Proposal to be submitted to the Government Council at the end of 2006                |                                       | SDI for energy intensity |

|    | <b>Goal</b> | <b>Priority Action Areas<br/>(Conclusions of the European Council in March 2006)</b> | <b>Description</b>  | <b>Status</b>   | <b>Forecasted Timeline</b> | <b>Budget</b>  | <b>Indicators</b>                |
|----|-------------|--|---|---|----------------------------|--|----------------------------------|
| 21 |             |  | More far-reaching use of biomass through the RUBIN project<br>' <i>Regionale Strategie zur nachhaltigen Umsetzung der Biomasse-Nutzung</i> ' - <i>Regional Strategy for the Sustained Implementation of Biomass utilization</i> ) | Action Plan approved in the Government Council (April 2006) | 2005-2008                  | Project financed by:<br>MCESR<br>Interreg IIA<br>DeLux                                       | SDI for energy intensity         |
| 22 |             |  | Research for the optimization of biogas-biomass production through achievement of the Luxcycle project<br>' <i>Trockene Monovergärung von Energiepflanzen</i> ' - <i>Dry Fermentation of Energy plants</i> )                      | Action Plan approved in the Government Council (April 2006) | 2006-2008                  | Project financed by MCESR  | SDI for energy intensity         |
| 23 |             |  | Solar electrical and thermal energy research through the implementation of the PV-Lab and RELIES projects   | Action Plan approved in the Government Council (April 2006) | 2002-2007                  | Project financed by: FEDER<br>Objective II<br>MCESR  | SDI for energy intensity         |
| 24 |             |  | Valorbous project: research to offer a range of technologies to sewage treatment companies for appropriate enhancements in the cross-border zone  | Action Plan approved in the Government Council (April 2006) | 2005-2007                  | Project financed by: Interreg IIIA<br>WLL<br>MCESR<br>2006-2007 MEV-CRTE budget :<br>5.278 € | SDI for organic waste management |

|    | <b>Goal</b> | <b>Priority Action Areas<br/>(Conclusions of the European Council in March 2006)</b> | <b>Description</b>  | <b>Status</b>   | <b>Forecasted Timeline</b>                        | <b>Budget</b> | <b>Indicators</b>                             |
|----|-------------|--|---|---|---|---------------|---|
| 25 |             |  | Draw up the 2 <sup>nd</sup> National Plan for quota allocations   | Action Plan approved in the Government Council (April 2006) | Notification to the Commission dated 18 July 2006 |               | SDI for the six main greenhouse gas emissions |
| 26 |             |  | Renegotiation of voluntary agreements to increase energy efficiency in various sectors of the Luxembourg economy                | Action Plan approved in the Government Council (April 2006) | 2007  |               | SDI for energy intensity                      |
| 27 |             |  | Research and promote the best technologies available:<br>Improve energy efficiency in industry, SME/SMI and the services sector | Action Plan approved in the Government Council (April 2006) | 2007-2008   |               | SDI for energy intensity                      |

|    | Goal | Priority Action Areas<br>(Conclusions of the European Council in March 2006) | Description  | Status  | Forecasted Timeline | Budget   | Indicators               |
|----|------|--|--|---|---------------------|--|--------------------------|
| 28 |      |  | Research and promote the best technologies available:<br>Improvement of energy efficiency in the agri-food industry through the achievement of the ANIA project (Analyses and management of environmental impacts and energy consumption of refrigeration equipment in the agri-food industry) | Action Plan approved in the Government Council (April 2006) | 2004-2006           | Project financed by:<br><br>MCESR ;<br>Private companies;<br>Environmental Administration<br>2006 budget: €4,560   | SDI for energy intensity |
| 29 |      |  | Set up a centralized structure to cover information, consulting and training in the area of rational use of energy and renewable energy sources  | Action Plan approved in the Government Council (April 2006) |                     | 2007 budget:<br>€0,000<br>€0,000 <sup>117</sup><br>(promotional projects carried out by municipalities)<br>€130,500<br>(promotion projects carried out by NGO)<br>€5,000 (Local 21 Agenda) | SDI for energy intensity |

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<sup>117</sup> Budget partially allocated



|    | <b>Goal</b> | <b>Priority Action Areas<br/>(Conclusions of the European Council in March 2006)</b> | <b>Description</b>   | <b>Status</b>   | <b>Forecasted Timeline</b>                       | <b>Budget</b>  | <b>Indicators</b>                             |
|----|-------------|--|--|---|--|--|---|
| 30 |             |  | Launch an awareness campaign concerning climate change   | Action Plan approved in the Government Council (April 2006) | Early June 2006 for a minimum period of 6 months | 2007 budgets:<br>€74,000 (Awareness campaign)<br>€40,000 (Energy promotion brochure)<br>€25,000 (ecological label) | SDI for the six main greenhouse gas emissions |
| 31 |             |  | Drafting of a “best practices” manual relating to energy savings and intended for municipalities –database accessible via internet | Action Plan approved in the Government Council (April 2006) |  |  | SDI for energy intensity                      |
| 32 |             |  | Efforts in the area of energy labeling, setting up a database for low energy consumption products                                  | Action Plan approved in the Government Council (April 2006) |  |  | SDI for energy intensity                      |
| 33 |             |  | Campaign for awareness to climate change in primary and secondary education courses, “Initiation to sciences” program              | Action Plan approved in the Government Council (April 2006) |  | 2007 budget: 80,000 € (education for the environment)  | SDI for the six main greenhouse gas emissions |
| 34 |             |  | 4 <sup>th</sup> training cycle “Construction and Energy” intended for architects and engineers-                                    | Action Plan approved in the Government Council (April 2006) | Autumn 2006                                      | 2007 budget: 15,000 €  | SDI for energy intensity                      |

|    | Goal | Priority Action Areas<br>(Conclusions of the European Council in March 2006)   | Description   | Status   | Forecasted Timeline | Budget   | Indicators |
|----|------|--|---|--|---------------------|--|------------|
| 35 |      |  | Preparing and publication of a guide entitled ' <i>Leitfaden für nachhaltiges Bauen und Renovieren in Luxemburg</i> ' (Vademecum for sustainable construction and renovation in Luxembourg), that furnishes practical, useful and science-based information, to companies and administrations confronted with environmental problems related to construction. | CRTE Activity  | 2003-2006           | Project financed by:<br>The Ministry of the Environment (through CRTE financing);<br>FEDIL;<br>CRTI-B  |            |
| 36 |      | Promote R&D, innovation and the production of eco-technologies, Products and services, Promote new eco-efficient production technologies | AGID Project: Analysis and Integrated and Sustainable Management of Flows of Materials and Energy in Companies. The goal of the AGID project is to promote a voluntary and environmentally preventive approach that supports and facilitates the possible introduction of an environmental management system in companies.                                    | CRTE Project is part of the FEDER Objective II Program | 2004-2008           | Project financed by: The Ministry of the Environment (through CRTE financing);<br>MCESR ; FEDER Objective II ;<br>Private financing, MEV budget for 2006-2008: €18,269 |            |

|    | <b>Goal</b> | <b>Priority Action Areas<br/>(Conclusions of the European Council in March 2006)</b>                             | <b>Description</b>  | <b>Status</b>   | <b>Forecasted Timeline</b> | <b>Budget</b>  | <b>Indicators</b> |
|----|-------------|--|---|---|----------------------------|--|-------------------|
| 37 |             | Rational use of energy<br><br>Promote new eco-efficient production technologies                                  | Training, information and awareness programs for the protection of the environment for SME carried out in the framework of the RIFE project: Cross-border environmental management training and information network   | CRTE project that is part of the Interreg IIIA WLL program                    | 2004-2006                  | Project financed by: MCESR, Interreg IIIA WLL          |                   |
| 38 |             |  | ECO-SB Project: Evaluation of a new production procedure for the forest products industry, in accordance with the ACV (life-cycle analysis) methodology.  | CRTE activity that is part of the LIFE Environment program                    | 2006-2007                  | Project financed by the LIFE Program and private funds |                   |
|    |             | Promote R&D, innovation and the production of eco-technologies, Products and services, Promote new eco-efficient | TRASU Project: Online Clean Atmospheric Plasma Process for Surface Finishing: The major objective of the TRASU project is the development of sustainable alternatives to standard surface finishing techniques for metals using hexavalent chromium (Cr(VI)). | CRTE activity that is part of the TRASU program of the National Research Fund | 2005-2008                  | Project financed by National Research Fund             |                   |

|    | Goal | Priority Action Areas<br>(Conclusions of the European Council in March 2006) | Description  | Status  | Forecasted Timeline | Budget   | Indicators |
|----|------|--|--|---|---------------------|--|------------|
| 39 |      |  | Sustainable management project for water in wine cellars   |   | 2006-2008           | Project financed by MIAT                                     |            |
| 40 |      |  | CONCEPT project: New concepts and innovative technologies for sustainable management of the urban water cycles | CRTE project that is part of the EAU program under the National Research Fund | 2002-2006           | Project financed by National Research Fund                   |            |
| 41 |      |  | LITFLUID Project: Application of modeling/simulation tools and flow analysis to fluidized technologies         | CRTE project that is part of the EAU program under the National Research Fund | 2002-2006           | Project financed by National Research Fund                   |            |
| 42 |      |  | RESEASURE project: Establish a model of the remediation of localities around the lake of <i>Haute-Sûre</i>     | CRTE project that is part of the EAU program under the National Research Fund | 2002-2007           | Project financed by National Research Fund                   |            |
| 43 |      |  | OPTISTEP: Optimization of waste water treatment procedures through models/simulation                           | CRTE project that is part of the FEDER Objective II                           | 2004-2007           | Project financed by MCESR, Private funds, FEDER Objective II |            |

## Appendix 3: Main conclusions of the OECD Report on Innovation Policies in Luxembourg

- *Improve governance processes*

In order to improve the system's governance characteristics taking into account specific circumstances in different nations, the report proposes the following:

- *Readjust roles of entities (NRF, PRC, University, Luxinnovation):* attempt to provide more clarification of roles of the various players and ensure regular evaluation of their respective roles and functions (forecasted for 2007-2008).
- *Improve coordination:* coordination between the various political players, especially the principal ministries, namely the Ministry of Culture, Higher Education and Research and the Ministry of the Economy and Foreign trade absolutely must be improved and an appropriate degree of horizontal coordination must be guaranteed.
- *Improve instruments for formulating strategy:* heightened efforts in the area of investments necessitate stronger strategic intelligence capacity.
- *Improve governance capabilities:* in order to achieve this, set up performance contracts between the Government and the various public research entities (planned for 2007 and implemented in 2008).
- *Set up a Consulting Council for S & T policy issues:* It has been proposed to establish an *ad-hoc* Council for dealing with S & T policy issues in order to supervise the important development phase of the system (planned for 2007 and implemented in 2008).
- *Prioritization in the area of RDI:* given the proposed increases in R&D expenditures, the bottom-up approach, in which proposals for project funding are submitted by entities in the domain, as has been done up till now is no longer appropriate. The approach should be complemented by a method that is more top-down, in which priorities for the national research and innovation system are determined. The new approach should take into account results of the preliminary study currently underway (planned for 2007 and implemented in 2008).

- *Improve the complementary fit between research and innovation players*

In order to ensure a complementary fit among research and innovation players nationally, the report is proposing the following:

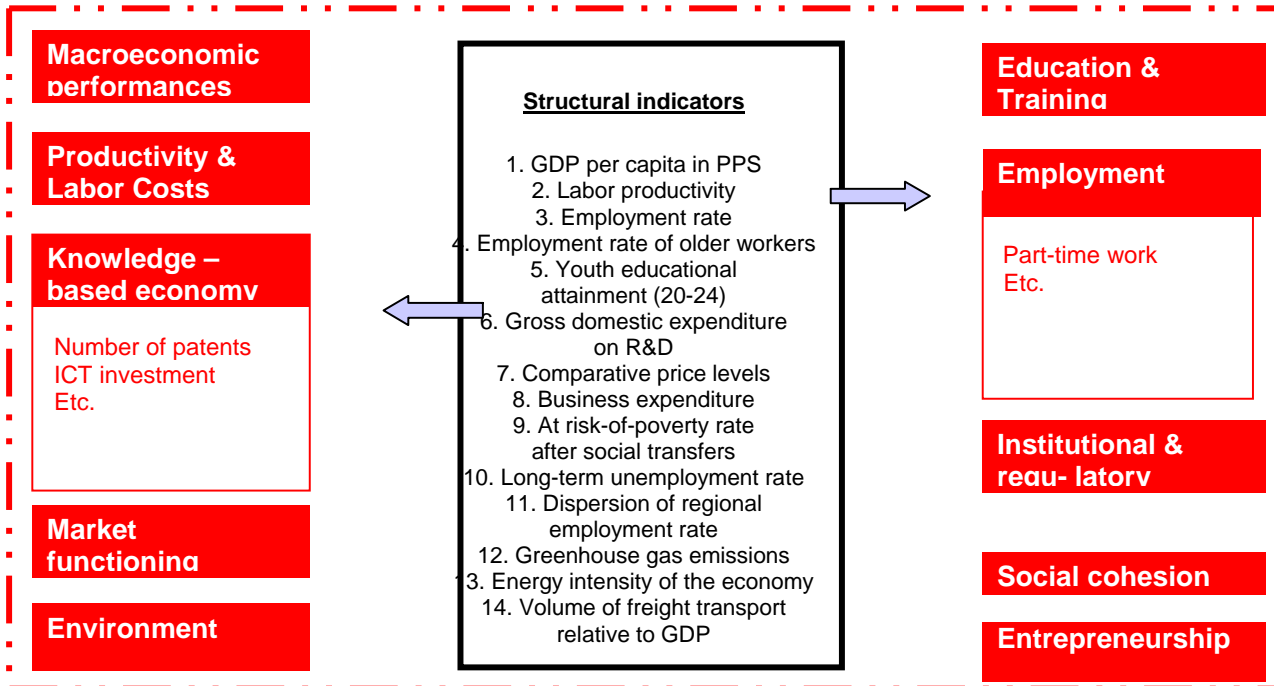
- *Public research institutions management:* in an effort to increase accountability and thereby also the efficiency of PRC, some are requesting a clearer outline of the centers' missions, their objectives and interaction with other entities on both strategic and operational levels. Strategic audits of establishments under review can contribute to this process, since both missions and objectives are carried out by means of performance contracts (planned for 2007 and implemented in 2008).
- *Modified role for Luxinnovation:* The portfolio of services for *Luxinnovation* could be readjusted with a view to maintaining the quality of services offered by the institution. In particular, *Luxinnovation* is being called on to play a major role in extending innovation policy, in the financial sector, in the services sector and in other activities where innovation is not necessarily limited to the technical area.

- *Concentrate financing of research activities within the NRF:* Financing of PRC and University research activities should be transferred to the NRF in view of its professionalism in the area of evaluation and management of public research projects. This has the dual goal of increasing the scientific quality of public research and aligning the implementation of public research activities with national overall strategies and objectives (planned for 2008 and implemented in 2009).
  - *Ensure links between research and teaching:* This basic task of the University should be taken care of by establishing schools with doctorate programs. The PRC play a complementary role by hosting doctoral and post-doctoral students in their research units and will guarantee technology transfer by means of mobility toward the private sector.
  - *Promote a consistent Science and Technology cooperation strategy:* Cooperation in the area of research at the level of the Greater Region and beyond is essential for developing research in Luxembourg. It will be necessary to adopt a selective approach that takes into account national priorities and objectives chosen by the various players.
- *Improve and bolster links within the innovation system*

In order to establish sustainable links between the public and private research sectors, it has been suggested that an ambitious *Skills Centers* program be implemented. This program will concentrate the national R & D effort on a limited number of key areas, a plan that will complement the technological clusters initiative. Banking on the positive experience of other OECD countries, these public-private partnerships offer, as do the technological clusters, an appropriate framework for escalating and increasing the quality of relations in areas of strategic importance for the national economy. The initiative is planned for 2007, with implementation in 2008.

Source: OECD, *OECD Review of Luxembourg's innovation policy*, Paris, 24 May 2006

## Appendix 4: Competitiveness Scoreboard



## Lisbon Structural Indicators (1999 – 2005)

|  | Luxembourg |       |       |       |       |       |       |                          | EU-25    |        |        |       |       |        |      |    | EU Target for 2010 |
|--|------------|-------|-------|-------|-------|-------|-------|--------------------------|----------|--------|--------|-------|-------|--------|------|----|--------------------|
|  | 1999       | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | National Target for 2010 | 1999     | 2000   | 2001   | 2002  | 2003  | 2004   | 2005 |    |                    |
| <b>GDP per capita in purchasing power parities (PPS) (EU-25 = 100)</b> | 218.1      | 222.5 | 214.7 | 220.7 | 232.7 | 237.5 | 247.5 |                          | 100      | 100    | 100    | 100   | 100   | 100    | 100  |    |                    |
| <b>Productivity per wage earner</b>                                    | 160.3      | 159.2 | 148   | 149.6 | 156.1 | 157   | 160.9 |                          | 100      | 100    | 100    | 100   | 100   | 100    | 100  |    |                    |
| <b>Overall employment rate</b>   | 61.7       | 62.7  | 63.1  | 63.4  | 62.2  | 62.5  | 63.6  |                          | 61,9     | 62,4   | 62,8   | 62,8  | 62,9  | 63,3   | 63,8 | 70 |                    |
| Employment rate of women   | 48.6       | 50.1  | 50.9  | 51.6  | 50.9  | 51.9  | 53.7  |                          | 52.9     | 53.6   | 54.3   | 54.7  | 55    | 55.7   | 56.3 |    |                    |
| Employment rate of men   | 74.5       | 75    | 75    | 75.1  | 73.3  | 72.8  | 73.3  |                          | 71       | 71.2   | 71.3   | 71    | 70.8  | 70.9   | 71.3 |    |                    |
| <b>Employment rate of older workers</b>                                | 26.4       | 26.7  | 25.6  | 28.1  | 30.3  | 30.4  | 31.7  |                          | 36.2     | 36.6   | 37.5   | 38.7  | 40.2  | 41     | 42.5 |    |                    |
| Employment rate of older workers – women                               | 17.2       | 16.4  | 15.2  | 18.4  | 20.6  | 22.2  | 24.9  |                          | 26.3     | 26.9   | 27.8   | 29.2  | 30.7  | 31.7   | 33.7 |    |                    |
| Employment rate of older workers – men                                 | 35.8       | 37.2  | 35.9  | 37.7  | 39.7  | 38.3  | 38.3  |                          | 46.7     | 46.9   | 47.7   | 48.8  | 50.3  | 50.7   | 51.8 |    |                    |
| <b>Internal expenditure for R &amp; D as a % of GDP</b>                | :          | 1.66  | :     | :     | 1.66  | 1.66  | :     | 3                        | 1.86 (s) | (s)    | (s)    | (s)   | (s)   | (s)    | :    | 3  |                    |
| <b>Youth educational attainment (20-24) - total</b>                    | 71.2       | 77.5  | 68    | 69.8  | 72.7  | 72.5  | 71.1  |                          | 74.8     | 76.3   | 76.1   | 76.5  | 76.5  | 76.6   | 76.9 |    |                    |
| Youth educational level - females                                      | 72.8       | 75.8  | 69    | 65.5  | 75.6  | 73.4  | 75.8  |                          | 77.3     | 79.2   | 78.9   | 79.4  | 79    | 79.6   | 79.5 |    |                    |
| Youth educational level - males  | 69.6       | 79.2  | 67    | 74    | 69.7  | 71.6  | 66.6  |                          | 72.2     | 73.5   | 73.3   | 73.5  | 73.9  | 73.7   | 74.4 |    |                    |
| <b>Comparative price levels</b>  | 102.3      | 100.9 | 102.9 | 102.5 | 105.3 | 106.1 | 107   |                          | 100      | 100    | 100    | 100   | 100   | 100    | 100  |    |                    |
| <b>Business investment</b>   | 19.2       | 16.9  | 18.3  | 17.5  | 16.9  | 15.9  | :     |                          | 18.1     | 18.3   | 17.8   | 17.2  | 16.9  | 17     | :    |    |                    |
| <b>At-risk of poverty rate after social transfers – total</b>          | 13         | 12    | 12    | :     | 10    | 11    | :     |                          | 16 (s)   | 16 (s) | 16 (s) | :     | (s)   | 16 (s) |      |    |                    |
| Poverty risk rate after social transfers - women                       | 13         | 12    | 13    | :     | 11    | 11    | :     |                          | 17 (s)   | 17 (s) | 17 (s) | :     | (s)   | 17 (s) |      |    |                    |
| Poverty risk rate after social transfers - men                         | 12         | 12    | 12    | :     | 9     | 11    | :     |                          | 15 (s)   | 15 (s) | 15 (s) | :     | (s)   | 15 (s) |      |    |                    |
| <b>Long-term unemployment rate</b>                                     | 0.7        | 0.6   | 0.6   | 0.7   | 0.9   | 1     | 1.2   |                          | 4.1      | 3.9    | 3.8    | 3.9   | 4.1   | 4.1    | 3.9  |    |                    |
| Long-term unemployment rate – women                                    | 1.1        | 0.9   | 0.6   | 0.6   | 0.9   | 1.4   | 1.2   |                          | 5.1      | 4.8    | 4.6    | 4.6   | 4.7   | 4.7    | 4.5  |    |                    |
| Long-term unemployment rate – men                                      | 0.6        | 0.5   | 0.5   | 0.6   | 1     | 0.8   | 1.2   |                          | 3.4      | 3.3    | 3.2    | 3.3   | 3.6   | 3.6    | 3.5  |    |                    |
| <b>Total greenhouse gas emissions</b>                                  | 70.9       | 74.7  | 76.9  | 84.9  | 88.5  | :     | :     |                          | 90.6     | 90.5   | 91.4   | 90.7  | 92    | :      | :    |    |                    |
| <b>Energy intensity of the economy</b>                                 | 192.9      | 186.6 | 190.7 | 196.7 | 181.8 | 194.3 | :     |                          | 214.9    | 208.8  | 209.7  | 206.5 | 207.6 | 204.9  | :    |    |                    |
| <b>Volume of freight transport by rail as a % of GDP</b>               | 88.9       | 96.5  | 106.4 | 107.3 | 109   | 104.8 | :     |                          | 100.7    | 100.4  | 99.4   | 100.3 | 99.7  | 104.7  | :    |    |                    |

Note: (s) Break in the series

Source: Eurostat

[http://epp.eurostat.ec.europa.eu/portal/page?\\_pageid=1133.47800773.1133\\_47802558&\\_dad=portal&\\_schema=PORTAL](http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1133.47800773.1133_47802558&_dad=portal&_schema=PORTAL)



## List of Competitiveness Scoreboard Indicators (2006 update)

|   |   |
|---|---|
| <p><b>Macroeconomic performance (13 indicators)</b></p> <ul style="list-style-type: none"> <li>➤ Gross National Product per capita (PPS)</li> <li>➤ Real growth rate of GDP</li> <li>➤ Growth in national employment</li> <li>➤ Unemployment rate</li> <li>➤ Inflation</li> <li>➤ Public balance as a % of GDP</li> <li>➤ Public debt as a % of GDP</li> <li>➤ Gross fixed capital formation of the public administration</li> <li>➤ Terms of trade</li> <li>➤ Real effective exchange rate (1995=100)</li> <li>➤ Diversification – entropy coefficient</li> <li>➤ FDI inflows</li> <li>➤ FDI outflows</li> </ul> | <p><b>Employment (9 indicators)</b></p> <ul style="list-style-type: none"> <li>➤ Employment rate</li> <li>➤ Employment rate (Men)</li> <li>➤ Employment rate (Women)</li> <li>➤ Long-term unemployment rate</li> <li>➤ Persons holding a part-time job</li> <li>➤ Unemployment rate of persons under 25</li> <li>➤ Employment rate of persons aged 55 -64 (total)</li> <li>➤ Employment rate of persons aged 55- 64 (Men)</li> <li>➤ Employment rate of persons aged 55 - 64 (Women)</li> </ul>   |
| <p><b>Productivity &amp; Cost of Labor (5 indicators)</b></p> <ul style="list-style-type: none"> <li>➤ Trends in total factor productivity</li> <li>➤ Trends in apparent work productivity</li> <li>➤ Productivity per hour worked as a percentage of the USA</li> <li>➤ Changes in unit labour costs</li> <li>➤ Costs / Revenue ratio in the banking sector</li> </ul>   | <p><b>Market Operations (10 indicators)</b></p> <ul style="list-style-type: none"> <li>➤ Percentage of full-time workers on minimum wage</li> <li>➤ Price of electricity (ex-VAT) – industrial users</li> <li>➤ Price of gas (ex-VAT) - industrial users</li> <li>➤ Market share of the primary operator in the cellular telephone market</li> <li>➤ Composite basket of fixed and cellular telecommunications (ex-VAT)</li> <li>➤ Composite basket of cellular telephone royalties (ex-VAT)</li> <li>➤ Broad band Internet access rates</li> <li>➤ Basket of national royalties for 2Mbits leased lines (ex-VAT)</li> <li>➤ Public markets – value of public markets using open procedure procurement</li> <li>➤ Total of State aid as a % of GDP (excluding horizontal objectives)</li> </ul> |
| <p><b>Institutional and Regulatory Framework (11 indicators)</b></p> <ul style="list-style-type: none"> <li>➤ Corporate taxes</li> <li>➤ Standard VAT</li> <li>➤ Tax wedge: Single, without children</li> <li>➤ Tax wedge: Married, with 2 children, one wage-earner</li> <li>➤ Public sector payroll costs</li> <li>➤ Administration efficiency index</li> <li>➤ Respect for the law index</li> <li>➤ Regulation quality index</li> <li>➤ Degree of sophistication of online public services</li> <li>➤ Public services fully available online</li> </ul>  | <p><b>Entrepreneurialism (4 indicators)</b></p> <ul style="list-style-type: none"> <li>➤ Propensity for entrepreneurialism</li> <li>➤ Independent jobs as a percentage of total employment</li> <li>➤ Net change in number of companies (set-up rate less close-down rate)</li> <li>➤ Volatility among companies (set-up rate plus close-down rate)</li> </ul>  |

|  |   |
|--|---|
| <p><b>Education &amp; Training (8 indicators)</b></p> <ul style="list-style-type: none"> <li>➤ Annual cost per student in public educational facilities</li> <li>➤ Portion of the population between 25-64 with a secondary education</li> <li>➤ Portion of the population between 25-64 with a university education</li> <li>➤ Percentage of human resources in scientific and technological fields as a % of total employment</li> <li>➤ Percentage of foreigners in S&amp;T human resources</li> <li>➤ Percentage of highly qualified workers (ICT) in total employment figures</li> <li>➤ Continuing training (participation of adults in training and teaching programs)</li> <li>➤ Young school leavers</li> </ul> | <p><b>Knowledge economy (14 indicators)</b></p> <ul style="list-style-type: none"> <li>➤ Internal R&amp;D expenditure</li> <li>➤ Public R&amp;D budget credits</li> <li>➤ Portion of public research financed by the private sector</li> <li>➤ Percentage of sales attributable to the introduction of new products on the market (new or significantly improved products)</li> <li>➤ Number of researchers per 1,000 employed persons</li> <li>➤ Scientific publications per million inhabitants</li> <li>➤ Number of patents (OEB/USPTO) per million inhabitants</li> <li>➤ Use of Internet by companies (broad band)</li> <li>➤ Investment in public communications as a percentage of gross fixed capital formation</li> <li>➤ Percentage of households that have Internet access at home</li> <li>➤ Number of cell phones per 100 inhabitants</li> <li>➤ Percentage of households that have broad band Internet access</li> <li>➤ Number of secure web servers per 100,000 inhabitants</li> <li>➤ Percentage of total employment in medium or high technology sectors</li> </ul> |
| <p><b>Social Cohesion (6 indicators)</b></p> <ul style="list-style-type: none"> <li>➤ Gini Coefficient</li> <li>➤ At-risk of poverty rate after social transfers</li> <li>➤ Persistent at-risk of poverty rate</li> <li>➤ Life expectancy at birth</li> <li>➤ Wage gap between men and women</li> <li>➤ Serious work accidents</li> </ul>  | <p><b>Environment (6 indicators)</b></p> <ul style="list-style-type: none"> <li>➤ Number of ISO 14001 and EMAS certifications par thousand companies</li> <li>➤ Total greenhouse gas emissions</li> <li>➤ Percentage of renewable energy sources</li> <li>➤ Volume of municipal waste collected</li> <li>➤ Energy intensity of the economy</li> <li>➤ Modal split in transportation choice-percentage of car users as transportation method</li> </ul>  |

Source: Ministry of the Economy and Foreign Trade. *Observatoire de la Compétitivité*  
[http://www.odc.public.lu/actualites/2006/09/13\\_bilan\\_compete/index.html](http://www.odc.public.lu/actualites/2006/09/13_bilan_compete/index.html)



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