



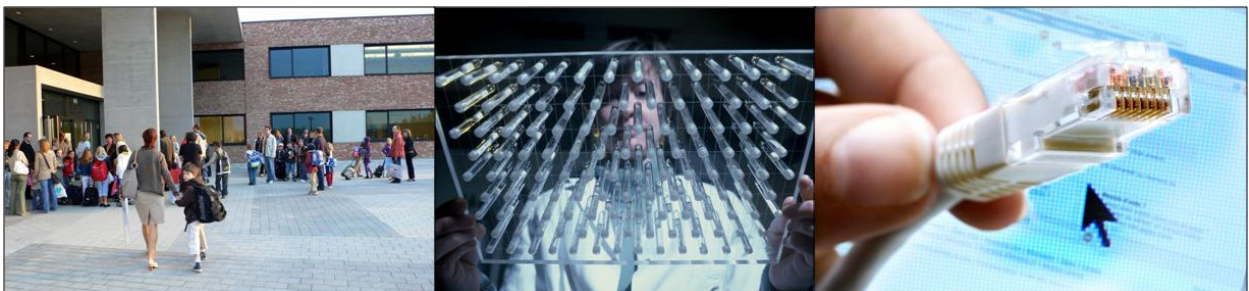
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NATIONAL PLAN FOR INNOVATION AND FULL EMPLOYMENT

National Reform Program
of the Grand-Duchy of Luxembourg
as part of the Lisbon Strategy

2009



Preliminary Remarks

The spring European Council (March 2008) launched the new cycle of the Lisbon strategy for growth and jobs. The Council stated that the Integrated Guidelines (IG) set in the first three-year cycle were to remain in force for the period of 2008-2010 and stressed that the upcoming triennial phase should concentrate essentially on their implementation.

This report summarizes the measures taken by the Government over the course of the past year, based on the broad objectives set in 2005 in the “National Plan for Innovation and Full Employment” and successive implementation reports in 2006, 2007 and 2008, drafted on the basis of the IGs. It also covers priorities stated in the new government program for 2009-2014.

ACRONYMS

ADEM	Labor Administration
CASES	<i>Cyberworld awareness and security enhancement structure</i>
CEPS / INSTEAD	Center for Population, Poverty, and Socio-Economic Policy Studies/International Networks for Studies in Technology, Environment, Alternatives, Development
CES	Economic and Social Committee
CFL	CFL Luxembourg National Railways
CIDD	Inter-Service Commission on Sustainable Development
CRP	Public Research Center
CRSN	National Strategic Reference Framework
CSA	Administrative Simplification Committee
CSRI	Senior Research and Innovation Committee
DIRD	Gross Domestic Expenditure on R & D
DSGE	Dynamic Stochastic General Equilibrium
EIG	Economic Interest Grouping
FEDER	European Regional Development Fund
FSE	European Social Fund
GDP	Gross Domestic Product
IFCC	Chamber of Commerce Training Institute
IGSS	Inspectorate General for Social Security administration
ILNAS	Luxembourg Institute of Standardization, Accreditation, Security and Quality of Products and Services
IUIL	<i>Institut universitaire international Luxembourg</i>
IVL	Integrated Transport and Spatial Development Concept
JCI	Junior chamber international
JI	Joint implementation
LCGB	<i>Lëtzebuenger Chrëschtliche Gewerkschafts-Bond (Union)</i>
LSF	Labor Force Survey
M.Sc.E.I.	Master of science in Entrepreneurship & Innovation
MRE	Children reception centers (<i>Maisons relais</i>)
NPPN	National Plan for the Protection of Nature
NRF	National Research Fund
NRP	National Reform Program
OGB-L	Luxembourg Independent Union Confederation (<i>Confédération syndicale indépendante du Luxembourg</i>)
OLN	Luxembourg Standardization Organization
ONG	Non Governmental Organization
OP	Vocational Guidance
PAEE	Action Plan for Energy Efficiency
PIRLS	Progress in International Reading Literacy Study
PISA	Program for International Student Achievement
PPP	Public-Private Partnership
R&D	Research and Development
RDI	Research-Development-Innovation
RMG	Guaranteed Minimum Income
SCM	Standard cost model
SE	Internships in Companies
SME	Small and Medium Enterprises
SNAS	National Social Action Service
SNCI	National Loan and Investment Company
STATEC	Luxembourg Central Statistics and Economic Analysis Office
STH	Handicapped Workers Unit (ADEM)
TIC	Information and Communications Technologies
UdL	University of Luxembourg
UEL	<i>Union des entreprises luxembourgeoises (Employer's Organization)</i>
ULC	Luxembourg Consumer Protection (<i>Union luxembourgeoise des consommateurs</i>)
VAT	Value Added Tax

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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. Between 2000 and 2005, results were disappointing and the EU was even further away from reaching goals set for 2010. In an attempt to correct the situation, the European Council, under Luxembourg presidency, redirected the Lisbon strategy in the spring of 2005. The main thrusts of this new initiative were shifting the emphasis back to growth and jobs, 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 was set at three years, beginning in 2005. In the spring of 2006, the European Council requested that a certain number of specific priority actions be achieved and these priorities were to be reflected in the implementation reports drawn up by the member states. The priorities consisted 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.

The member states intensified efforts to achieve structural reforms during the first three-year cycle. At present, the Lisbon tool box resembles the various political processes of nations and gives a more complete view of the manner in which the EU and the member states can combine their efforts to face and resolve the complex problems facing Europe today. Major progress has been made in Luxembourg since 2005. The results of the implementation of the first national reform program that was introduced in the fall of 2005 are encouraging. Since all the instruments and strategic mechanisms are now in place, the stratagem has achieved a high degree of maturity. Much remains to be achieved to place the EU and its member states in a posture to face the challenge of globalization and to bolster the basis of economic success in the medium and long term. With this perspective in mind, the spring session of the European Council produced the new cycle of the Lisbon strategy for growth and jobs in March 2008. The European Council confirmed that the Integrated Guidelines (IG) of the first phase of the three-year cycle covering 2008-2010 will remain in force, and stressed that the new triennial cycle should focus on implementation and on the recommendations and the monitoring points directed to the member states.

Since the autumn of 2008 report was submitted, a new element has entered into play in the form of the worldwide economic and financial crisis, which has subjected the EU and its member nations to an unprecedented level of pressure. This situation has presented enormous challenges in the area of coordination and made it more essential than ever that the 27 EU member states exhibit an extraordinary level of solidarity in order to take steps to fight the crisis and to prepare for economic recovery. Action undertaken through this economic recovery plan must be compatible with a more distant objective of building a competitive and lasting European economy, as provided for in the Lisbon strategy for growth and jobs. Luxembourg has therefore also taken a number of domestic measures to stimulate the

economy and to feed into the flow of recovery¹. These measures are fully compatible with the national reform program that was developed under the Lisbon strategy. Even though it will take time for the positive effects of the action to be felt within the entire economy, the breadth of the budgetary effort has made it possible to generate new investments, help workers and their families and to stimulate demand.

This 2009 Implementation Report of the Luxembourg national reform plan is the second report of the second cycle covering 2008-2010 of the renewed Lisbon strategy. It details the measures taken by the Government based on the broad objectives set in 2005 in the “National Plan for Innovation and Full Employment”², using the Integrated Guidelines numbering system. It also addresses the various “points to watch” directed specifically to Luxembourg by the spring 2009 Council. Finally, this report reflects the priorities of the new Government that was elected in the June, 2009 legislative elections³.

1.2 Implementation on the national level

1.2.1 The need to focus on implementing reforms on the national level

In the autumn of 2005, the Luxembourg Government submitted its strategic plan for re-launching the Lisbon strategy to the European Commission entitled “National Plan for Innovation and Full Employment. The plan was drafted under the responsibility of the Ministry of the Economy and Foreign Trade as the national coordinator of the Lisbon strategy. Innovation and full employment were presented as partner concepts of equal value, indivisible from each other, in preparation for an information society. Innovation in all its forms - social, technological, environmental, organizational - promotes higher productivity and rapid progress. The objectives and priorities of the upcoming three-year cycle for 2008-2010 remain the same: innovation, full employment, high quality education and training structures, the integration of Luxembourg’s economy into the European and world economies, maintaining an attractive economic milieu and providing a stable macroeconomic framework. Lastly, the principles of sustainable development will again underpin all the Government political initiatives during this new triennial cycle.

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*”⁴. The Government and social partners pinpointed a certain number of imbalances essentially concerning questions of public finance, the labor market 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, energy policy and transportation and telecommunications infrastructures. 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 work areas, as follows: 1. Controlling inflation, 2. Balancing the budget, 3. Implementation of a set of complementary measures to promote competitiveness of

¹ For more information, see the Luxembourg Economic Recovery Plan :

http://www.gouvernement.lu/salle_presse/actualite/2009/03-mars/06-plan/index.html

² For more details, see : <http://www.odc.public.lu/publications/pnr/index.html>

³ For more information on the 2009-2014 government program, see :

<http://www.gouvernement.lu/gouvernement/programme-2009/index.html>

⁴ Ministry of State, Tripartite Coordination Committee Opinion, Luxembourg, 28 April 2006

companies, 4. Redress the labor market situation, 5. Introduction of a single status for employees and 6. Social Security measures. These reforms all arose from an analysis of long-term fundamentals for 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 on the European level.

Past years were spent implementing the Tripartite Coordination Committee's agreements of 28 April 2006, including the preparation and finalizing of regulatory and legislative texts guiding the reforms. The political discussions and decisions of the past twelve months again illustrate continuity and consistency with regard to options selected, all the while incorporating the rough reforms taking shape that will be implementing the priorities of the new Government voted in at the June 2009 legislative elections.

1.2.2 Evaluation of Luxembourg by the European Council in March 2009

The European Council requested Member States to include detailed and concrete actions in their national reform programs concerning the implementation of specific measures they intend to undertake to respond to country specific recommendations and points to watch concerning their nations.

Luxembourg is one of the member states for which no formal recommendation was adopted, as in 2007 and 2008, by the European Council's most recent evaluation in March 2009. The European Council did however make the following remarks under the "Points to Watch" heading: *"With the financial sector accounting for more than one quarter of GDP, the current financial crisis could deeply affect the country. In addition, the comparatively rapid increase in unit-labor costs is likely to negatively affect competitiveness. This deterioration is likely to continue in the coming years because productivity is projected to decrease in 2008 and 2009. In a longer perspective, the pension system needs reform in order to insure its long-term sustainability. The employment rate of the resident population remains below the European average with that of older workers being particularly low. Luxembourg also needs to further enhance the attractiveness of the business environment. The implementation of the energy and climate change package, agreed by the European Council, will require close attention"*⁵.

With regard to points to watch directed to Luxembourg as part of the "Partnership for growth and jobs", the term "partnership" is especially important. While the Government generally welcomes the approach, the analysis and the points to watch as it pertains to Luxembourg, it wishes to stress that the renewed Lisbon strategy must allow Member States to specify their own objectives - outside of those set by the Community in the areas of R&D and employment - and to leave them the independence to achieve these objectives, at the rhythm and according to the preference of each member state.

⁵ Council recommendation concerning the 2009 update of Member States and the Community BEPG and the implementation of employment policies of Member States, March 2009.

Table 1 : Responses by the Government to the points to watch directed at Luxembourg as part of the Lisbon strategy (March 2009)

Points to watch	Steps taken and current assessment
<p><i>(...)the <u>comparatively rapid increase in unit-labor costs</u> is likely to negatively affect competitiveness.</i></p>	<p>The new Government that has emerged from the June 2009 legislative elections strongly supports a wage policy that must align with changes in overall productivity of the Luxembourg economy. This is one of the leading measures taken up in the Action Plan for fighting excessive inflation that is a part of the Government's program for 2009-2014. The Government is closely monitoring productivity, wages and unit labor costs. This monitoring effort is based on quantitative and qualitative analyses that are carried out periodically by STATEC and the <i>Observatoire de la Compétitivité</i>.</p>
<p><i>In a longer perspective, the <u>pension system</u> needs reform in order to insure its long-term sustainability.</i></p>	<p>At the conclusion of the Tripartite Coordination Committee discussions in April 2006, the social partners, together with the Government, set up a study group whose objective was to draw up proposals to ensure the long term viability of pension schemes and to analyze the various measures that could be implemented to guarantee their viability. It would also study different measures for guaranteeing this long-term viability and to adapt the pension systems to changes in professional careers, the ageing of the population and its impact on the length of peoples' active working lives.</p> <p>Long term viability of pension schemes implies not only financial viability but also social and political viability, as well as the legitimacy of these schemes. Thus social and political viability of a pension system would no longer be intact if maintaining it meant requiring too heavy sacrifices on the part of the working population or if those still working believed progressively less with time that the system would provide adequate pensions for their old age. In the same way, the viability of the system depends heavily on changes in demography and on the professional careers of insured persons. Longer expected life spans imply longer periods during which persons will draw pensions, while more university studies shorten professional careers. In addition, it must be noted that 20% of the total sum of pensions paid out are sent abroad and that 40% of pension beneficiaries reside abroad. In years to come, these percentages will only increase. Furthermore, these changes bring up the question of whether or not the pension system adequately adapts to changes in professional and family life, especially in the case of atypical careers characterized by part-time work and interruptions in work periods. The Government means to promote the establishment of individual rights for each person and is committed to avoiding interruptions in peoples' careers that count against partners that devote most of their time to raising children, through incentives promoting continued insurance.</p> <p>The current demographic and financial situation of the system is such that effective reforms can be considered without jeopardizing individual acquired rights. The combination of a substantial level of reserves and a working population that is relatively young make it possible to prepare reforms to the system without undue haste, although waiting too long to act could result in temporary, poorly structured packages or last minute solutions. Judiciously selected and comprehensible changes enacted by the persons concerned should be undertaken dexterously on a certain number of the systems parameters. It would be advisable that reforms be begun in the near future in such a manner that people still in the work force be kept informed about changes that will affect them as future beneficiaries. With this objective in mind, work should be done so that the system retains its capacity to adapt to changes in the country's economy</p>

	<p>and to the level of available financial resources without abandoning its social objectives. The most important of these include the need to make those receiving a pension participate equitably in national revenue collections, maintaining a balance between available income of the working population and that of retired persons and offering credible guarantees to the working population with regard to their future pensions.</p> <p>Clearly, any reform process must take into consideration the mechanisms interacting within the workings of the pension system. The system is flexible enough to accommodate a multitude of possible measures working toward a like objective, that of always ensuring medium and long term viability of the pension system. Below are indicated areas of possible adjustment - this is by no means a comprehensive list: duration of working life, the interaction between active workers and life expectancy, keeping workers on the market by means of professional reinsertion and incentives to employers, age of early retirement pension award, replacement rate levels, pension adjustment mechanisms considering longevity of beneficiaries, the redistributive effects of the pension system among higher and lower incomes, changes in the rate of contributions or ceilings for contributions to raise the bar for solidarity between the socio-professional classes and between successive generations of workers, internship periods and social contributions periods, the advantage of a pensions supplemented with a salaried job, rules against overlapping, the <i>Rentendösch</i> pension indicator alerts, the adequate and necessary level of pension reserves and alternative sources of financing.</p> <p>In this context, early retirement schemes must be re-evaluated.</p> <p>The current good health of the scheme's financial base should promote a low pressure environment for discussions about which adjustments to make and which operating torque to use. The Government, without neglecting any of the platforms for discussion with the social partners and the political world as a whole, is prepared to immediately state its preference for confirming the 40 year rule for pension contributions, a critical analysis of internships periods and concurrent collection of pensions and exercising a professional activity. The Government will carry out consultations with the appropriate commissions in Parliament simultaneous to discussions with the social partners on the subject. It will ensure that appropriate coverage in the area of pensions is extended to divorced persons. (IG 18)</p>
<p><i>The employment rate of the resident population remains below the European average with that of older workers being particularly low.</i></p>	<p>There are several arguments in favor of a resolute policy for increasing the rate of older workers in the country, among which the need to secure longevity of our social security systems and our economy's need to draw from the experience and skills of older workers on the labor market. However, the physical and/or psychological state of significant portions of older workers prevents them from exercising a full time professional activity, while a reduced load is completely within their capabilities. For this reason the 2009-2014 Government program calls for making it possible to earn wages on a part time basis while drawing a partial disability check. The implementation of a mechanism that makes more flexible outlets available on the market will be analyzed. The possible combination of wages and pension portions of income is intended to motivate a number of older workers to remain on the job. The progressive early retirement option will be preferred where it can be an ideal instrument for combining youth insertion objectives with keeping older workers employed on the labor market. In this case, an older worker</p>

	might take on the responsibility of tutoring an inexperienced person in working in a company. The law concerning reduced capacity workers will be re-worked on the basis of preparatory work begun by the previous government. (IG 17)
<i>Luxembourg also needs to further enhance the attractiveness of the business environment.</i>	Luxembourg is putting a large number of measures into play to render the business environment more attractive to companies. These measures are directed both at large companies and SME. Various measures are currently underway, including State aid for research, development and innovation, a search for spillovers through the setting up clusters, efforts to make companies aware of intellectual property issues, standardization programs, establishment of framework conditions and high performance infrastructures in the areas of information and communications technologies, providing access to competitively priced energy and supply security systems, framework conditions for the internal market, competition policy, administrative simplification and efficient transportation infrastructure. With particular regard to SME, there are aid schemes for the SME sector, R&D aid schemes and aid schemes to promote and support companies in the areas of protection of the environment and rational use of natural resources as well as in the area of food security. In addition, the third edition of an Action Plan benefitting SME went into effect in April 2008. (IG 7, 8, 9, 11, 12, 13, 14, 15, 16)
<i>The implementation of the energy and climate change package, (...) will require close attention</i>	The first action plan to reduce CO ₂ emissions was adopted by the Government in April 2006 and was drawn up following a stringent analysis of greenhouse emissions reduction potential in Luxembourg. It includes measures in the areas of transportation, buildings, renewable energy sources and industry, while emphasizing the aspects of information and consulting. It was worked out mainly with a view to adhering to Luxembourg's commitments with regard to the Kyoto protocol (2008-2012) and the measures should be considered the backbone of a long-term climate protection strategy. The action plan was implemented in consultation with the ministries, the professional sectors and all other players concerned. A taskforce comprising all the concerned ministries reviews work on the plan regularly. In May 2007, the action plan underwent its first formal evaluation following a public forum and was reinforced by ten functional elements representing essential points for short-term action. The majority of the measures stipulated have been implemented. In the transportation sector as from January 2007, the "Kyoto-cent" tax rates on fuel have been progressively increased. The tax on road vehicles has been restructured depending on environmental criteria, namely CO ₂ emissions. Financial aid is now available for the purchase of high fuel economy vehicles between 1 June 2007 and 31 December 2009. All of these measures will be subject to in-depth evaluations to allow for amendments to current legislation. In addition to the area of road transportation, the action plan identifies a diversity of other measures. Finally, it has been decided that by the end of 2010, a second action plan will be drawn up for reducing greenhouse gas emissions that will take into account the ambitious objectives allotted to Luxembourg as part of the Climate-Energy package of the European Commission. (IG 11)

1.3 The Lisbon strategy and the Plan for Sustainable Development

The National Plan for Innovation and Full Employment that has been prepared as part of the new three-year cycle of the Lisbon strategy for 2008-2010 should be considered fully

compatible with the new National Plan for Sustainable Development (PNDD)⁶. An ongoing coordination and consistency effort involving all policies is in place. The sustainable development strategy should be seen as a long-term extension of the Lisbon strategy. Emphasis and priority is concentrated on education and training, entrepreneurship and support of SME, the new Kyoto emissions allocations plan, maintaining competitiveness in general and promoting jobs by adopting a new approach based on life cycle working time.

2. Governance and assuming responsibility

In order for the Lisbon strategy to succeed it is vital to continue to stimulate the debate on the strategy for long-term growth and employment. As the economic and financial crisis has resulted from plummeting demand, it is vital that discussions not be limited to a short-term demand policy. This is naturally a menace for long-term perspectives for which the supply policy and structural competitiveness issues remain essential to achieve sustainable growth and employment objectives, all the more so in a world that is increasingly globalized. The political debate must continuously focus on the lessons learned from the first three years of the renewed strategy, the objectives to achieve during the next cycle and the ways to achieve them.

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

It is useful to consider difficulties generally encountered on all levels 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 benefits of such a policy to Luxembourg in upcoming years. Accepting and assimilating the reforms is crucial and shared analysis is a key factor to successfully completing the reforms. The Government is therefore taking care that reforms engendered as a part of the National Plan for Innovation and Full Employment will only be drawn up following extended consultations, as follows:

- Between the fall of 2008 and the first half of 2009, numerous meetings were held between the Government and the social partners, under the aegis of the Tripartite Coordination Committee to discuss the economic and financial crisis and the tools available for correcting worsening economic situations, while simultaneously preparing an exit strategy for Luxembourg as the crisis eases⁷.
- In order to mitigate the effects of the economic and financial crisis and to prepare the country for emerging from the crisis, the Government has put up a number of measures for vote in Parliament. Prior to engaging on this path a special commission was set up in the Chamber to monitor all aspects of these measures linked to the economic and financial slowdown. The Special “Economic and Financial Crisis” Commission of Parliament has drawn up a report to this effect⁸.
- During the 2009 bilateral meeting between Lisbon Strategy coordinators in the ministries and administration and representatives of the European Commission, the

⁶ See also IG 11 – Sustainable Development Plan. For more details see:

http://www.environnement.public.lu/developpement_durable/index.html

⁷ For more details see : http://www.gouvernement.lu/dossiers/economie_finances/crise-financiere/index.html

⁸ For more details see: <http://www.chd.lu>

social partners were also consulted through the Enlarged Bureau of the Luxembourg Economic and Social Committee (ESC)⁹.

- A territorial reorganization program is being drafted at present. It is expected that new structures arising from this reorganization will be better capable to transpose measures emanating from the Lisbon strategy on the local level, which is a key element of active involvement by the nation. Sector plans provide framework conditions for spatial development, which are reliable for a competitive economy and sustainable development in Luxembourg both domestically and regionally. In addition, Luxembourg is currently considering a possible participation in the INTERREG IVC project known as "*The Lisbon Strategy going local*" in order to increase national involvement on the local level¹⁰. The objective of this project is to transfer and adapt local integration experiences and the implementation of the Lisbon strategy in the Sörmland region of Sweden to other regions in Europe. At present, interest in cooperating in this program has been expressed by Sweden, Portugal, Great Britain, Malta and Slovenia.

In Luxembourg therefore, the major guidelines and concrete measures of this NRP were determined in wide concert between the executive and legislative powers, as well as the national and local public entities and social partners.

2.2 Ensuring public awareness is a key objective

A major challenge in rebooting the Lisbon strategy consists in providing better explanations to citizens of the advantages of policies carried out in order to secure a prosperous 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 “actively” informing the general public and the players in the economy 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 a high degree of visibility 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, then in November 2006, both times presented from a European perspective. A third colloquium took place in December 2008¹¹. Several hundred participants including researchers, public and private sector decision takers and representatives of the social partners once again assembled to hold debates on the Lisbon Strategy. The colloquium’s aim is to bring together research professionals, decision makers and professionals 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 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

⁹ For more details see: http://www.odc.public.lu/actualites/2009/09/29_Visite_CION/index.html et <http://www.ces.public.lu/fr/actualites/2009/09/comm-europ/index.html>

¹⁰ For more details see: http://www.cipu.lu/index.php?option=com_content&task=view&id=111&Itemid=108

¹¹ For more details see: <http://www.tudor.lu/Lisbonne2008>

general public¹². 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 Lisbon strategy on the national level. The *Observatoire de la Compétitivité* ensures that this site is updated actively with a wide range of competitiveness related information.

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 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. Member states certainly need quality information in order to guide and evaluate their reform efforts. To this end, the Government has acquired several follow-up tools.

In the first place, in order to optimize coordination of the various measures being introduced, to ensure that consultation procedures were followed and to guarantee the assimilation of the Implementation Report in 2008, 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, as was the case in past years. 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 Luxembourg¹³. In view of this critique, it was appropriate 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”¹⁴ was suggested in 2004 to the Tripartite Coordination Committee. The social partners were closely involved in this effort. This scoreboard is updated periodically¹⁵, depending on the availability of data, and serves as an instrument of economic policy. The most recent version was introduced in September, 2009¹⁶.

Box 1: Competitiveness Scoreboard – Update 2009

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

¹² For more details see: <http://www.odc.public.lu/>

¹³ One example of this is the fact that cross-border workers are not counted in the employment rate. The employment rate is a purely national concept, with residence as a criterion. However, domestic employment in Luxembourg includes a cross-border population of 40%, and 50% of new jobs created recently have gone to persons in this category.

¹⁴ See the Appendices for more details on this subject. In order to properly follow progress in economic reforms 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.

¹⁵ MINISTRY OF THE ECONOMY AND FOREIGN TRADE, *Bilan Compétitivité 2009*, Luxembourg, September 2009. http://www.odc.public.lu/publications/bilan_compete/index.html

¹⁶ For more details see: http://www.odc.public.lu/actualites/2009/09/28_BilanComp_titivit_/index.html

Economy, Social cohesion and Environment. These indicators are then analyzed using three different complementary approaches.

First Luxembourg's position is set using a European average obtained for the countries for which data is available. This average is used 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. Next, changes in the performance of the Grand Duchy are also analyzed over years in time. Lastly, all of the basic indicators appearing in the ten competitiveness categories are synthesized by the *Observatoire de la Compétitivité* which calculates an overall competitiveness indicator (TBCO) based on the calculation method used by the European Innovation Scoreboard (EIS)¹⁷.

The Competitiveness Scoreboard in the 2009 *Bilan Compétitivité*, was updated using the most recent data available, coupled with a systematic comparison of the results of earlier years. This provides a good picture of the level of competitiveness of the Luxembourg economy. The overall competitiveness indicator TBCO puts Luxembourg in 13th place within the EU-27. Luxembourg dropped three places compared with its ranking in the previous year. This loss in overall competitiveness is explained primarily by the poor performance of Luxembourg in the area of Productivity and labor costs.

In its program for 2009-2014, the Government indicated its desire to incorporate a new Scoreboard that would be operational. The economic indicators included in the Grand Duchy regulation authorizing the Government to take steps for stimulating economic growth and maintaining full employment¹⁸ will be replaced by a Competitiveness Scoreboard, after discussions are completed with the social partners represented in the Tripartite Coordination Committee. This scoreboard will replace some indicators dating from before the transformation of the Luxembourg economy to a services economy. It will include short term indicators that allow for rapid reaction to changes in the economy which often depend on changes on the international level, while stressing the long-term structural indicators as well as compatibility with sustainable development indicators. Analyses for this new scoreboard will be based on work carried out since 2004 by the *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 macroeconomic evaluation methods for policies, although actually accomplishing this task has proved to be relatively difficult. To this end a new Dynamic Stochastic General Equilibrium (DSGE) model even better adapted to economic policy simulations is currently in its final stages of completion¹⁹. Some features of the model are such that it is especially well adapted to analyzing economic policies implemented in Luxembourg. In addition, the model should be particularly suitable for judging overall effects of economic policy measures related to implementing the Lisbon strategy. However, one must keep in mind that there is no ideal structure for an institutional macro econometric model.

¹⁷ For more information see : <http://www.eis.eu/>

¹⁸ Grand Duchy regulation dated 4 April 1985, in application of article 21, paragraph 6 of the law amended on 24 December 1977.

¹⁹ For more details see: <http://www.odc.public.lu/actualites/2009/06/index.html>

Box 2: The Luxembourg DSGE model - ModEL

The initial economic policy simulations have been published in *Bilan Compétitivité 2008* using the new Luxembourg Economic Model LSM (Luxembourg Structural Model)²⁰. This model was also introduced in December 2008 at the third “*Road to Lisbon*”²¹ colloquium.

During a methodology seminar set up in June, 2009²², the LSM model was used to methodically explore measures that could help to prepare Luxembourg’s economy for emerging from the economic and financial crisis. The LSM is a microeconomic dynamic stochastic general equilibrium (DSGE) model, that incorporates economic specificities of Luxembourg, meaning the specific functioning of the labor market that takes into account both resident and cross-border workers, the importance of negotiations between unions and companies and the fact that Luxembourg is a small, extremely open economy. On the face of the emergency measures taken by European governments and the European Central Bank, the model analyzes the impact of various policies that could mitigate the negative effects of the crisis. Simulations were thus made of the repercussions of an increase in margin rates or replacement rates, as well as of decreases in social contributions, fiscal taxes and the VAT. To that end, the results produced by the LSM macro-econometric model can provide precious information for formulating future structural policies. The LSM model shows that reforms undertaken in an isolated fashion often result in little impact or in undesired impacts, while choosing a combination of scenarios is more reasonable and can produce positive effects for Luxembourg’s economy. Professor Fontagné stressed that a negotiated economic policy, such as within the framework of the Tripartite Coordination Committee, is the right path to choose.

²⁰ FONTAGNE L., MARCELLINO M., *Premières simulations de politique économique avec le nouveau Modèle de l’Economie du Luxembourg: LSM (Luxembourg Structural Model)*, in *Bilan Compétitivité 2008*, Ministry of the Economy and Foreign Trade, Luxembourg, October 2008

²¹ For more details see : <http://www.tudor.lu/Lisbonne2008>

²² For more details see : <http://www.odc.public.lu/actualites/2009/06/index.html>

3. Broad economic policy guidelines

3.1 Macroeconomic policies to promote growth and employment

IG 1 – Guarantee the economic stability for sustainable growth
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The worldwide economic crisis has also affected Luxembourg. In the wake of the severe financial crisis in October and November, 2008, the crisis began progressively to extend into the real economy. According to STATEC estimates, economic growth stagnated in 2008 and for 2009 we are expecting a drop in GDP figures in the area of -4%.

In an attempt to preserve the country's financial system and to contain the negative impact of the recession on work and employment, the Government implemented a series of exceptional measures that conform to the European Council recommendations of 15 -16 October and on 11-12 December 2008.

The Government coordinated with the Belgian, French and Dutch governments at the end of September and the beginning of October to shore up two systemic financial institutions thus stabilizing the banking system and ensuring that depositors savings were protected. This rapid and effective action by the governments renewed confidence in the market and limited the effect of a contagion in the real economy.

Furthermore, the Government carried out actions under the European Economic Recovery Plan aimed at stimulating consumer and investment demand and in attenuating the human cost of the slowdown and its impact on vulnerable people.

In order to achieve these objectives, the Government adopted a group of measures that are directed at the six categories below:

- Support households' purchasing power
- Support businesses by enacting tax and other incentive legislation
- Create an administrative environment favorable to economic activity
- Help businesses by getting public expenditure projects on the ground
- Assist in mitigating the impact of the crisis in the area of employment
- Prepare for economic recovery

Implementing these discretionary measures, the impact of automatic stabilizers and the effect of the recession on the country's revenues have combined to significantly deteriorate the public finance balance situation. The country's finance balance went from +3.8% of GDP in 2007 to +2.6% of GDP in 2008. Public finances will record a budget deficit of 2.3% of GDP in 2009, and according to the 2010 draft budget, this deficit will rise to 4.4% of GDP in 2010.

Table 2: The Administration's budget situation as a % of GDP

	2004	2005	2006	2007	2008	2009	2010
Public Administration	-1.2%	0.0%	1.4%	3.8%	2.6%	-2.3%	-4.4%
Central Administration	-2.6%	-1.2%	-0.7%	1.0%	-0.2%	-4.2%	-6.2%
Local Administrations	-0.1%	-0.3%	0.2%	0.4%	0.0%	-0.1%	-0.2%
Social Security	1.5%	1.5%	1.8%	2.4%	2.9%	2.0%	2.0%

Source: Ministry of Finance

Despite the presence of positive factors such as a potential for growth that exceeds that of the European average and a public debt that is below the European average, it is clear that Luxembourg must, together with the other member states in the Euro zone and the European Union, develop a strategy for correcting the public finances situation and ensuring its longevity as the crisis fades. Implementing a resolute and expansionist budget policy has indeed resulted in stabilizing economic activity for the short and medium term. Yet a necessary prerequisite for the longer term involves maintaining a prudent budget policy and stable public finances situations if we are to guarantee economic stability and arrive at sustainable growth.

Getting excessive inflation under control is one of the six major avenues of approach for reform measures as stated by the Tripartite Coordination Committee in April 2006. After consulting the Tripartite Coordination Committee and participating in an exchange of views with diverse employer and worker organizations, as well as consumer protection groups, various measures were implemented under an Action Plan for fighting excessive inflation²³. This Action Plan for fighting excessive inflation, especially its component implementing a number of structural measures impacting pricing policies, is a part of the 2009-2014 Government program²⁴.

The Government strongly favors a wage policy that will adhere to changes in overall productivity in the Luxembourg economy. The Government is monitoring changes in productivity, wages and unit labor costs closely; this scrutiny is grounded in quantitative and qualitative analyses carried out periodically by STATEC and the *Observatoire de la Compétitivité*²⁵.

The Government is pursuing a prudent policy in adapting administered prices, by setting up a procedure for a mandatory review of the impact of increases in public service charges on the inflation rate before implementing an increase. A complementary heading has been added to the impact assessment for legislative and regulatory measures²⁶. In addition, in April 2008 the Government decided to “*defer for the moment all increases in public prices and requested the municipalities to follow suit*”²⁷.

All Ministry departments received a circular exhorting them to restrict the indexing of public contracts to increases in costs of goods and services.

The supply difficulties that Luxembourg companies are encountering in the internal market namely the rules and practices of general representation for imports, are currently being analyzed by means of the market monitoring mechanism put in place by the European

²³ For more details concerning these measures, see MINISTÈRE DE L'ÉCONOMIE ET DU COMMERCE EXTÉRIEUR, Maîtriser l'inflation : plus de compétitivité pour plus de pouvoir d'achat, in Bilan Compétitivité 2008, Luxembourg, October 2008

²⁴ For more information : <http://www.gouvernement.lu/gouvernement/programme-2009/programme-2009/07-ecocomex/index.html>

²⁵ See reports by STATEC and the Observatoire de la Compétitivité on the following sites:
http://www.odc.public.lu/publications/rapport_competitivite/index.html

http://www.odc.public.lu/publications/bilan_compete/index.html.

²⁶ http://www.mcm.public.lu/fr/admin/espace_administrations/procedure_analyse_flux/index.html

²⁷ Also see the Government statement on the economic, social and financial situation of the country in 2008, made by the Prime Minister in Parliament.

<http://www.gouvernement.lu/gouvernement/etat-nation/etat-nation-FR-2008/index.html>

Commission as part of the Single Market review. The overall framework used to import goods influences both the level and changes of prices in a country, such as when exclusivity contracts are concluded, and a small economy such as Luxembourg's would appear particularly vulnerable because of its size.

The Government wishes to continuously implement framework conditions for competition between economic agents, namely with regard to transparency of markets and displaying prices. To this end the Luxembourg Consumer Union (ULC) was asked to facilitate comparisons of consumer prices. In addition, STATEC was requested to intensify its information policy *vis à vis* the general public with the intent of facilitating access to improved information and to make the pricing system more transparent²⁸. As a result, STATEC put a report on line dealing with the consumer price and inflation index and stepped up promotion in the press of its evaluation mechanisms for monitoring changes in prices. The Government expects to optimize synergies between the Competition Council and the Competition Inspectorate to this end²⁹. This measure intended to revitalize competition aims at providing the Competition Council the means of legal action required to carry out active and vigorous policies to promote increasing the free play of competition.

Voluntary pricing agreements were signed in February, 2008³⁰. Neither general pressure on prices nor increases resulting from the automatic wage indexation system can serve as a pretext to impose excessive or covert price increases on consumers. The Government intends to continue these types of agreements with different sectors of the economy.

The Government has instructed the Economic and Social Committee (ESC) to involve the social partners in studying the multiple factors behind the determinants of inflation in Luxembourg and the instruments available to control it.

IG 2 - Safeguard economic and budgetary sustainability, a prerequisite for more jobs
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The public administration's finance balance was positive for the period 2005-2008. With the upheaval in the economy occurring in 2008-2009 and the subsequent implementation of exceptional measures seeking to stabilize economic activity and employment, the administration's budget situation went into deficit for 2009, to a -2.3% of GDP. It will remain in deficit in 2010, at around -4% of GDP.

The Government used the growth period from 2005-2007 to consolidate public finances and allocate the surpluses of 2005-2008 to reserves. These reserves provided a margin of maneuver that allowed Luxembourg to cope with the economic turnaround and subsequent consequences to the budget without excessively increasing the public debt load.

However, the crisis is reducing the budget's margins of maneuver. Simultaneously, Luxembourg is dealing with structural issues such as the loss of growth potential due to the current crisis and the ageing of the population.

The Government is currently developing an exit strategy for the crisis that will keep public finances healthy and ensure growth and prosperity over the medium and long term.

²⁸ For more details see : http://www.statistiques.public.lu/fr/communiqués/economie/prix_salaires/2008/09/20080915/index.html

²⁹ Draft law for reforming the law dated 17 May 2004 relating to competition (n°5816). Also see IG 13 of the 2008 National Reform Plan. For more details see: <http://www.chd.lu>

³⁰ http://www.eco.public.lu/sa-lle_de_presse/com_presse_et_art_actu/2008/02/29_inflation/acc_volont_prix.pdf

To this end, the 2009-2014 government program stresses public expenditures policies while underscoring the importance of preserving social equilibrium. In addition, the Government is committed to carrying out a prudent fiscal policy that maintains a fiscal framework favorable to employment and to households' purchasing power.

With regard to the long-term viability of public finances, the government program sets out the implementation of a reform of the pension system aimed at ensuring at once the financial, social and political viability of the pension system, as well as its legitimacy. The Government's proposals are based on the work of a round table of experts that was established following the Tripartite Coordination Committee meeting of April 2006, which presented its conclusions in December 2008.

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

In the Government's R&D and innovation objectives as set out in the 2004-2009 government program, the aim is to increase public expenditures to 1% of GDP, while ensuring that maximum effectiveness and efficiency is achieved in expenditures for this area, in a changing process that takes into account the absorptive capacity of the nation's R&D mechanism.

Table 3: Changes in budget allocations to R&D from 2004-2010

Year	2004	2005	2006	2007	2008	2009	2010 (Forecasted)
Allocations to R&D (Units: Mn €)	72.0	97.6	114.4	140.4	170.4	200.0	248.0
% of GDP	0.27	0.32	0.34	0.39	0.47	0.57	0.67

Source: Ministry of Higher Education and Research

With recent significant changes occurring in the research and innovation landscape in Luxembourg, such as the introduction of the University of Luxembourg³¹ and the Government's commitment to invest more heavily in research and innovation in upcoming years, the recommendations of the 2006 OECD study-evaluation of Luxembourg's research and innovation system were largely put into effect by establishing the CSRI, the *Comité Supérieur de la Recherche et de l'Innovation* (Senior Research and Innovation Committee). Performance contracts were drawn up with public research agents for the period 2008-2010 and the national R&D effort will concentrate on a limited number of priority areas stipulated in the multi-annual CORE program of the National Research Fund (NRF)³². Governmental action will be set up with the assistance of the CSRI and in consultation with science and economic players in civil society. It will be based on a continuing programming format, by means of agreements extending over several years. This action will be implemented with the assistance of NRF and Luxinnovation³³.

³¹ For more details see: <http://www.fr.uni.lu/>

³² For more details see: <http://www.fnr.lu/>

³³ For more details see: <http://www.luxinnovation.lu>

More importance must be accorded to investment in intangibles in order to re-launch long-term economic growth. In this context, governmental action will resolutely adopt the “Knowledge Triangle” concept in an attempt to bolster the potential of those who will be producing knowledge through research, disseminate acquired knowledge through the higher education system and apply it through innovation. To achieve this will require tight and effective coordination between higher education, research and innovation entities. The Knowledge Triangle concept will be achieved within the *Cité des Sciences* complex, which will group the University of Luxembourg, the public research centers, incubators and certain research laboratories of private businesses in a single location.

To this effect, the Government will reinforce synergies between the University of Luxembourg and the public research establishment in operation, both through dialogue among research activities and sectors and by promoting mobility of research and teaching personnel. These actions will be supplemented by other initiatives to achieve synergies, notably concerning the setting up of shared scientific instrumentation platforms, the implementation of joint projects involving international cooperation underscoring the interdisciplinary aspects and the creation of a shared knowledge transfer and management structure for intellectual property. These synergy seeking actions will be catalyzed by the concentration of activities within the *Cité des Sciences, de la Recherche et de l’Innovation* complex, with the objective of building a genuine technological campus that also promotes public-private partnerships. This type of approach entails integrated vision and management of all the activities in the innovation value chain and the valuation of the results of these research activities will gain in importance.

The Government, in an approach seeking to achieve the most appropriate arrangement possible between domestic requirements in the area of science and technology skills in the medium and long term and future paths of economic development, will promote the development of veritable skills centers. These will be based on a public-private partnership model involving the private sector in the planning of research agendas and tasks, technological and innovation development (RDI) and management and financing of the skills centers. This approach will lean heavily on acquired knowledge from the work of technological clusters, which will receive better supervision in order to achieve greater efficiency and improved structuring of work.

In order to ensure required levels of impact and efficiency, RDI policy and activities developed as part of that framework will be continuously monitored and will undergo periodic evaluation exercises controlled by independent international groups of experts.

The Government will thus continue to encourage scientific collaboration and mobility among researchers with the objective of achieving stronger integration of Luxembourg players into scientific and technological cooperation initiatives on the European or international levels by means of reinforcing bilateral cooperation agreements. In the same vein, the Government, in concert with the other Greater Region partners³⁴, will analyze the potential of a joint scientific programming structure. The Government is convinced that there is good potential in reciprocal reinforcement of this concept and will explore achieving better synergies between nation RDI policies and development aid.

³⁴ For more information on the Greater Region, see: <http://www.granderegion.net>

The law dated 5 June 2009 for the promotion of research, development and innovation took effect in July 2009. This law revokes the provisions of article 6 of the law dated 27 July 1993, whose purpose is: 1. Economic development and diversification 2. Improvement of the overall structure and regional equilibrium of the economy as amended by the law dated 21 February 1997. This legislative reform is part of the group of anti-crisis measures. In that context, support measures recommended by the reform for companies are intended to help them prepare as much as possible for emerging from the crisis and moving into economic recovery. The provisions of the law are grouped under four areas.

The purpose of the first area is to transpose the dispositions of the Community framework for State aid for research, development and innovation into national law³⁵. As such it covers all of the schemes and measures of direct aid to companies to incite them either to embark on a new innovative path or to develop an existing innovative process. As with the Community framework and in the spirit of the Lisbon strategy these provisions exceed the limited context of support for technological research and development (hereafter referred to as R&D). They address and seek to incite the efforts of companies all along the research-development-innovation chain (RDI). In this way, the legislative mechanism covers not only the “standard” R&D support, but also aid schemes that promote the following:

- The establishment and expansion of young innovative companies
- Helping SME obtain temporary personnel that are highly qualified in RDI and whose job is to assist the SME in embarking on an RDI process
- Helping SME use innovation consulting services and outsourced innovation support experts to set up new RDI processes
- Process and organization innovation in departments
- Technical feasibility studies for SME
- Technical industrial property rights protection for SME
- Investing in innovation centers and their management

The aid scheme for R&D projects and programs also particularly stresses cooperation between large companies and SME, and between companies and public research organizations, on the cross-border and international levels.

The second area covered by the law creates a legal basis for projects sponsored by Luxinnovation EIG, the national agency for promoting research, development and innovation, and intends these projects for promotion under the law’s aid scheme and for consultation for companies that wish to benefit from these aids³⁶, as well as for management of future Luxembourg participations in international RDI cooperation initiatives. The new aid schemes under the first heading of the law and those of Luxinnovation’s wider projects under the law’s second heading constitute the last links that were lacking to form a new, proactive process of promoting investment in RDI.

³⁵ JO C 323 dated 30 December 2006.

³⁶ Luxinnovation was established in 1984 under an agreement between the State and professional organizations representing the private sector. The Chambers of Commerce and Trade and the Federation of Industries are now private members of this partnership together with the public sector, which set up an EIG in 1998. The statutory projects of the agency found tangible existence in a performance contract extending over several years with public and private members, dated in 2008 and covering the period 2008 to 2010. Title 2 of the law dated 5 June 2009 creates a legal basis for these projects.

The third area covered by the law provides for the establishment of an Innovation Fund that will come on line in 2010 with the responsibility of financing the aid schemes and measures under the first title of the law, the State's participation in the financing of Luxinnovation projects, and costs relating to all State actions intended to promote RDI in Luxembourg. The budget allocation to the fund for 2010 amounts to 29.3 million Euros, an increase of 28.5% of the fund's resources with relation to an allocation of 22.8 million Euro³⁷ to Luxinnovation for direct aid projects to companies and consulting and information projects. Budget forecasts are calling for increases of annual allocations to the fund to around 35 million Euros as from 2012. Extensions of aid allocations for the new direct aid scheme for companies will also serve to increase the number of public-private RDI partnerships, to target public research on priority areas and to develop skills centers within public research organizations.

The Government is still awaiting the formal authorization from the European Commission to implement the aid schemes not covered by the General Exemption Regulation by categories, No. 800/2008 dated 6 August 2008³⁸.

OBJECTIVE: Increase the pool of human resources

In order to contribute to the development of internal human resources as well as to attract and retain human resources essential to the RDI development effort in Luxembourg, it is important to develop an environment propitious to improving scientific and technological employment for researchers that promotes career perspectives and mobility, both internationally and between sectors. To this end, the Government will implement an action plan based on the principles set out by the European Commission and the Council³⁹ and which is intended to include a consistent group of specific actions, particularly in the area of improving employment and working conditions in order to render scientific careers more attractive.

IG 8 – Facilitate all forms of innovation

OBJECTIVE: Promote the creation and development of new companies

From the perspective of creating new high added value economic activities the Government will support entrepreneurial initiatives and bolster their affiliation in the form of start-ups or spin-offs. The Government will also finalize the development of programs hosting young start-ups with an adequate advisory structure.

OBJECTIVE: Promote intellectual property

The Government has been active in pursuing its awareness actions concerning intellectual property, through the efforts of the Intellectual Property Office, and put new activities into play intended for a wider audience:

- Target SME/General public: A conference on infringement of copyrights was held in Luxembourg in November, 2008 in an effort to make the public aware of the issue and to inform companies operating in the Greater Region. A second course comprised of

³⁷ Available to the Ministry of the Economy and Foreign trade in 2009.

³⁸ The Luxembourg authorities formally notified the schemes concerned on 6 May 2009 (State Aid N 273/2009). Complementary information and explanations were addresses to the Commission on 15 July 2009.

³⁹ The *Gago-Biltgen* initiative for a European partnership to improve the attractiveness of technological research and development careers as well as the mobility of researchers in Europe [ST10003/09].

four training sessions specifically oriented on intellectual property was given during the first half of 2009. On the occasion of the World Intellectual Property Day, the Government initiated and coordinated the second edition of the “*IP Day in Luxembourg*” conference which brought together the players active in this area in Luxembourg. The economic value of intellectual property rights was also the main theme dealt with by various participants.

- Target Schools/Secondary Schools/Youth/Teachers: For the second year, copyright issues were the topic of an awareness campaign directed at youth during the *Books and Copyright Day* initiated by UNESCO. On this occasion, a training session on copyrights adapted for young audiences was given during visits to several schools. It is expected that the course materials on copyrights issues prepared for this session and intended for presentation to students can be provided to teachers.
- Target Teachers/Researchers: A workshop intended for researchers, teachers/researchers and research engineers on ways to safeguard and promote the research process was set up in June 2009 in collaboration with the Benelux Intellectual Property Office (*Office Benelux de la Propriété Intellectuelle-OBPI*)⁴⁰.
- Target SME/Professionals/General public: A workshop in drafting a standard in the area of brand evaluations was initiated. A group of national experts participate in standardization work in the ISO/TC 231 "Brand evaluation" technical committee.
- Target SME: The massive European intellectual property project entitled "*IPeuropAware*", whose purpose is awareness programs for SME, was used to implement an evaluation method within SME. This methodology is currently provided free of charge in volunteer SME and companies wishing to use it will subsequently receive specialized tools intended to improve or perfect their use.
- Target Consumers: Directive 2004/48/EC was transposed into national law with a group of measures enabling its implementation in Luxembourg.

OBJECTIVE: Promote standardization

Since the establishment of the Luxembourg Standardization Organization in 2008 within the confines of the Luxembourg Institute of Standardization, Accreditation, Security and Quality of Products and Services (ILNAS)⁴¹, the strategic development of standardization in Luxembourg is clearly inscribed under the principles of the key Knowledge Triangle concept. The importance of a Knowledge Triangle functions in the form of interactions between education, research and innovation. In this context, OLN considers as essential to the development of standardization and as a backdrop for the nation's economy the act of producing standards knowledge (in the sense of creating it through the work of technical standardization committees) ; transfer this knowledge via training and awareness programs; use the standards knowledge in research and innovation applications. As such, the OLN has increased companies' participation - chiefly SME - in standards work in the mirror committees. It should be noted that participation in the committees is free of charge and the OLN provides administrative and technical support. A FEDER research project was also developed to assist SME to participate in the standardization process. The OLN drafted and launched a multi-year Partnership Program dubbed “Innovation & Normalization in Services” (INS), in collaboration with the Henri Tudor Public Research Center. This development is in direct rapport with the EU stated desire for implementing “heightened contribution to standardization and innovation in Europe”. The program is made up of several research

⁴⁰ For more details see: <http://www.boip.int>

⁴¹ For more details see: <http://www.ilnas.public.lu/fr/>

projects including the one begun in 2009 on the theme “Search for Quality and the Development of Information Technologies” and concentrates on the theme of standardization in entities’ departments. It should be noted that an initial module of standardization themed training was tested in the University of Luxembourg in a context of asking students to participate as observers in mirror committee sessions. An *e-shop* for purchasing standards online was developed and a room to consult standards free of charge was set up. Finally, a standards regulations monitoring service is available to companies through the Henri Tudor Public Research Center with the support of OLN.

IG 9 – Facilitate the spread and effective use of ICT and build a fully inclusive information society
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OBJECTIVE: Spread the use of ICT by all players in the economy

Broadband internet coverage has been at 100% in Luxembourg since 2003. In other words, 100% of the population can obtain broadband internet service if they so desire. This very high rate of coverage is one of the factors that explains the very rapid adoption of broadband in Luxembourg, to the extent that in 2009, Luxembourg ranked 6th in the EU 27 with regard to the penetration rate in households, at 61%. Access to internet service aside, skill levels play a crucial role in promoting the spread of ICT services. At this level Luxembourg’s position is also among the best, as the country ranks first in basic ICT skills at 29.1%, and second with regard to specialized ICT skills at 5%. The country also receives an excellent report in the area of use of internet services. Of the 15 criteria evaluated by the European Commission, Luxembourg is in the top ten for 14 of them. The *eGouvernement* services are a particular attraction as 48% of the general population and 90% of companies regularly use these services, resulting in the country ranking 4th among the 27 member nations of the EU⁴².

Public confidence and security are the key vectors for spreading the use of broadband infrastructure and services. The certification entity LuxTrust S.A.,⁴³ which has implemented a national public key infrastructure (PKI) and has continued to disseminate its authentication and signature certificates on the national level. These certificates, which are available in different formats, have been in use since the end of 2007 in banking, private and public sector applications, and since 2008 widely so in *e-government* applications such as the single window for citizens⁴⁴, income tax statements, family benefits, etc.

The priorities of the master plan of the Information Systems and Network Security is to get players to assume their responsibilities, bolster confidence in the new technologies of the sphere of information and communications, reduce digital divide in the domain of security and manage responses to computer incidents. At the core of the front line of the plan, the CASES⁴⁵ mission is to heighten awareness and keep informed a wide public made up of adult and child citizens, SME and administrations. The CASES group provides information through its internet portal with the help of fact sheets and guides and promotes both adopting methodological approaches and the use of internationally recognized standards in the area of

⁴² EUROPEAN COMMISSION, Commission staff working document accompanying the communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Europe’s Digital Competitiveness Report - Volume2: i2010 - ICT Country Profiles, Brussels, 4 August 2009, SEC (2009) 1104 final.

⁴³ Established in November 2005, in which the State is the majority shareholder with 66 % of equity capital. For more details see: <https://www.luxtrust.lu/>

⁴⁴ For more details see: www.guichet.public.lu

⁴⁵ For more details see: <http://www.cases.public.lu>

security. Applying security policies based on such standards as ISO/IEC 27001 is as much a priority for CASES as the campaigns directed toward the general public that assemble a wide range of partners. On the second line of defense, the government's Computer Emergency Response Team (CERT)⁴⁶ of the Computer Incident Response Center Luxembourg (CIRCL)⁴⁷ has the mission of promoting the implementation of reaction and remedial skills and coordinating the various structures in the area of incident response. Among the CIRCL priorities are technological watches, the implementation of research projects in the areas of threats and vulnerabilities and implementing a skills exchange network.

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

The development of broadband and mobile networks is continuing. Currently, 90% of the population is covered by 3G networks. The extension of the WiFi technology has progressed widely in urban areas. Simultaneous to improvements in international and domestic connectivity, continued efforts are under way to increase infrastructure mostly in fiber optics material for Luxconnect⁴⁸.

With the transition to digital land-based television completed in 2007, the spectrum emerging from the spectrum dividend (790-862 MHz) will now be open to electronic communications departments. The frequencies plan was adapted to fit this arrangement. This additional spectrum will facilitate the future of implementing high speed wireless networks.

Finally, with regard to the transition to digital in cable, almost all cable operators are now committed to digital. The major networks are currently offering high speed internet access and telephone service. Also, there is stiff competition in this area for the market of tele-distribution with the onset of television through DSL.

OBJECTIVE: Promote the search for excellence in information and communications technologies through quality and security

The Digital Trust Service in ILNAS provides support to companies that are active in the ITC area. It is a clearinghouse for information and exchange of knowledge of norms for the ITC domain, a mission that simultaneously permits a targeting of excellence in ITC. In February 2009, Luxembourg became a participating member of the *ISO/IEC/JTC1* committee relating to information technologies. This formal involvement makes it possible to follow up on all subjects dealt with in the committee meetings, through participation in the voting process, but also by being part of the annual meetings. ILNAS will thus facilitate the transfer of ad hoc knowledge for Luxembourg, at the core of which a dynamic of interests and involvement for several sub-committees are already in place. ILNAS presides over JTC1 domestically, with the Digital Trust Service ensuring regular meetings with the chairs of JTC1 national study groups. In time, the Digital Trust Service will set up a *JTC1* National Forum meeting twice yearly at ILNAS, to assemble the essential economic actors in the ITC sector of Luxembourg, and also to discuss pertinent information coming out of ISO/IEC/JTC1, with 17 sub-committees that are active the ITC sector. The Digital Trust Service manages and develops accreditation instruments and notification of digital confidence, and has begun promoting authentication and certification instruments of digital confidence. In this framework, the PKI

⁴⁶ Computer Emergency Response Team

⁴⁷ Computer Incident Response Center Luxembourg. For more details see <http://www.circl.lu>

⁴⁸ For more details see: <http://www.luxconnect.lu/>

accreditation system was reinforced and improved and a preliminary study for implementing a Digital Services Provider (PSN – digital archives sector) was carried out.

IG 10 - Strengthen the competitive advantages of Europe's industrial base

The Government is pursuing economic diversification and the development of the industrial base by promoting technological clusters, as follows:

- In June, 2008, under the common impetus of the seven founding members⁴⁹, the *Cluster for Logistics (a.s.b.l.- non-profit)* was established.
- In September 2008, all technological clusters⁵⁰ expanded to the cluster *BioHealth* which operates in the area of health sciences and technology. The Government announced the implementation of a strategic partnership initiative with three American world-class research institutes in this domain. The objective of the initiative, in which the Government will invest around 140mn euros over the next five years, is to develop a skill pool in molecular medicine. The partnership will collaborate with the public research centers⁵¹ Santé, Henri Tudor and Gabriel Lippmann, as well as the University of Luxembourg. The three projects aim to intensify research in the domain of molecular diagnostics, the cornerstone of personalized medicine. The project pivots around the establishment of a Luxembourg “BioBank” in partnership with the Translational Genomics Research Institute, to be called the Integrated Biobank of Luxembourg⁵². The second phase of the research agreement involves a partnership between the Institute for Systems Biology and the University of Luxembourg, whose objective is to establish a skill pool in systems biology in Luxembourg within the next five years. The third and final venture is a demonstration project to be achieved by the *CRP Santé* in the framework of the Partnership for Personalized Medicine, which will target lung cancer, a nearly incurable disease that manifests itself generally in the advanced stages.
- In February 2009, the cluster *EcoDev* was established to cover the domains of eco-technologies and sustainable development⁵³.

IG 11 - Encourage the sustainable use of resources and strengthen the synergies between environmental protection and growth

In accordance with the options set out by the Integrated Transport and Spatial Development concept (IVL), four master sector plans have been drawn up in the following areas: transportation, industrial zones, housing and countryside. Preliminary drafts have been adopted by the Government Council. These preliminary drafts are currently being evaluated according to the provisions of the law governing impact assessment of plans and programs on the environment.

⁴⁹ This includes the Chamber of Commerce, the Luxembourg Confederation of Commerce, the Luxembourg Maritime Cluster, Fedil, Luxinnovation, the University of Luxembourg and the Henri Tudor public research center.

⁵⁰ Established under the initiative of the Ministry of the Economy and Foreign Trade and led by Luxinnovation.

⁵¹ For more details see: <http://www.crp-sante.lu/>, <http://www.tudor.lu/> et <http://www.lippmann.lu/>

⁵² For more details see: <http://www.ibbl.lu/>

⁵³ A technological cluster launched under the initiative of the Ministry of the Economy and Foreign Trade and directed by Luxinnovation.

OBJECTIVE: Promote a balanced environmental policy

The Government has made the implementation of measures in two key environmental plans a maximum priority. The plans are the Action Plan⁵⁴ to reduce CO₂ emissions and the National Plan for the Protection of Nature (NPPN).

The first Action Plan to reduce CO₂ emissions was adopted by the Government in April 2006 and was drawn up following a stringent analysis of greenhouse gas emissions reduction potential in Luxembourg. It includes measures in the areas of transportation, buildings, renewable energy sources and industry, and includes the aspects of information and consulting. It was worked out mainly with a view to adhering to Luxembourg's commitments with regard to the Kyoto protocol (2008-2012) and the measures should be considered the backbone of a long-term climate protection strategy. The action plan was implemented in consultation with the ministries and professional sectors, and all other players concerned. A taskforce comprising all the concerned ministries⁵⁵, reviews work on the plan on a regular basis. In May 2007, the action plan underwent its first formal evaluation following a public forum and was reinforced by ten functional elements representing essential points for short-term action. The majority of the measures stipulated have been implemented. In the transportation sector, as of January 2007, a progressive increase of fuel tax on road transport vehicles known as the Kyoto-cent has been implemented, as well as a restructuration of the tax on road vehicles in accordance with environmental criteria, i.e. CO₂ emissions. Financial aid is now available for the purchase of highly fuel economical vehicles between June 1st 2007 and December 31st 2009⁵⁶. All of these measures will be subject to in-depth evaluations to allow for amendments to current legislation. Apart from the domain of Road Transportation, the Action Plan identifies diverse other measures, some of which are detailed in the sections relative to energy policy and eco-efficiency⁵⁷. Finally, a second Action Plan is to be drawn up at the end of 2010 with a view to reducing greenhouse gas emissions that will take into account the ambitious objectives allotted to Luxembourg as part of the Climate-Energy package of the European Commission.

The National Plan for the Protection of Nature (NPPN) was drawn up within the framework of a consultation process involving eighty experts representing twenty-four non-governmental organizations (NGO), unions, and public authorities. It was adopted by the Government in May 2007. As a political action program in the area of the protection of nature for the period 2007-2011, the NPPN sets two strategic objectives: 1. Halt the loss of biodiversity before 2010⁵⁸ and 2. Protect countryside and ecosystem services; the objective also includes seven specific goals to achieve⁵⁹. The NPPN emphasizes above all the implementation of specific

⁵⁴ "Climate change: act on a major challenge"

For more details see: http://www.environnement.public.lu/air_bruit/dossiers/CC-plan_action_CO2/index.html

⁵⁵ These include the ministries, departments or directorates in charge of Agriculture, Economy, Energy, Finances, the Interior, Housing, Transportation and Public Works.

⁵⁶ Also see: OBJECTIVE: Promote eco-efficiency (IG 11).

⁵⁷ The Action Plan also calls for measures in the following areas: Energy savings, reinforcement of the structure for energy consulting, absolute priority for public transportation, financial aid for bolstering promotion of buses and heavy utility vehicles with low emissions to adhere to the Euro V standard, financial aid for promoting household refrigeration appliances with the A++ low energy consumption rating, new legislation in the area of energy performance for single family houses, new aid schemes for energy savings and the use of renewable energy in housing, reduced VAT rate for energy saving products, use of flexible mechanisms.

⁵⁸ On the international level, the NPPN is the nation's commitment to halt losses in biological biodiversity before 2010.

⁵⁹ 1. Reinforce the implementation of specific measures promoting the protection of nature 2. Integrate the concept of protecting nature into other sectors of activities and multiply the numbers of actors involved 3.

measures for the protection and conservation of nature and has selected forty-one priority measures, fifteen of which are labeled high priority, as well as thirty-six priority sites to be classified as protected areas. Implementation of all the measures registered has begun and a majority of them are near completion.

The preliminary draft of the National Plan for Sustainable Development (PNDD) was adopted by the Government Council in March 2009⁶⁰. It was prepared by the Inter-Service Commission on Sustainable Development (CIDD), formed with representatives from all the ministries. Using 14 “non-sustainable trends”⁶¹, the PNDD outlines a series of “Quality Objectives” necessary for sustainable development to take hold in Luxembourg⁶². From these, 89 “action objectives” and 155 “measures” were laid out. The process of drafting the PNDD was accompanied by consultation with actors in civil society. This second PNDD and the National Plan for Innovation and Full Employment (PNR) are complementary programs because as with the position adopted on the European level, it is understood that the PNR’s contribution is significant in achieving the goal of sustainable development.

OBJECTIVE: Promote a competitive energy policy

The laws dated 1 August 2007 concerning the organization of the electricity and natural gas markets, which took effect on 24 August, transpose European electrical (2003/54/CE) and natural gas (2003/55/CE) directives that aim to accelerate the establishment of the internal energy market. They also transpose the two directives concerning the security of supply in the areas of electricity and natural gas (2005/89/CE and 2004/67/CE). As part of the application of this legislation, the legal separation of integrated incumbent operators has gone into a new phase. Since 1 July, 2009 an exemption to the principle of legal separation of the managing entities of the natural gas transportation network as confirmed for Luxembourg in the directive 2003/55/EC has expired. In reality, the transposition of this principle for the natural gas sector is part of a larger merger of the Luxembourg operators Cegeled and Soteg and the German gas firm Saar Ferngas into two new regional entities: Creos - an owner and manager of electricity and gas networks - and Enovos - a company responsible for the production and supply of energy. The establishment of such a large actor based in Luxembourg is in the

Designate and manage in an appropriate manner, protected areas of national and community interest 4. Update legal and regulatory planning instruments 5. Introduce a science-based monitoring system for the status of biodiversity and to check how effective implementation of nature protection policies is 6. Promote scientific research in the area of biodiversity and conservation of nature 7. Improve awareness and teaching in the areas of protection of nature and sustainable development.

⁶⁰ See also section 1.3

⁶¹ 1. Over-exploitation of natural resources and loss of bio-diversity 2. Over-exploitation of farmland and cutting up of the countryside 3. Onset of climate change due to growing consumption of energy 4. Constant increases in transportation 5. Insecurity in the population (danger of poverty), 6. Threats to cohesion in society 7. Threats to public health, a so-called ailment of civilization 8. Ageing of the population 9. Danger of economic crises due to excessive volatility of international markets 10. Risk of loss of maneuverability due to lack of financial resources 11. Income gap between the North and South 12. Challenges to the national education system in the area of qualification and in the area of education of sustainable development 13. Inequality and differences in quality of life between men and women 14. Lack of consistency in governance matters.

⁶² The 18 “Quality Objectives” as follows: 1. Protect natural resources 2. Sustainable consumption and production 3. Sustainable land development 4. Climate protection 5. Disassociate economic development from volume of traffic 6. Full employment 7. Employ older workers 8. Avoid insecurity of work and provide access to and fairness of social protection 9. Integrate non-Luxembourg citizens and cross-border workers into Luxembourg 10. Ensure health for all 11. Provide an economy that is sheltered from crises 12. Ensure viability of finances 13. Contribute to eliminating world poverty 14. Promote global sustainable development 15. Improve levels of education and qualification 16. Educate people about sustainable development 17. Equality between men and women 18. Consistency among policies.

strategic interest of Luxembourg and of the Greater Region, as the entity will guarantee the security and quality of energy supplies, maintain employment in the energy sector and support economic development by supplying energy at competitive prices to both industrial and private customers.

In a wider context the Government has initiated a process aimed at formulating an overall strategic energy policy that takes into account the requirements of supply, competitiveness and eco-efficiency while seeking a firmer foundation on market instruments. A process of collaboration with the civil society group concerned has been started to discuss and finalize a proposal drawn up by a group of experts⁶³. This process ended in the completion of a white paper on establishing an energy strategy for Luxembourg⁶⁴. The white paper concludes that the type of energy strategy in question should establish a context including specific proposals for achievement. The document provides an analysis of the situation, the development of an energy model and the formulation of general energy policy objectives for whose achievement specific strategies and accompanying conditions must be developed. An analysis of the situation from the outset, including an understanding of the international situation and of the European context, is a central element. This element bears a major influence on the accompanying conditions for the Luxembourg market and thus for any national energy policy.

OBJECTIVE: Promote eco-efficiency⁶⁵

The Government continues to place priority on increasing energy efficiency and on developing new and renewable energy sources.

The Government had set January, 2008 as the deadline for completing a full review of its renewable energies promotion and its energy efficiency processes. The drafting of a new regulation was based on a study on the potential of renewable energies in Luxembourg that was introduced in March 2007⁶⁶. The new decree is reflected by two new Grand-ducal regulations that went into effect on 1 January 2008. The first Grand-ducal regulation relating to electricity production based on renewable energy sources introduces different injection fees for electricity produced from renewable energy sources. This is a major instrument for meeting the ambitious goal of exploiting the full potential of Luxembourg's renewable energy sources. The mechanism sets injection fees for each sector of technology, be it hydraulic, wind-power, photovoltaic, biogas, biomass or scrap wood. The second Grand-ducal regulation establishes a subsidy system for physical persons in promoting rational use of energy and highlighting the value of renewable energy sources. It states what subsidies are available to private persons who invest in energy savings projects in the construction sector or in using renewable energy sources for heating. It will help improve the Kyoto balance for Luxembourg. The new subsidies support the construction of housing with high energy savings, the so-called passive houses, as well as for energy use reduction, even on a partial basis, in existing buildings. Subsidies also encourage the use of solar thermal energy systems,

⁶³ Directed by Joachim Ziesing with assistance from "Fraunhofer Institut für System- und Innovationsforschung, (Fh-ISI)" and the "Finanzwissenschaftliches Forschungsinstitut an der Universität zu Köln (FiFo)".

⁶⁴ *Weißbuch über die Erarbeitung einer Energiestrategie für Luxemburg*.

⁶⁵ The Resource Center for Environmental Technologies (CRTE) undertakes activities and executes projects for which the objectives are reflected in the promotion of sustainable consumption and eco-efficiency as described in IG 11. The objective of these activities is reduce the impacts on the environment—air, water and land—resulting from human activities through the implementation of RDI projects tending toward sustainable management of natural resources and energy.

⁶⁶ Drafted by *Fraunhofer Institut für System- und Innovationsforschung (Fh-ISI)*, *Energy Economics Group, TU Wien (EEG)* and *BSR-Sustainability* in partnership with the Energy Agency, Luxembourg.

heat pumps, pellet or wood chip fired furnaces and replacing low yield furnaces. The regulation was modified in 2009 in order to improve its incentive base.

The Grand-ducal regulation dated 30 November 2007 concerning energy performance of residential buildings entered into effect on 1 January 2008. In large part it transposes the European directive on the energy performance of buildings (2002/91/EC). The directive's objective is to progressively obtain buildings that provide better conservation of energy resources and to lay the foundations for savings of sustainable energy to cover the full useful life of these buildings. It will also serve to federate the concept of creating sustainable local and regional employment for tradesmen in the construction sector. A vast awareness campaign has been launched in this framework⁶⁷ that includes information brochures, participation stands in trade fairs, skills upgrade seminars for professionals in the sector and seminars for local and municipal authorities. In this context the Government signed a partnership agreement for achieving better energy efficiency in residential buildings in early May 2008 with several banks operating in the Luxembourg financial sphere. The motivation behind the agreement is to further sustainable development and to provide a multiplier effect to encourage the construction of passive houses with low energy consumption in Luxembourg. The Government has granted participating banks the use of "Energy Efficient Partner" as a logo. This partnership remains open to all interested financial establishments. The same regulations includes the obligation of obtaining an energy performance certificate, in certain well defined situations, as a means of helping homeowners and/or renters save energy. Beginning in January 2010, all homeowners that wish to sell or rent their property must present an energy performance certificate. This obligation is also valid for major transformations of buildings or of their technical plant. For newly constructed residential buildings, additions to or renovations of existing residential buildings the obligation to obtain an energy performance certificate has been in effect since January 2008 and will also be extended to cover commercial buildings. In the mean time, the draft regulation on energy performance of commercial buildings was placed on the legislative circuit in 2009, thus covering the second part of the transposition requirement of the European directive on energy efficiency in buildings (2002/91/CE).

Following a workshop that was set up in May 2007 to explore strategies for establishing a national structure for energy consulting in the area of rational use of energy and renewable energies, the Energy Agency was restructured by creating a supplementary EIG entitled "MyEnergy",⁶⁸ that was charged with disseminating information, awareness programs and advice to the general public about energy savings. This restructuration has been in operation since 1 January 2009.

With the aim of supporting products that save energy, the Government has introduced a reduced VAT rate of 6% on heat produced by a heating network and for wood used in heating.

As noted earlier, the Government has initiated a system of financial aid for low fuel consumption automobiles. Initially, it will be restricted to physical persons who own automobiles first registered for the road between 1 June 2007 and 31 May 2008. The *PRIME CAR-e* bonus, worth € 750 toward the purchase of a low fuel consumption automobile, has been extended per the regulation dated 30 December 2008, and now applies to private citizens

⁶⁷ The PRIME House campaign was launched in November 2008 with the objective of engaging in more specific promotion of the aid schemes for energy savings and the use of renewable energy in housing.

⁶⁸ For more details see: <http://www.myenergy.lu/>

or companies or, in the case of leased vehicles, people driving vehicles with low fuel emissions rates. The € 750 bonus concerns automobiles registered for road use between 1 June 2007 and 31 December 2009 with CO₂ emissions of less than 120 g/km, which corresponds to fuel consumption rates of 5 liters of gasoline/100 km or 4.5 liters of diesel/100 km. This financial aid figure of € 750 is a complement to other measures already in place, such as the tax on road vehicles that entered into effect on 1 January 2007 that was restructured for environmental criteria as an incentive to citizens to favor low fuel consumption vehicles. In January 2009, a scrapping premium dubbed *PRIME CAR-e plus* was introduced to promote the replacement of vehicles older than 10 years with a new one to be registered for the road in 2009. The premium amounts to €1,750 if the replacement vehicle releases less than 120g/km and €1,500 for vehicles with emissions inferior to 150g/km. As all of these incentives expire at the end of 2009, they will be evaluated on an annual basis by the Government with a view to extending or modifying them.

Furthermore, financial aid for bolstering the promotion of buses and heavy utility vehicles with low emissions that meet the Euro V standard were instituted by the Grand Duchy regulation dated 24 October 2008. A premium of € 2,500 was established for companies purchasing vehicles that meet the Euro V standard before it becomes mandatory to do so. The premium is paid for vehicles acquired between 1 January 2007 and 30 June 2009.

The Government, conscious that the constant search for better energy efficiency is a key element in the fight against climate change and in preserving natural resources, has decided to encourage the replacement of old electrical appliances with new, low energy consumption units. Through the Grand Ducal regulation dated 30 December 2008, a financial aid bonus entitled *PRIME Cool* amounting to €100-150 depending on the size of the appliance, was introduced for purchasing refrigerators, freezers and combination units with category A++ energy labels .

In 1996 a voluntary agreement to improve energy efficiency in Luxembourg's industrial sector was concluded with the Business Federation Luxembourg (FEDIL)⁶⁹. This agreement was extended in 2002 through the end of 2008. Consequently, the Government rolled the agreement over again for an additional two years. Preparatory work was undertaken to widen the scope of this energy efficiency promotion instrument to other sectors of Luxembourg's economy.

Since 1994, the Government has actively promoted the development of the cogeneration concept. In view of the transposition of the European directive concerning the support of cogeneration activities (2004/8/CE), the 1994 legislation is now being fundamentally revamped. To this end, a study was initiated concentrating on the potential of high yield cogeneration systems. The goal of this study is to identify not only potential gains but allowable costs, technical and administrative barriers that exist, and any support measures for cogeneration. A new regulation that continues to promote cogeneration is being drafted based on the results of this study.

In February 2008 the Government Council approved a draft Grand-ducal regulation concerning the dissemination of information about electricity and labeling systems that includes details and content of information about electricity as well as about checks,

⁶⁹ For more details see : <http://www.fedil.lu>

supervision and structure of the labeling organization⁷⁰. This should allow each consumer to easily compare the mix of a specific electrical product with that of a given supplier and that of the national mix, which corresponds to the composition of electricity sources at the national level, or even the sum of all electricity sources supplied in Luxembourg. In addition, the labels will outline information on environmental impacts of electricity that must be provided to end users. This includes both CO₂ emission quantities and radioactive waste resulting from the process of producing electricity. This Grand Duchy draft law is currently in the legislative process.

A draft Grand-ducal regulation concerning the injection of biogas into a natural gas network was introduced for legislative action, following a study presented in 2007. The regulation's objective is to outline the framework for a support mechanism for installations injecting biogas into natural gas networks in Luxembourg.

The Government attempted to give a boost to the use of biofuels through the de-taxation of this type of fuel effective January 1st 2006, by transposing directive 2003/30/CE intended to promote the use of biofuels and other renewable fuels in transportation. Because this measure did not result in material increases in biofuel use as expected, the Government introduced a measure effective 1 January 2007 requiring that fuels for motor vehicles comprise a minimum of 2% biofuel, calculated on the basis of energy content of the fuel. This requirement was extended for 2009.

Directive 2005/32/CE of the European Parliament and the Council dated 6 July 2005, establishing a framework for setting requirements in the area of eco-design outlines the principles, terms and criteria for setting environmental requirements on energy consuming products. It does not directly state restrictive requirements for specific products, as this will be accomplished at a later date by means of implementing measures that will apply following consultations with interested parties and an impact analysis. The framework directive applies in principle to all products that use energy for their functioning and appear on the market. All energy sources are dealt with in the directive, including electricity, combustible solids, liquid and gases. It applies to all products that appear on European Union (EU) markets and imported products. The law dated 19 December 2008 establishing a framework for setting requirements in the area of eco-design applicable to consumer energy products transposes directive 2005/32/EC into national law.

As a part of directive 2006/32/CE on energy end use efficiency and energy services the Government finalized its first action plan in energy efficiency (PAEE), which sets a benchmark and intermediate objective for energy savings and is a summary of the strategy for achieving intermediate and overall goals. The action plan was approved by the Government Council at the end of February, 2008 and was then ratified by the European Commission. While awaiting the drafting of the second plan for energy efficiency due by 30 June 2011, the measures included in the first plan as well as their impact should be analyzed closely. In addition, in early April 2009 the Government reported to the European Commission that the transposition of directive 2006/32/CE dealing with energy efficiency in end use and to energy departments has been completed.

⁷⁰ Directive 2003/54/CE of the European Parliament and Council dated 26 June 2003 stipulates the common rules for the internal market for electricity and repeals directive 96/92/CE. It contains provisions concerning the dissemination of information about electricity and labeling of electricity that aim at furnishing end users with information denoting the source of their electricity and of its impact on the environment at the time it was produced.

OBJECTIVE: Promote sustainable patterns of consumption

An online buyer's guide for the most ecological products⁷¹, an initiative put into play by the Luxembourg group *Mouvement écologique*⁷², was completed. This guide provides recommendations for buying larger appliances such as washing machines, dishwashers, refrigerators, freezers (see PRIME Cool), ovens and cook tops, with an environmental classification for each product. The scope was widened to include automobiles (see PRIME CAR-e), televisions and energy saving lamps.

Under its consumption policy, the Government that emerged from the June, 2009 elections is committed to developing a program to promote responsible consumption practices.

Finally, as part of the second PNDD, the progressive introduction of sustainable consumption and production patterns was selected as a quality objective with a view to sustainable development in Luxembourg.

IG 12 - Extend and expand the internal market

OBJECTIVE: Promote accurate and timely transposition of directives and proper functioning of the internal market

The 2009-2014 governmental program reiterates the importance of ensuring rapid and high quality transposition of European directives. The Government “...commits to submitting legislation and regulatory drafts stipulating the transposition of directives in a timely fashion, allowing for adoption within the period provided for by the directive, while allocating to the legislative bodies concerned the time necessary for examining and if needed approving these projects.”

Since June 2008, the new measures taken by the Government to use a harmonized work method have been applied⁷³. They seek to provide a consistent and rigorous follow-up of outstanding dossiers of approved European acts awaiting transposition. These new measures are intended to allow systematic and meticulous monitoring, including within the Government Council, of each legislative proposal emanating from the European Commission all throughout the European legislative process. The management of these new measures is incumbent on the Ministry of Foreign Affairs, in accordance with this entity's assigned role regarding coordination of European policy. Therefore, since 1 June 2008, each proposal of a legislative act is recorded on a descriptive sheet. This descriptive sheet is drafted by departments within the Ministry in charge of negotiating the act within the UE Council and contains information on the objectives and content of the Community draft act and its legal basis, as well as information concerning the probable implications of this Community legislative act proposal on Luxembourg. Descriptive sheets must also go through the Inter-ministerial European Policy Coordination Committee (CICPE).

Once a community legislative act is adopted within the European Union, the Minister responsible for its transposition presents an updated descriptive sheet accompanied by an estimated transposition calendar⁷⁴. Only those Community legislative acts that encounter difficulties in keeping with the transposition deadline are submitted to the perusal of the

⁷¹ For more details see : www.oekotopten.lu

⁷² For more details see : <http://mouvement.oeko.lu>

⁷³ The main body of this paper can be found in the circular letter dated 10 July 2006.

⁷⁴ As provided for in Appendix I of the Prime Minister's circular letter dated 10 July 2006.

Government Council. In the event of a delay in preparing a legislative draft for the transposition of a Community act, the Minister responsible is expected to immediately inform the Prime Minister in writing, with a copy to advise the Minister of Foreign Affairs. The notice should indicate the difficulties of a legislative or other nature relating to the transposition of the directive within the time period allotted, the steps taken to inform the Commission of the situation and the measures the Minister responsible proposes to take to ensure that the directive is transposed within the shortest time possible. Apart from this management effort upstream of the transposition process, the Government Council will continue to monitor the infringement proceedings for transpositions not accomplished within the set deadlines. The Government hopes that these new measures will contribute over time to reducing the transposition deficit in accordance with the objectives of the spring 2007 European Council meeting, which determine that the intermediary objective for reducing the Internal Market transposition deficit was to be set at less than 1% of these directives before 2009.

The application of these new measures seems already to have had a certain impact on the results recorded by Luxembourg at the last board posting. The transposition deficit for Luxembourg dropped from 2.2% in the autumn of 2008 with posting 18, to 1.7% at posting 19, in the spring of 2009. A further drop in this figure is expected at position 20 in the fall of 2009, which should make it possible to reach or come very near to the stated objective of 1% set by the European Council.

As a supplement to the measures detailed above, the Government has expressed its desire to engage in more substantial monitoring of the directives transposition issue at the level of the Government Council. The July 2009 government program indicates that, "*The Government will review the transposition dossiers during its Council Meetings at regular intervals and at a minimum of twice monthly.*" In application of this commitment, the Minister of Foreign Affairs will place directives transposition and application of Community law on the agenda of the Government Council for review every two month, or more frequently as urgency dictates.

The transposition of directive 2006/123/CE continues. A draft law seeking to transpose the horizontal provisions of directive into national law was submitted in Parliament on 30 March 2009⁷⁵. This law will include elements of administrative cooperation, administrative simplification, aid for companies that are attempting to get established or seek to provide services in the European Community (through one single point of contact) and guarantees for end users and consumers of services by means of improved service quality and pre-contract information to consumers, as provided for by this directive. Projects underway now dealing with the adaptation of sector legislation and regulations are to be submitted to Parliament as from October 2009, following the opening of ordinary plenary sessions in the Chamber following the June legislative elections.

The Luxembourg SOLVIT center⁷⁶ continued its promotional activities aimed at increasing knowledge about the network among the general public by participating in several conferences and seminars. The number of files dealt with continues to increase, which allows obtaining a better view of the body of issues that subsist in the internal market and makes them known to the competent authorities, as needed. The second bi-annual summary report was published at the end of 2008.

⁷⁵ Parliamentary Document n° 6022.

⁷⁶ For more details see: <http://www.eco.public.lu/attributions/dg2/solvit/index.html>

IG 14 - Create a more competitive business environment and encourage private initiative by improving regulations.

OBJECTIVE: Increase impact studies and analyze the flows⁷⁷

The 2009-2014 government program calls for a certain number of administrative simplification measures that particularly affect procedures in the areas of communal planning and urban development, the protection of nature, classified establishments, public procurement, impacts of transportation infrastructure projects on the environment, water management and the prevention and management of waste.

Transversal Measures

Content of dossiers to be introduced as part of consultation procedures, as stipulated by legislation concerning the areas listed above is sometimes quite similar. In addition, a single project may undergo several evaluation procedures with comparable processes and deadlines. Therefore, the Government will:

- Assemble, to the extent possible, all the different mandatory consultation procedures with comparable deadlines and objectives applicable to a single, like project
- Avoid cross-referencing or duplication by grouping technical and scientific elements of a dossier that can be prepared in a complementary manner
- Prepare an implementation guide to ensure improved legislative consistency as proposed in the Government Economic Plan dated 6 march 2009
- Clarify vague definitions appearing in certain texts so as to avoid to the extent possible decisions that could be deemed subjective or even random.

A single "Authorizations" window will be set up to facilitate the path of small and medium sized companies through the administrative process as a point of contact between them and the administrations with authority in specific areas. The single window will function as an entry point for all company holding files. Files will be dispatched through the window, which will ensure that responses to companies' requests will be available within a predetermined timeline. The window can also provide advice to requesters and, if required, can play a consultative role between administrations. A comparable structure, also to be made available to private parties, is being considered for facilitating construction administration processes such as the various permissions, roadway permits, water courses, the cutting of trees and to simplify the application of the law concerning communal planning and urban development. This single "Urbanization" window should be set up in a de-centralized mode and could be linked to, for example, three district commissariats.

The Government will introduce the principle of "Silence Means Assent" concept for administrations pertaining to certain authorizations that may be issued without the need for setting out conditions or obligations. For other authorization procedures, the legal and regulatory texts will be modified so as to clarify the response timelines to which authorizing authorities shall be held. In this way, timelines may be fixed to verify that the application is complete, to set a time limit in which requesters must complete their applications, timelines for any public procedures and timelines for preparing authorizations or refusals of

⁷⁷ Also see IG 15.

applications. The principle that the administration may make requests for additional information only one time is being retained.

Measures aimed at a progressive dematerialization of administrative processes

The “Entreprises.lu” portal was conceived in 2004 to better inform companies with regard to the various procedures in existence. This portal will be converted to an interactive portal that will make “professional” room available to individual companies that will constitute a platform for exchanging electronic files with the administrations. The professional room will make it possible to memorize recurring data so as to avoid continued data entry tasks at every new application. It will also maintain an online history of all files currently being processed so that the processing status of each can be determined within the administration.

Bringing this virtual window on stream implies that companies may be required to adapt their information systems and their procedures to take full advantage of dematerialized business files.

In the same vein and parallel to the implementation of the virtual window, a system to electronically manage files will be set up within administrations that they can use to improve internal exchanges of information.

Measures aimed at individual legislative and regulatory plans

The following measures are being considered for simplifying the application of the law with regard to communal planning and urban development:

- Introducing a plan by which mayors can authorize construction projects without producing a specific development plan for small scale works in existing developments
- Making the practice of rolling over one year building permits to an additional year more widespread
- Introducing the possibility for the Parliament to exempt construction, transformation or demolition projects of public buildings from obtaining building permits from mayors where the construction is declared a public utility project.
- Stating the content of work, by means of project specifications, to upgrade General Land Use and Specific Land Use plans
- Preparing a regulation on structures by the communal planning department of the Ministry of the Interior in collaboration with other concerned administrations of the type stipulated since 2004 by the law pertaining to this topic.

In the framework of protection of nature and natural resources, a process will be introduced by which all the one-off compensatory measures related to individual projects that are part of a whole to be determined can be grouped together, such as the National Plan for the Protection of Nature⁷⁸ and the implementation of a sector plan for protected countryside as well as the regional *Oekobonus* plans in the future. This will remediate the difficulties encountered by public entities directing works that must implement specific compensatory measures even for small scale infrastructure projects. This approach will require building up a public land reserve, allowing for the implementation of large scale compensatory measures and a more resolute land buying policy for the purposes of conservation. The law for the

⁷⁸ See IG 11.

protection of nature and natural resources will be modified to remove the absolute prohibition of destroying biotopes inside the perimeter of an urban concentration through the authorization of a Minister and, if required, the implementation of compensatory measures.

In the area of classified establishments, the combination of four laws concerning communal planning and urban development, the evaluation of impacts of transportation infrastructure projects on the environment, the protection of nature and natural resources and classified establishments allow that a single, like project can fall under four distinct environmental evaluation procedures. An initial review occurs in the area of zoning, with a strategic impact study relating to the economic activities zone, then phase two of zoning, with a procedure concerning the overall evaluation of the General Land Use Plan and the Specific Land Use Plan required by the communal planning and urban development law. Next would come a zoning plan, assuming that the law concerning the general land use is applicable and finally, the "*commodo*" procedure for economic activities zoning may be required, prior to the establishment of a company that is subject to that type of evaluation procedure. The following has therefore been proposed:

- To coordinate the various texts so as to ensure that there is no doubling of efforts in the cascade of evaluations described above, where an element already serving to evaluate a higher level should not have to be the object of a lower level evaluation
- To synchronize timelines, procedures and, if required, durations of validity of authorizations issued as part of the laws on classified establishments, protection of nature and natural resources, water management and prevention and management of waste.
- To significantly reduce the timelines for the *commodo-incommodo* procedure
- To revise the Grand Duchy regulation that stipulates nomenclature and classification of classified establishments, so as to facilitate procedures
- To develop the service for presenting projects and discussing requests prior to submitting applications so as to allow requesters to immediately include certain requirements and to verify from the beginning that the application being submitted is complete
- To make available to the departments concerned the resources necessary for carrying out a monitoring program at the end of three years to verify the effectiveness of the measures proposed above.

The public procurement procedure has just been completely modified and simplified by legislative vote, and various modifications dealing with thresholds for awarding contracts were brought in. These administrative simplification measures included in new provisions will be evaluated in three years so as to be able to judge whether they have had a positive impact on competitiveness of companies. Another priority is the level of importance assigned to electronic technology. Changes in information technologies have revolutionized the expectations of users and practices over recent years. The Public Procurement Portal⁷⁹, which enables public procurement processes to be done entirely by electronic means, will be in service very soon. To rapidly adapt to the changes in this area it has been recommended that via Grand Duchy regulations, in the future the Minister responsible for public works should be able to require special standardized specifications for procurement, and that these standardized documents be subsequently be published electronically. This method will largely

⁷⁹ For more details see: <http://www.marches.public.lu/>

facilitate the work of all players concerned, that is, the administrations, architects and construction companies.

Legislation concerning the evaluation of impacts of transportation infrastructure projects on the environment is also part of the framework of measures selected by the Government to facilitate business for companies. It aims to modify legislation relating to the evaluation of instruments and procedures pertaining to the impact of certain public and private projects on the environment with an eye to administrative simplification. An evaluation of these impacts will be made in a legislative medium.

Monitoring will be carried out to verify to what extent measures for water management actually are effective and, if need be, revisions to the text will be undertaken.

An analysis will be done on whether or not it is possible to better harmonize legislation in the area of prevention and management of waste to connect with laws in other subjects evoked above. An accounting of timelines and principles laid out above for dealing with authorization requests will be done as part of the transposition of directive 2008/98/EC dated 19 November relating to waste.

The disparity and large number of prevention services for health and safety on the job, under the Ministry of Labor and Employment and the safety departments of the Ministry of Health not only result in high costs, but also in divergences in functioning and decision making processes. The Government will analyze the harmonization issue, and may consider merging these departments. The same goes for the two departments concerned with safety, namely the Labor Inspection and the National Safety Service for Government Workers. Harmonizing procedures and standards, as well as unifying these departments will bring companies and other administrations into contact with a single interlocutor.

Simplification measures that are specifically intended for administrative formalities concerning small and medium sized companies

The Government will make a priority of simplifying the administrative formalities that hold up production and the spirit of initiative in SME. It will reinforce the Administrative Simplification Committee (CSA)⁸⁰ who will concentrate on detecting administrative burdens that can fall to companies and will take charge of substantially reducing the administrative burdens bearing down on SME.

The Government will permanently adapt the right of establishment to socioeconomic change. As part of the transposition of the professional qualification and services directives, a new reform of this right of establishment will be carried out to make it more flexible and better adapted to the current situation, which is characterized by a progressively greater tendency toward internationalization. Conditions for acquiring a new trade or business will be reviewed with detail. In this context, a modernization of the Grand Duchy regulation that determines equivalence criteria and an adaptation of the general list of trades will be carried out. This will imply in terms of consequences a redefinition of the scope of application of certain trades.

The Government will take up the European challenge of matriculating a company at lower cost and more rapidly. The objective of obtaining authorization to establish a company within

⁸⁰ Formerly the *Comité national pour la Simplification administrative en faveur des Entreprises* (CNSAE).

one week will be attained through the implementation of a new computer application in the company registration department. This new application will also allow requesters to consult the progress of their application on the internet⁸¹. This software program constitutes one of the pillars of what will be an electronic one-stop-shop that will make it possible to process practically all administrative requests and procedures that a company may have to complete throughout its existence.

The Government will ensure SME compatibility of all legislation and regulations and study their impact on companies' spirit. The Government will introduce the principle of tacit authorization when administrations fail to respond for those service activities that enter into the scope of the framework law relating to services in the internal market. In general, using new information and communications technologies within administrations and ministries will become more widespread. In order to prevent multiple declarations, administrative mutual assistance intended to reduce the number of forms to be filled out by companies will be intensified. The single window formula will be extended further, with the aim of centralizing and grouping the various procedures in a single location.

OBJECTIVE: Codify legislative texts

The Consumer Code came before the State Council and Parliament in May 2008⁸². Work within the Parliament commission for the Code will begin when Parliament meets in October 2009.

⁸¹ This program will appear on the site www.entreprises.public.lu a major source of information for companies.

⁸² Parliamentary Document 5881.

Box 3: Implementation of the European Charter for Small Enterprises and of the Small Business Act

I. The Six Priority areas for 2009-2010

1. Cash flow for growth of companies – reduce payments delays and promote income re-investment (Line of Action 7 of the Charter/SBA principle 6) (IG 14 and 15)

» An inter-ministry working group is responsible for monitoring the file on the new Directive proposal of the European Parliament and the Council concerning untimely payments, in view of the potential impact of this proposal to both companies and the State and its public administrations.

2. Facilitate access to public contracts (Line of Action 6 of the Charter / SBA principle 7) (IG 13, 14 and 15)

» The *Portail des marchés publics* (Public Contracts Portal) is an internet B2G application that provides a single platform for all economic operators for searching out and consulting new opportunities in labor, supplier and services markets of the Luxembourg public sector. This gateway is also an information platform with regard to current legislation and laws applicable to the public sector. Also available on the site are pre-information notices of European directives, domestic and European tender notices, procurement applications for limited submittal on the national and European levels and for negotiated contracts, tendering for contracts and contract awards. The gateway can be used to attach submittal documents for desired contract tenders and companies can register to be kept abreast of any new information. In addition, a newsletter is published under the name of “*Service Alerte*” to inform interested parties of the latest public tender notices appearing on the portal. This portal was introduced as a good practices Platform by Luxembourg in preparation for the 2009 Conference of the European Charter for small companies.

3. Changing companies: simplify business failure procedures and facilitate company takeovers (Line of Action 3 of the Charter /SBA principles 1 and 2) (IG 14 and 15)

» Consultations concerning the draft law on budgeting control, the objective of which is to avoid business failure through a reorganization plan, have now been completed and a text is going through the finalization process and should be submitted shortly to the Ministry of Justice. In addition, jump starting a failed company or one in the process of winding up remains a possibility for business owners, provided an owner’s professional respectability has remained intact and that the owner agrees to complete an accelerated training course in the area of business management conducted by the appropriate trade chamber.

» The Business Re-launch/Takeover loan is a new SNCI financial instrument made available to commercial and trades companies that have been newly established or taken over, regardless of their legal form. The loans are intended to co-finance tangible and intangible costs required to achieve the requirements of the business plan presented by the newly established or taken over SME. This new pro-SME instrument was selected by the European Commission to appear in the 2009 edition of its good practices binder produced under the aegis of the European Charter for Small Businesses.

4. Stimulate creativity within the corporate spirit sense (Line of Action 1 of the Charter /SBA principle 1) (IG 15)

» The *Innovation Club for the Trades Sector* is a Chamber of Trades initiative that provides a forum for participants to hold regular exchanges relating to their experiences and good practices on innovation in the areas of management and marketing and in the technical domain. This initiative was selected by the Commission as a good practice and was the subject of a presentation in a workshop set up as part of the 2009 Conference of the European Charter for Small Businesses.

» The 2009 *Young Entrepreneur Luxembourg* (CYEL) prize, was set up by members of the Junior Chamber International (JCI), Luxembourg. The Government provided financial support for this prize that is intended to reward the most creative young entrepreneur. The winner competes in a worldwide competition.

» The inter-regional 1,2,3,GO network comprises 350 entrepreneurs, managers and directors, from all walks of business life and provides free assistance in developing innovative projects, helps in the establishment or diversification of SME and assists in creating convincing business plans. This project was selected as a standard of good practice in 2007 and was ranked among the ten best initiatives at the Small Enterprises Charter conference organized by the European Commission at Berlin in June 2007. It was again awarded a prize in December 2007 in the “Enterprise Support” category at the European Entrepreneurship Award 2007 in Porto. Each year, of the 200 or so innovative projects submitted to 1,2,3 GO, a good hundred are selected as meeting innovation and economic feasibility criteria. Also, around fifty business plans are evaluated by three panels from within the organization annually.

5. Stimulate the corporate spirit concept among women (Line of Action 1 of the Charter /SBA principle 1) (IG 15)

» The “Informal Coaching for Future Women Enterprisers” program was initiated by the Federation of Women Business Chiefs of Luxembourg with the object of providing assistance to future women business creators, by learning from the experiences of duly qualified women business creators. This initiative was presented as a good practice prior to the 2009 Conference of the European Charter for Small Businesses.

» The *Woman Business Manager of the Year 2009* prize was awarded by Dexia-BIL Bank, with the support of the Federation of Women Business Chiefs of Luxembourg, the Chamber of Commerce, the Chamber of Trades and the Government.

6. Encourage eco-innovation energy efficiency in SME (Line of Action 8 of the Charter /SBA principle 9) (IG 11)

» Since 2003, the Government has operated the Business and Innovation Center Ecostart 1 in Foetz, which is intended both for launches of new innovative businesses and for developing companies or foreign entities looking for a landing area in Luxembourg. Since the center’s doors opened, this enterprise and innovation unit has contributed to job creation. In 2006 the Government approved new infrastructure and the Ministry of the Economy and Foreign Trade began construction of a new facility in Foetz dubbed Ecostart 2 that boasts some 8,000 square meters of space broken down into 6,300 square meters for workshops and 1,700 meters for storage and offices. The new Center opened in 2007. The Ministry of the Economy and Foreign Trade also opted to extend and even increase the scope of the convention existing with the EIG Luxinnovation, assigning it the dual mission of coaching hosted companies and managing and promoting the Ecostart center. Parallel to the extension of its activities in Foetz, the high tech incubator project within the structure at the *Cité des Sciences, de la Recherche et de l’Innovation* at Belval-Ouest, called Ecostart 3 is nearly complete. Services provided by Ecostart enterprise and innovation centers go well beyond simply making square meters available at good prices, as the hosted companies can also profit by regular visits from Luxinnovation counselors and by specific services, such as setting up and providing in situ training sessions.

» The Action Plan for Promoting Energy Efficiency is an initiative of the Chamber of Trades that was launched in the second half of 2008. A web page entitled “Energy and You” provides access to a repertory of some 800 companies that are active in the area of renewable and efficient energy. The *Energie fir Zukunft* label, established by the Chamber of Trades, compensates companies that have acquired the required skills by completing training cycles centered on renewable energies and energy performance. This initiative was presented as a good practice by Luxembourg in preparation for the 2009 Conference 2009 of the European Charter for small companies.

II Other Areas of the Charter

1. Education and training for entrepreneurship (Line of Action 1 of the Charter/SBA principle 1) (IG 15)

Make entrepreneurship talked about and valued

» Under the initiative of the European Commission, the European SME Week took place in Luxembourg for the first time in May, 2009. Its objective was to carry out a campaign to promote entrepreneurship and to inform, assist to motivate potential entrepreneurs and stimulate experienced entrepreneurs and to share ideas and experiences. A large number of events took place in different locations of the territory and this dynamic continued throughout 2009.

» The 2009 “Luxembourg Company Days” (*Journées portes ouvertes luxembourgeoises*) allowed a wide public group to get an idea of the diversity and vitality of companies and to fuel the concept of entrepreneur as a vocation among youthful visitors. The objective of these open houses is to give the general public an opportunity to see what goes on inside of companies, regardless of their size or industrial sector. Thirty-three companies participated in this event that hosted some 18,600 visitors, bolstered by wide publicity in the media.

» To follow through with the first media campaign *Trau Dech* for promoting entrepreneurship, another approach, consisting of testimonials by entrepreneurs was very well received by the public, all the more so since the public already knows the majority of them by having met them in their own companies. Clearly, Luxembourg’s size is an asset for this kind of campaign whose objective is to transmit a positive message on entrepreneurship by spot publicity.

» The Business Plan Toolbox (BPTB) of the IUIL is free online aid (available in English, French, German and Portuguese) intended for future business creators. The tool consists of an electronic platform that future entrepreneurs can use to draw up their business plans on line. Different modules are offered, including a company business plan comprised of market, financing and marketing analyses, a virtual guide containing responses and specific examples of how to draw up a business plan, online information and advice provided by a counselor who can read the business plan and the single form, with data entered only once as the tool then automatically fills in all required forms. One of the specificities of this virtual platform is that it is adapted to the economic, financial and legal environment in Luxembourg. Aside from this “local” specificity the site⁸³ is distinguished by its interactive character and its use paths. BTPB was ranked in the top ten of best practices during the Brdo Charter Conference in June 2008. In conformity with the goal of this conference, which was to exchange good practices at the European level in the area of mechanisms promoting the creation and development of SME, the *Institut Universitaire International Luxembourg* (IUIL) launched a “dissemination” procedure for the platform, directing it to the University of Metz, the National Schools of Business and Management of Morocco and to the University of Bratislava.

Bolster school – professional world links

» The Master of Science in Entrepreneurship&Innovation (M.Sc.E.I.), a degree program offered by University of Luxembourg, has the vocation of promoting entrepreneurial spirit in companies and creating innovative companies through a university training program.

» The nonprofit association *Jonk Entrepreneuren* Luxembourg, a branch of the Junior Achievement network, 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 current budget originates from the public sector and 51.5% from the private sector. Numerous projects were carried out in 2008-09 as a result of this financial support. The non-profit organization *Jonk Entrepreneuren* has also taken over the mini-companies competition. Students are responsible for operations of a mini-company for an entire year where they make decisions and assume responsibility. In order to guarantee that

⁸³ For more details see : www.businessplan.lu

each mini-company project develops in a professional manner, a pool of entrepreneurs and coaches intervene occasionally to give advice to students, who also receive training courses in entrepreneurialism. The management team deemed to be the best participates in a European competition set up by Junior Achievement-Young Enterprise Europe.

Promote new start-ups, especially innovative ones

» The University of Luxembourg and the Chamber of Commerce are offering a Master of Science in Entrepreneurship&Innovation (M.Sc.E.I.). This is an advanced university degree program for students who want to perfect and acquire practical knowledge, or for managers who want to improve their professional skills in the area of innovation. This program was launched for the first time during the 2007-2008 academic year. The program was a balance of theory and immersion in the world of business. Students from various countries and of extremely varied academic backgrounds have enrolled for the 2009-2010 academic year. They will have the benefit of teaching from Chinese, Indian, Portuguese and Swedish professors each of whom has their own vision and experience with entrepreneurialism. In addition, some twenty companies will provide support behind teaching dispensed by professors. The one-year course provides a syllabus given entirely in English. This Master degree is very much concentrated on the business world and is based on a strong triangular relationship between students, the teaching staff and companies. One half of the graduating class of the first year this degree was offered immediately found jobs in Luxembourg companies.

» The “Start-up or Acquiring Businesses Days 2008” exhibition, sponsored by the Government took place during the end of November and beginning of December 2008. The launching event occurred at the Chamber of Trades, as per the alternating year agreement between the two Chambers. All the players involved in starting up or taking over companies were present in the stands, prepared to advise participants regarding establishing a company and extending an initial contact of an informal nature. On this occasion, Luxinnovation set up an information session on the financing of the launching and subsequent development of an innovative company. In addition, the SME single window participated for the first time and organized a conference on submitting company dossiers for obtaining loans. A conference on SME opportunities in the Greater Region was held by the Chamber of Trades, while the Federation of Women Business Chiefs of Luxembourg (FFCEL) held a round table on the subject of social and fiscal status of assisting spouses. In addition, the Chamber of Commerce set up a Franchise day event.

» The Federation of Young CEOs of Luxembourg published a guide on transferring companies in Luxembourg as seen from the point of view of the person relinquishing it. The distribution of 32,000 copies of this guide, mainly in the monthly *Merkur* and *Handwierk* publications was underwritten by the Government.

» Luxembourg hosted the 7th Winter University of the *European Association of Business Angels Networks* co-organized by LBAN. The Government contributed financially to this event.

2. Less costly and more rapid registration (Line of Action 2 of the Charter/SBA principle 4) (IG 15)

» Two single points of contact cover all start-up procedures for companies, one for handcraft businesses and one for trade businesses. The procedure for recruiting the first employee is still subject to a mandatory announcement of a vacant position to be submitted to the Labor Administration (ADEM), however registration documents for social security and pensions are also available through both single points of contact and these procedures may be handled through assistance by its personnel.

» The electronic assistant for creating companies that was announced in 2007 as a supplement to the virtual single window for companies, which was selected as a good practice in the 2006 conference on the monitoring of the Charter, is now being finalized. Over the next months, the virtual single window will be progressively improved with new functionalities like online processing in relation with the services directive. The virtual creation of a company, initially

limited to requests for basic registration items, will be progressively extended to include other authorization procedures. The window concept also enables companies to electronically declare inflows and outflows of employees beginning in 2009, according to the rules of single status approved in 2008. Lastly, electronic VAT declarations will be incorporated in the same virtual window.

» The objective of granting authorization to create a new company within a week has been achieved for companies whose set up process presents no particular difficulty. A new computer application is currently being implemented.

3. Improved legislation and better regulation as a principle of the “think small first” concept (Line of action 3 of the Charter/SBA principles 3 and 5) (IG 14)

» Following a governmental decision to accord priority rating to simplifying administrative formalities that hold up production and the spirit of initiative in SME, the Administrative Simplification Committee (CSA) was convened in December, 2004. The CSA was coordinated by the Ministry of Middle Classes, Tourism and Housing in close collaboration with the Ministry of the Economy and Foreign Trade. After the legislative elections in June, 2009, the CSA was transferred to the Ministry of State and was given transversal authority. With a view to improving procedures and administrative formalities in the public administrations, CSA extended its scope of application to citizens in general and in the short term will build up its structure to assume the responsibility of a veritable Administrative Simplification Window. This reinforced structure will enable it to test administrative procedures and formalities and to make real proposals for reforming regulations. This initiative is targeting a substantial lightening of the administrative load with relation to the existing pool of legislation and sustainable involvement of the administrations in an impact analysis while drawing up draft projects or Grand Duchy regulations. Furthermore, it expects to incorporate the *Mieux légiférer* (Better lawmaking) principles into the European directive and adoption of legal and regulatory texts transposition processes. Of the 85 specific actions announced by the CSA in its action plan, an initial series of conclusions from six working groups in the areas of Food Safety, Environment, Fiscal Matters, Health and Safety at Work, Social Security and Transportation, on a consensual basis between corporate representatives and the concerned ministries and administrations, was approved by the Government Council in May, 2008. The majority of these conclusions were implemented in the mean time, while other measures are in the process of being achieved. In order to allow the Government to react more quickly and efficiently in the face of the economic crisis and to improve the competitiveness of companies, the CSA make specific proposals to substantially lessen the administrative constraints and procedures, namely in the area of communal and urban development, classified establishments and the protection of nature and of natural resources. These proposals can be found in the 2009-2014 governmental program. In 2007, the CSA set up a Simplification Coordination Committee (CCS) to analyze the impact statements and draft recommendations for the Government concerning all proposed laws and Grand-ducal regulations - including the attached impact evaluation sheets - on the basis of the five *Mieux légiférer* principles. Finally, in 2009, the CSA recommended to the Government that the requirement to furnish a certified copy of a document be done away with. This requirement involved unwarranted administrative and financial impacts since certified copies no longer provide any value superior to that of a standard copy. These documents give no information relating to the authenticity or genuineness of an original document, which can now be manipulated using present day computer equipment. In addition, certified copies were a major obstacle to processing administrative formalities electronically and consequently to creating a virtual single window that provides substantial electronic access to the administrative windows of ministries and public administrations. The CSA web site⁸⁴ provides a description of current news in the administrative simplification domain and allows companies to

⁸⁴ For more details see : www.simplification.lu

communicate their observations, comments or ideas relating to administrative simplification or administrative burden issues facing them.

» The second phase of the eVAT system that was chosen as a best practice in the “European Charter for Small Enterprises: 2007 best practice selection”, was expanded to include electronic deposits of declarations for quarterly and annual summary statements, the amortization statement and the statement of purchased assets subject to amortization. The former authentication system that operated by means of user name and password has been replaced by a system requiring a more secure LuxTrust professional certificate. The other public online applications also use this authentication method necessitating a single professional LuxTrust smart card for access.

4.- Support the quality effort in small companies, with special concentration on internationalizing aid
(Line of Action 9 of the Charter/SBA principle 7) (IG 13, 14 and 15)

» As part of the assistance and consulting activities in helping companies access foreign markets - especially in Germany, France and Belgium - the *Contact Entreprise* service of the Chamber of Trades is collaborating with the Enterprise Europe Network to complete a certain number of administrative procedures for these companies to facilitate accessing services abroad. Using companies’ proxies, the support entity carries out such as applying for a VAT number, statements concerning direct taxation and notifications to be submitted to respective authorities before beginning work. In addition, the Chamber of Trades informs companies about legislative changes occurring in bordering countries that may be of interest to those seeking to do business abroad.

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 that has linked Luxembourg to Paris since June 2007 reduces travel time between the two capitals by 42%. The completion of the second phase of the Europe East high speed rail line that will achieve the Luxembourg-Strasbourg section of the Eurocap-Rail project, will, by the project's completion date set for 2015, reduce travel time between Luxembourg and Strasbourg by 32%. In addition, an international rail link with Germany has been planned⁸⁵, which will guarantee appealing train service on this section. Furthermore, the Government of the Saar and the Government of Luxembourg are considering establishing a direct rail connection between Saarbrücken and the City of Luxembourg.

Apart from the entry into service in February, 2008 of a general aviation terminal dedicated to business travelers, the new Luxembourg airport has made possible an increase in capacity and improved traveler flows through modernized airport infrastructure that is adapted 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 was continued.

In order to deal with the increasing numbers of cross-border commuters, the Government intends to improve cross-border relations in terms of traveler transportation. Actions in this direction include not only the strategic locating of a Park and Ride network that will help drain off numbers of commuters into public transportation systems but also extending and improving public transportation capacities both by road and rail. The Government and the Regional Council of Lorraine have decided to implement a group of measures that aim to improve train traffic, collective and vehicle sharing capacities, in order to progressively augment the modal portion of alternatives to individual automobile transportation for all Luxembourg-Lorraine traffic. The measures were part of a strategic scheme for cross-border mobility known locally as SMOT, which was introduced in January, 2009 and will allow coordinating directions set out in the framework of Luxembourg and Lorraine planning documents. In addition, the Government is devoting special effort to implementing the integrated mobility concept "mobil 2020" that is counting on the complementary fit between the rail, tramway and bus systems, while providing for exchange nodules located on the capital's periphery, such as peripheral stations and Park and Ride facilities. Among the projects emerging from this concept is the new rail line that links the Luxembourg airport and the European district Kirchberg to the national rail lines. The portion of this project located directly in front of the airport has been completed and the rail line is slated to come on-stream in 2016. The Government and the City of Luxembourg have decided to proceed with the light tramway project and has instructed the EIG LuxTram to complete planning for the project. Following the decision on the final path of the tramway line in May 2008, the architect for the tramway project was designated in March 2009 and detailed plans of the path and the

⁸⁵ The Luxembourg-Wasserbillig-Trèves-Coblence route

insertion process were started in early 2009. The Tram will be routed through the center of Luxembourg and link up with the peripheral stations and highly urbanized neighborhoods, or where major development is projected in the medium and long term. The project has the two-pronged objective of increasing the attraction and capacity of urban public transportation within the City of Luxembourg and significantly reducing motor vehicle emissions. The major attractions of this project include the ease of integrating it within the urban context, the continued use of existing tramway infrastructure capabilities, the fact the project can be completed in the short term, the benefits to users of increased service as sections are progressively completed and the reasonable cost of the construction project⁸⁶.

In the area of freight transportation, the Government set up a company called CFL CARGO to address the need to adjust the balance between the various modes of transport. The company arose as a result of a joint venture between the national railroad company CFL and the steel company Arcelor. CFL CARGO was established in October 2006, with CFL retaining the majority of shareholder's equity. CFL CARGO's objective is to handle all logistics and transportation operations, primarily by rail, both domestically and internationally. Several initiatives were begun 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, Antwerp – Basel and BELIFRET⁸⁷. Several railway corridors have been developed within the trans-Europe railroad network that aim to improve merchandise traffic potential in Europe, chiefly by means of rapidly implementing the European Rail Traffic Management System (ERTMS), but also via other infrastructure and rolling stock investments. There are six corridors dissecting Europe, including the Antwerp – Basel/Lyon Corridor C that measures around 1,840 kilometers and crosses Belgium, Luxembourg, France and Switzerland. The path of this corridor is strategic for freight transportation because it links one of the oldest ports in Europe to first class industrial centers⁸⁸. Integrating ERTMS throughout Corridor C will occur from 2008 to 2018, by successive stages and sections. In order to facilitate studies, work on improving interoperability along corridor C and to build a high-performance system, a European EIG was established and dubbed EEIG C corridor. The memorandum of association for EEIG C Corridor was signed in Luxembourg in March 2007. The aim of the EEIG is to develop, in concert with its members, specific measures by improving interoperability and the attractiveness of the offer on this line. In addition, the EEIG intends to draw up a detailed plan of action for the introduction of the ERTMS on the Antwerp-Basel C Corridor. Luxembourg will chair this structure. The official setting up of the EEIG is an important step in the realization and development of Corridor C. This organization is also an excellent base for railway companies who intend to use this railway axis for freight traffic.

Luxembourg is a member of the non-profit and multi-sector association FERRMED, whose headquarters is located in Brussels. FERRMED was established to improve competitiveness by means of harmonizing railroad standards for a single, interoperable, European railroad

⁸⁶ Other analyses for future establishment of a light tramway system are underway in the South Region and in *Nordstad*.

⁸⁷ The precursor in Europe takes its name from the first letters of the countries that are traveled through: Belgium, Spain, Luxembourg, Italy and France.

⁸⁸ The EU supports the development of these corridors in collaboration with the member states involved and the infrastructure managers of the countries concerned. The EU is also supporting this venture financially with up to half possibly being paid by the EU. There are five different signaling systems currently operating on corridor C. The introduction of the ERTMS standardized safety system will stimulate the growth of freight traffic and will contribute to the speed and reliability of train traffic.

system and for a major railroad corridor extending from Scandinavia through the Rhine-Rhone region to the western Mediterranean area.

In 2007, the Government 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. 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.

Regarding the levy system for road infrastructures, it should be noted that Luxembourg continues to operate motorways and lesser highways in the Grand Duchy under the shared "Euro vignette" toll system. However, should the Euro vignette group go out of business, the Government would, after consultations with neighboring countries, impose other taxes on heavy road traffic vehicles for the use of some infrastructure with a view to reducing some of the road congestion and promoting renewed modal equilibrium in transporting merchandise.

Lastly, with regard to airport operations, the Government has set up a new rate structure for airport use fees at the Luxembourg Airport that took effect in June 2008. The structure incorporates changes in fees depending on the hourly timeframe of use, which requires users to factor in environmental considerations in planning operations.

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

In the area of telecommunications infrastructure, the Government intends to carry out specific actions to ensure connectivity of electronic communications to worldwide networks. In 2009, continued investments were made in fiber optics to improve broadband internet services and simultaneously Luxembourg continues to extend its hosting centers, both in quantity and in surface coverage. These centers are necessary complements to the information highway. Heightened competition is also underway through the multiplication of fixed and radio infrastructures, including a European broadband connectivity offer put out by the incumbent operator (*Teralink*) and frequencies were placed on the market allowing WiMAX mobile applications.

4. Guidelines for employment policies

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

Achieving full employment remains at the center of the Government's preoccupations. In this context, it will act on work intermediation structures and will appreciably improve coordination of all policies that are downstream of the labor market. The economic crisis carries the risk of increasing the proportion of workers subjected to the danger of structural unemployment. Those involved are primarily workers with low levels of qualification and those whose qualifications are insufficient, older workers, workers with weak linguistic skills and workers with health problems or social or family problems.

This structural unemployment problem risks being compounded by an at least temporary problem, namely that of unemployment among workers with degrees, or young degree holders leaving schools and universities in autumn. In view of the economic situation, many companies operating in the most diverse sectors and often belonging to multinational groups may well extend their hiring freezes on young degree holders that in normal times would have been hired. Therefore, these young people must be helped get a job rapidly to allow them to acquire professional experience that increases the value of their degrees. For without specific measures, the hiring and budget freezes among companies could make even these qualified people cast offs. This type of unemployment among persons with degrees is little known in Luxembourg.

The Government believes therefore that it is necessary to get some temporary measures in place to rapidly and effectively fight against this type of unemployment linked to the current crisis⁸⁹.

Lastly, financial aid for employment policies and that for social policies, primarily the minimum guaranteed income RMG, will be better organized. The Government will reflect on the interdependence between the RMG and changes in the minimum wage (SSM).

The integrated approach that promotes equality between women and men will be used as an implementation guide for all the integrated guidelines for employment and the struggle against the economic crisis in order to maintain and even increase the rate of employment among both women and men. The Government will break down key employment figures by gender to better analyze the impact of the economic and financial crisis on women and men and to facilitate deciding on measures to counteract the negative effects with regard to one gender or the other. It will assign particular importance to integrating the gender dimension in the offer of unemployment measures in general and for young people in particular. Women who wish to establish companies will be encouraged.

Therefore, the Government's full employment policy will be transversal.

⁸⁹ Also see IG 19.

OBJECTIVE: Increase employment rates, placing particular emphasis on older workers⁹⁰

In 2008, the employment rate for 15 to 24 year olds was 26.0%, for 25 to 54 years it was 80.2% and for older workers aged 55-64 years it was 34.8%. This level had never been reached before and represents a considerable increase, 31.7% with relation to 2007.

Table 3: Changes in employment rates, persons 15-64 years old (in %)

Specification	2007	2008
Total population	64.0	63.8
Luxembourg citizens	60.5	61.0
Foreign citizens	68.4	67.1
Men	72.2	72.0
Women	56.1	55.4
Male Luxembourg citizens	68.6	69.6
Male Foreign citizens	76.5	74.9
Female Luxembourg citizens	52.5	52.2
Female Foreign citizens	60.5	59.2

Source: STATEC (LFS)

There are several arguments in favor of a resolute policy for increasing the rate of older workers in the country, such as the need to secure longevity of the social security systems and the economy's need to lean on the experience and skills of older workers on the labor market.

However, the physical and/or psychological state of significant numbers of older workers prevent them from exercising a full time professional activity, while a reduced load is completely within their capabilities. For this reason the 2009-2014 government program calls for making it possible to earn wages on a part time basis while drawing a partial disability check.

The implementation of a mechanism that makes more flexible outlets available on the market will be analyzed. The possibility of combining wages to the pension portions of income is intended to motivate a number of older workers to remain on the job.

The progressive early retirement option will be preferred where it can be an ideal instrument for combining youth insertion objectives with keeping older workers employed on the labor market.

⁹⁰ Although in the Lisbon 2 Strategy the Commission 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 2007 and 2008 by 4.7%. 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 residency-based concept. Yet the rate of cross-border workers in internal employment is 40%, and about 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.

In this case, an older worker might take on the responsibility of tutoring an inexperienced person who is being brought within a company.

The law concerning reduced capacity workers will be re-tooled on the basis of preparatory work begun by the previous government.

OBJECTIVE: Well-being at work

The Government will continue to promote voluntary initiatives by companies that round out existing mechanisms in various domains. A specific action plan will be worked out to further the concept of the social responsibility of companies, which is part of a more general effort to make companies assume greater responsibility with an eye to sustainable development. This is a voluntary action on the part of companies that will not be a substitute for the legislative framework.

The Government will continue its fight against the new scourge of psychological harassment at the workplace by emphasizing better coordination among initiatives in this area. On the basis of an inter-professional agreement with the social partners, the Government will implement its action plan to promote the struggle against psychological harassment by stages that will combine awareness, counseling and prevention resources. Conventions with private associations that are active in the area of stress and psychological harassment will be extended and expanded.

The Government will intensify, together with the social partners, the fight against workplace accidents on the basis of a joint agreement.

Action against clandestine employment of housemaids will be continued.

IG 18 - Promote a lifecycle approach to work
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OBJECTIVE: Continue the struggle against differences in the salary gender gap

The 2009-2014 government program provides for the extension of the National Action Plan for Equality between Women and Men with one major priority being the decrease of the wage gap between the sexes. An analysis of existing legal mechanisms for collective bargaining will be carried out with a view to reinforcing obligations concerning implementing equal wages and to provide incentives to companies to produce results toward achieving the objectives set in this area. The social partners will have instruments available to use in reducing the wage gap for equal work between the sexes.

OBJECTIVE: Continue to engage in positive actions in the area of gender equality

The Government will continue its “Positive Action” program in private sector companies with a view to diminishing professional segregation and wage gaps between the sexes and to fostering the increase of women on the job through examples of good practices that can be transferred to other companies. Three priority areas have been determined, to include:

- Equal treatment of women and men in terms of recruiting, training and qualifications, equal pay and corporate mentality

- Equality between women and men in decision making, such as in the areas of career advancement, continuing professional training and equal participation in decision making between women and men
- Equality between women and men in reconciling professional and private lives with regard to work organization, professional reintegration measures, reconciling a management job function with private life and child care and concierge services

All companies that carry out a survey on the situation of women and men and that subsequently draw up an action plan are eligible for ministerial recognition and financial support from the State. Monitoring of the plans will be done on the basis of qualitative and quantitative indicators and State-certified positive action projects will be re-evaluated after two years. Six projects were prepared in 2009.

The social partners, including the union entities UEL, LCGB and OGBL have drawn up a joint action program in the area of equality between women and men that deals with the following themes: the role of women and men in the labor market, reconciling professional and private life, equality between women and men in decision making and equal wages. The plan's implementation, which will cover the period 2009-2012, began with a study on stereotypes in vocational guidance situations that impact the career choices of women and men. The results of the study are due at the end of 2009.

OBJECTIVE: Introduction of the child care check services

The year 2005 featured the implementation of the Children Reception Centers concept, while 2006 and 2007 were used to consolidate gains involving these two measures. In 2008 a significant change occurred with the conception of the child care check services system, introduced on 1 March, 2009 and which constitutes a new grant from the State to the municipalities benefiting children and their families. The check services system is not a cash allocation, but rather a service that provides an educational child care benefit for children between the ages of 0 and 12. The system provides for a minimum of three hours of free child care per week, per child, regardless of parents' revenue. The scope of the Check-Services Care project is considerable in as much as it aims to:

- Extend the network of educational care structures
- Make an investment in the resources required to provide quality care services
- Ensure that the care services attain a reputation of being excellent child care centers
- Allow all children access to the care centers, regardless of the social or economic status of their parents.

The child care check services system is making advantages available to parents with children, which include the following: 1. A part of the educational child care program is provided free of charge 2. A special rate is offered for financial participation in costs called the "Check Services Rate" 3. A special rate is offered for financial participation in costs called the "Socio-Familial Rate". The system thus affords parents the possibility of using the care centers for their children. In addition, introducing the child care check service has a social element to it in that it particularly benefits children that are most at risk of poverty and are threatened with social exclusion because the charge rates system provides for more free educational child care hours per week during the school year, during the summer vacation period and free registration for additional vacation period activities for children of households receiving the minimum RMG allocation and more generally to the benefit of children in danger of poverty. In the same vein, the

system is advantageous to parents because there is a single cost for the child care check service, regardless of fluctuations in actual costs between one center and another.

The development of the network of child reception centers and of the introduction of the child care check services promote reconciliation between professional and family life and enable parents with children to send them to a center while they are acquiring a job and a source of income.

OBJECTIVE: Re-evaluation of assuming responsibility for school children outside of classroom hours⁹¹

On 1 January 2009, Luxembourg had a population of 102,108 children⁹², equivalent to 20.69% of the total population. Of these, 5.57% were children aged 0 to 3, 10.25% aged 4 to 12 years and 15.82% were aged 0 to 12 years. The Government calculated that there would be a need for meeting the cost of 35,000 child care spaces by 2015.

Table 5: Progress achieved in implementing child care centers⁹³

	Spaces available on 31 Dec 2005	Spaces available on 31 Dec 2006	Spaces available on 31 Dec 2007	Spaces available in September 2008	Projected spaces available
<i>Maisons relais</i> children reception centers (MRE)	8,000	10,053	11,425	15,751	7,983
Nurseries, MRE nurseries and Day Nurseries	5,015	5,402	5,520	5,600	500
Boarding facilities	796	847	886	759	121
Adult child care provider	247	347	437	1,296	No data
Total	14,058	16,649	18,268	23,406	+ 8,483
Change in number of spaces compared to previous year		+18.43%	+9.72%	+ 28.12 %	

There has been an increase in the percentage of women in the work force since 2000. In 2000, the rate of women working⁹⁴ between the ages of 15 and 64 was recorded at 52 %, in 2004 this rate had risen to 56%, up to 58% in 2006 and finally at 59% in 2007.

The Government intends to revise the parental leave laws following the signature of a new agreement by the social partners on 18 June 2009.

OBJECTIVE: A life-long guidance plan

Information and guidance work is becoming more and more important and is being requested by a growing number of adults.

The Professional Guidance department of ADEM works within the framework of school work plans of the various secondary vocational schools in the area of youth guidance programs. The

⁹¹ This is also an implementation measure of the European Youth Pact.

⁹² By children aged 0 to 3, we mean all children under the age of 3, or children aged 0 through 2 years. This applies for the other age levels cited as well.

⁹³ The statistics in the chart reflect existing spaces in the following types of structures: Nurseries, child reception centers, boarding facilities and adult child care providers.

⁹⁴ Eurostat (ov-ind 12).

OP attempts, from the moment students enter the seventh grade⁹⁵ to develop a sense of responsibility in their minds for when they begin secondary technical education, and to promote their personal development and facilitate access to their academic and professional paths. Students are thus led to explore data concerning the world of careers, to structure and accumulate related knowledge with the goal of making a decision and eventually to carry out their projects. In view of the conclusive results observed in various schools, this type of action ought to become the standard.

In this context, the counseling groups Local Action for Youth (*Action Locale pour Jeunes*), The Center for Psychology and Academic Guidance (*Centre de Psychologie et d'Orientation Scolaires (CPOS)*), the Documentation and Information Center for Higher Education (*Centre de Documentation et d'Information sur l'Enseignement Supérieur (CEDIES)*) and the Professional Guidance department of ADEM all carried out individual and group actions as part of the "Guidance" project at regular intervals at four secondary education and secondary technical education schools. The objective of these actions was to step up and maintain a regular presence of vocational guidance counselors within the schools so as to provide information and detailed explanations to students and parents of students regarding training in general available for professions on our labor market.

During September and October 2009, ADEM, CPOS, the Ministry of Education and Professional Training and CEDIES will collaborate closely to provide an advisory service for young graduates completing their academic programs during the year 2008-2009.

This advisory service will be offered during three half days per week in order to provide the necessary aid for young peoples' insertion into professional trades, university studies, additional training programs or to adopt transitory measures for placing them.

OBJECTIVE: Continuous adaptation to the social security system

At the conclusion of the Tripartite Coordination Committee discussions in April 2006, the social partners together with the Government set up a study group whose objective was to draw up proposals to ensure the long term viability of pension schemes and to analyze the various measures that could be implemented to guarantee their viability. It would also study different measures for guaranteeing this long-term viability and to adapt the pension systems to changes in professional careers, the ageing of the population and its impact on the length of peoples' active working lives.

Long term viability of pension schemes implies not only financial viability but also social and political viability, as well as the legitimacy of these schemes. Thus social and political viability of pension would no longer be intact if maintaining it meant requiring too heavy sacrifices on the part of the working population or if those still working believed progressively less with time that the system would provide adequate pensions for their old age. In the same way, the viability of the system depends heavily on changes in demography and on the professional careers of insured persons. Longer expected life spans imply longer periods during which persons will draw pensions, while more university studies shorten professional careers. In addition it must be noted that 20% of the total sum of pensions paid out are sent abroad and that 40% of pension beneficiaries reside abroad. In years to come, these percentages will only increase. Furthermore, these changes bring up the question of whether or not the pension system adequately adapts to

⁹⁵ This is the first level of secondary education.

changes in professional and family life, especially in the case of atypical careers characterized by part-time work and interruptions in work periods. The Government means to promote the establishment of individual rights for each person and commits to avoiding interruptions in peoples' careers that count against partners that devote most of their time to raising children by means of incentives promoting continued insurance.

The current demographic and financial situation of the system is such that effective reforms can be considered without jeopardizing individual acquired rights. As a substantial reserve has been constituted and there exists a working population that is relatively young, it will be possible to prepare reforms of the system without undue haste, although waiting too long to act could result in temporary, poorly structured packages or last minute solutions. Judiciously selected and comprehensible changes enacted by the persons concerned should be undertaken dexterously on a certain number of the systems parameters. It would be advisable that reforms be begun in the near future in such a manner that people still in the work force be kept informed about changes that will affect them as future beneficiaries. With this objective in mind, work should be done so that the system retains its capacity to adapt to changes in the country's economy and to the level of available financial resources without abandoning its social objectives. The most important of these being the need to make those receiving a pension participate equitably in national revenue collections, maintaining a balance between available income of the working population and that of retired persons and offering credible guarantees to the working population with regard to their future pensions.

Clearly, any reform process must take into consideration the mechanisms interacting within the workings of the pension system. The system is flexible enough to accommodate a multitude of possible measures working toward a like objective, that of always ensuring medium and long term viability of the pension system. The following list indicates types of possible adjustments - it is not a comprehensive list:

- Duration of working life
- Interaction between working life and life expectancy
- Keeping workers on the job market by means of professional reinsertion and incentives to employers
- Age of early retirement pension award
- Level of replacement rate
- Pension adjustment mechanisms, considering longevity of beneficiaries
- Redistributive effects of the pension system among higher and lower incomes
- Changes in the rate of contributions or ceilings for contributions to raise the bar for solidarity between the socio-professional classes and between successive generations of workers
- Internship and social contribution periods
- The advantage of a pension supplemented with a salaried job
- Rules against overlapping
- Rentendesch pension indicator alerts
- The adequate and necessary level of pension reserves
- Alternative sources of financing

In this context, the early retirement system must be re-evaluated.

The current good health of the scheme's financial base should promote a low pressure

environment for discussions about which adjustments to make and which operating torque to use. The Government, without neglecting any of the platforms for discussion with the social partners and the political world as a whole, is prepared to immediately state its preference for confirming the 40 year rule for pension contributions, a critical analysis of internship periods and concurrent collection of pensions and exercising a professional activity. The Government will carry out consultations with the appropriate commissions in Parliament simultaneous to discussions with the social partners on the subject. It will ensure that appropriate coverage in the area of pensions is extended to divorced persons.

IG 19 – Ensure inclusive labor markets, enhance work attractiveness and make work pay for job-seekers, including disadvantaged people and the inactive

OBJECTIVE: Facilitate the insertion of young people in the labor market

The Government of Luxembourg feels that the best track to promote for integrating young people holding university degrees that they earned in 2009 into the labor market must continue to be that of work contracts concluded under general law. Yet against the backdrop of a financial and economic crisis, many companies will retain a cool attitude when it comes to hiring new and/or additional personnel during a time when the emphasis is primarily on maintaining current jobs. It is nonetheless of vital importance that young people enter into contact with the working world immediately in order to acquire an initial professional experience and subsequently start on the path of additional training to increase their employability and improve their chances of definitive integration into the job market. For this reason, when Parliament reconvenes in the fall of 2009, the Government will submit a draft law to adapt existing measures to promote employment among young people on three levels:

- By opening up the Work Support contracts (CAE) in the public sector and integrating certain changes to the system
- By opening up the Initiation to Work contracts (CIE) in the private sector and integrating certain changes to the system
- By making it possible to conclude Initiation to Work contracts-Practical Experience (CIE-EP) under a less stringent procedure.

OBJECTIVE: Make work pay

With regard to the maximum length of time for active measures of the Guaranteed Minimum Income (RMG), the administrative statistics established by the National Social Action Service (SNAS) for 2008 indicate that up till the end of 2008, the number of maximum length decisions made by SNAS increased 14% compared with the end of 2007. On 1 September 2009, the number of decisions again grew, this time 38% compared to 2008.

The administrative statistics established by the SNAS in 2008 regarding priority guidance of RMG beneficiaries toward active measures for accessing the job market, namely the internship (*stage en entreprise: SE*) and subsidized contracts stemming from the application of article 13(3) of the RMG mechanism, show that:

- At the end of 2008 active internships represented 13% of active measures, as opposed to 15 % in 2007

- The number of internship active measures underway was slightly lower than that achieved and the end of 2007, dropping 7%
- This was offset by a higher rate of insertion into the labor market, following the end of an internship. Thus, in 42% of the cases in which SE measures expired in 2008, the reason for the end of the internship was that the intern found a job, while this was true for only 17% of those working through public employment measures (in 2007 the figures were 37% and 21%, respectively)

In addition, these administrative statistics for 2008 show that:

- At the end of 2008, article 13(3) contracts represented 29 % of active measures
- While the number of new article 13(3) contracts decreased slightly (-2%) compared to 2007, the proportion of unlimited term contracts among these new contracts went from 66% in 2007 to 75 % in 2008
- Also, while the number of new 13(3) contracts signed fell by 9 % in 2008 with relation to 2007, the proportion of indeterminate length CDI contracts among new contracts rose from 67 % in 2007 to 76 % in 2008.

The following can also be construed from analyses of subsidized contracts that since the implementation of the article 13(3) program in August, 2004 to through December, 2008 show that:

- Among the determined length subsidized CDD contracts, 8 % were converted into CDI contracts
- Only 14 % of 13(3) contracts ended with a layoff
- Following the expiration of the subsidized period, 45% of all persons found work. This means that they set up their own operations as independent contractors (2%), they continued their employment with the same employer (28%) or they got a job with another employer (16%)
- Among the beneficiaries of the article 13(3) program that were available for the labor market following the expiration of their subsidy period, 48 % entered or re-entered the primary labor market upon the conclusion of their 13(3) contract

Between 1 January 2009 and 1 September 2009, in 36% of the cases in which SE measures expired, the reason was that the person involved got a job and the number of new type 13(3) contracts concluded was slightly lower than during the same period in 2008. On 1 September 2009, the number of SE internships as a percentage of total RMG active measures was 15%, while article 13(3) measures as a percentage of total RMG active measures was 25 %.

With regard to some of the statistics shown above, it should be noted that orienting persons toward the active measures concerned requires a degree of employability conducive to the criteria of the primary labor market, whereas for a good number of the RMG beneficiaries, getting a job on that market is not a viable option. In order to promote even better access to this market for RMG beneficiaries that possess reasonable employability, the 2009-2014 government program provides for stronger collaboration between the SNAS and the Luxembourg Employment Agency. In addition, the 2009-2014 government program is announcing a change to the law on RMG that depends on the measures linked to the labor market cited earlier. Considering the discussions that must occur upstream of such a revision, the idea of placing a ceiling on the active measures for activating RMG beneficiaries that are particularly isolated from the labor market -

made by the Superior Council for Social Action and taken up in the 2008 National Reform Plan - assumes particular interest.

OBJECTIVE: Reinvigorate the solidarity economy concept

In 2009, the Government continued to allocate budget resources⁹⁶ to support the *emplois de proximité* (jobs in the households) effort. Support of a Luxembourg Red Cross project⁹⁷ was also maintained.

While on the one hand, the solidarity economy as it is carried on currently in Luxembourg is based on pro-labor social initiatives and, on the other hand, there will always remain barriers between the two concepts, the Government believes that in the wake of the revitalizing of the law dated 3 March 2009 for the re-establishment of full employment, it is appropriate to regulate the activities of the solidarity economy. The law dated 3 March 2009 for the re-establishment of full employment will enter into effect as from 1 January 2010 and will no longer permit financing of programs through the employment funds that are not consecrated by law as supervised assistance programs for job seekers. As the law already entered into effect in 2009, and in view of past peregrinations, concerning some infrastructure and personnel costs, which could be recognized for one or another social initiative for employment in 2009, and which could corner these initiatives if a substantial deficit occurred putting in jeopardy the viability of the initiative, the Employment Fund will, as an exception to the rule, cover the solidarity economy differential for 2009.

The Government will prepare a draft law on general interest associations.

A working group will be set up to consider possible options for financing the solidarity economy.

OBJECTIVE: Improve benefits for disabled workers

The Government will actively support the establishment and development of structures adapted to the specific needs of handicapped workers that are not, or are not yet, able to enter the job market. In order to ensure full employment of handicapped workers in a protected structure, the Government will make a priority of promoting the implementation of a joint buying and selling platform that includes all the protected shops, so as to ensure the visibility of products and above all, of their regular circulation. Concerning the ordinary job market, ADEM's Handicapped Workers department is carrying out and continuing its placement initiatives, including:

- Awareness actions intended to increase the employment rate of handicapped workers in the municipal or quasi-State sectors
- Professional training for handicapped workers, especially in cooperation with the institutions of the Greater Region
- The early detection of any problems concerning relations between handicapped workers and their employers as early as possible. The strategy behind this is to act as a sort of mediator between the two parties with the ultimate object of maintaining lasting work relations between them, or if this proves impossible, to reassign the handicapped person to a new company while simultaneously seeking to place another handicapped person in the original

⁹⁶ € 170,000

⁹⁷ The project involves redistributing used clothing, household goods and appliances from private and corporate donations to underprivileged households.

- Applying a scientific method for evaluating both the skill set of a person and the requirements of a job using an approach centered on the capacity for work of a person. This helps guarantee that the job placement lasts and quantifies a handicapped person's loss in productivity
- Collaboration with the non-profit organization "Job coaching ATP" in an effort to make handicapped workers and their employers aware of the supported employment concept, which involves intensive and individualized accompaniment of a person during that person's job search and after hiring, with the emphasis on the person acting independently and assuming responsibility. The concept is based on the value enhancement and the expression of personal resources of the work in equilibrium with the requirements of the company.

OBJECTIVE: Promote the reclassification of persons with limited work capacity on the labor market

A legislative revision is being prepared on the basis of a report drawn up in consultation with all the parties concerned by the legislation governing work disabilities and re-entry into professional life. The proposals for modification of the legislation are as follows:

- Reclassification inside the company by lowering the threshold requirement related to company size for employing handicapped workers and by removing the quotas set by rates as stated in article L.562-3 of the Labor Code
- Create a specific status for employees in an occupational reclassification situation to avoid having persons being reclassified refuse to accept a new position for fear of losing their benefits should the work contract for the new job be cancelled
- Make it mandatory that occupational physicians carry out periodic evaluations and recommend necessary adjustments
- Set up a professional disability pension to be paid out by the national pension insurance fund where the strength and ability of persons in an external occupational reclassification process are inadequate to re-enter the job market according to certain criteria such as age, skills inadequate to a person's level of educational advancement, professional experience or training, or linguistic issues and perspectives for occupational retraining
- Simplification of the calculation method for benefits by linking it to the basis for social contributions of an employee's statutory sick pay
- Occasional adjustments to the procedure

IG 20 – Improve matching of labor needs.

OBJECTIVE: Optimize activation policies

The primary cause for unemployment, impact of the economic crisis aside, remains the insufficiency of qualifications with relation to the requirements of the job market. Unqualified people are the most severely affected by the risk of unemployment. From now on, the Government will promote active employment policies, above all seeking out actions to increase employability of job seekers rather than exercising purely passive policies.

In this context, the Government will encourage using active instruments in favor of employment in the private sector. It will promote implementing permanent structures as provided for by the law dated 3 March 2009 relating to full employment that will allow unqualified persons, in a

spirit of social cohesion, who cannot find jobs on the primary job market, to obtain a paid job. It will promote social initiatives in favor of job seekers during this crisis period.

Following consultation with the social partners, the Government will temporarily adapt current active measures favoring employment and will create new ones to counter the impact of the economic crisis on youth employment⁹⁸.

Legislation concerning employment aid and unemployment benefits will be reviewed together with the social partners from a perspective of greater flexibility from the perspective of both job seekers and employers. In this framework, the Government is considering an increase in the length of time unemployment benefits can be provided for job seekers who enter training programs that will provide them with qualifications to significantly increase their employability. Modifications to the current legislation to help with the employment crisis will be limited in time.

Collaboration between the National Social Action Service (SNAS) and the Employment Administration (ADEM) will be improved and developed with a view to more rapid guidance and activation for persons falling under the Minimum Guaranteed Revenue (RMG) system who possess professional potential and qualifications that can be used to guide them toward the primary labor market.

OBJECTIVE: Take new paths in the area of employment policy

In 2009, the Government set up and/or achieved innovative projects in the area of professional insertion and re-insertion. As part of a pilot project dubbed “Trampoline to Employment” young job seekers with university degrees in domains other than the financial sector were taken on by companies in the investment funds sector following an eleven-week specialized Junior OPC Accountant and Transfer Agent training period. The training, followed by a one month internship in nine banks and administrations of the financial center, resulted from collaboration between the Government, the Employment Administration, the Association of Sector Professionals, the Institute for Bank Training and a consulting company. With the current economic crisis as a backdrop, this project could be extended to re-qualify highly qualified employees of the financial sector toward other pillars of the economy, especially SME. Next, the Government finalized another pilot project entitled Indura, whose chief objective was to reintegrate as quickly as possible - in a lasting arrangement - unemployed persons on the Luxembourg job market by using skills and knowledge of interim work companies and that of their customers. The project aims to establish close accompaniment and monitoring of unemployed persons via the partners in the interim worker sector with a view to increasing the employability of job seekers and to develop their professional project according to their individual requirements. The primary goal of the project is the sustainable integration of these persons in the medium to long term on the labor market. A proposal for collaboration was sent out to all interim work companies that are legally established in Luxembourg. With regard to partner companies the project entails the following phases:

- Hosting and profiling of unemployed beneficiaries designated for the measure
- Train participants with a view to improving their professional skill levels on the basis of their existing profiles and requirements on the job market
- Accompaniment and monitoring of participants throughout the project
- Integrate unemployed beneficiaries into the job market for the long term.

⁹⁸ See IG 19.

Lastly, the Government set up for the first time in March, 2009, a National Employment Exchange with the purpose of providing a place for companies that have stated that they are prepared to recruit personnel in a unfavorable economic environment to meet and exchange ideas with prospective employees. It is also for job seekers registered with the ADEM and high school students in the upper secondary levels who no longer wish to pursue their studies.

OBJECTIVE: Modernize public service for employment

The Government will finalize the basic structural reform of the National Employment Agency (ADEM) to heighten the efficiency of active employment policies and the interaction between job offers and applications so that the agency is competent in rapidly and flexibly responding to constantly changing challenges in the labor market. Following the appearance of the OECD report recommendations on public services for employment in Luxembourg, the new ADEM will have emerged from its State sponsored administrative restraints. A new public entity will be established, managed by a tripartite administrative council and a Committee Director who will make decisions on a collegial basis. The new structure will concentrate its efforts on an overall assumption of responsibility for the jobseeker, through the implementation of multidisciplinary teams. Jobseekers will be supported while working their way through the social process, training and placement by external players who will be associated with their actions through agreements or public tenders. The principles of the jobseekers activation policy in the tripartite law dated 22 December 2006 will be upheld and reinforced, especially in the area of activation agreements. The functioning of the new public establishment, like the monitoring of different active employment measures and employment policies in general will be subjected to permanent external evaluation in order to be able to proactively and expeditiously adapt the functioning of the public services for employment to active policies. As employment policies are very often located well downstream of other policies, such as those for education, the economy and social policies in general, an effective coordination apparatus between ministries will be put in place with the new public establishment whose primary objective is to ensure the most appropriate interaction between job offers and applications.

OBJECTIVE: Provide equal training for men and women

The Government will provide training in the area of evaluations and classification of job functions in cooperation with the Chamber of Commerce and the Chamber of Employees, intended for employers and union representatives who are negotiating collective bargaining agreements in the private sector. The objectives of these courses include developing a deep understanding in the area of evaluation of functions by means of specific examples, detecting errors in a discriminatory evaluation of job functions and learning ways to avoid them. The course will be based on the ABAKABA⁹⁹ system, which is a scientific method whose objective is to establish fair salary structures in relation to the work activities of men and women. This training session covers two days and is given each year.

With regard to the public sector, the final evaluation of the 2006-2008 national action plan for equality between men and women has revealed a shortfall of training by gender among government workers. In 2008 the Government decided to make gender training mandatory for all government employees. One project in the domain was carried out as part of the Community PROGRESS program. This project aims to strengthen gender skills by embedding the gender dimension in the structures of the *Institut national de formation administrative (INAP* - National

⁹⁹Analytical evaluation system of job functions according to Katz and Baitsch.

Administration Training Institute)¹⁰⁰, and by integrating the concept into all initial and continuing training programs provided by INAP. To this end, the project, entitled « Integrating the Gender Dimension in National Training Policies», includes the following:

- Developing a training concept that respects gender as a model for INAP
- Establishing pedagogic and methodology materials for trainers in INAP ;
- Developing an initial and continuing education program for 2010 at INAP intended for Government and Municipality workers.

Preliminary results are expected in October 2009 and will contribute to rounding out the training of Government and Municipality personnel through training in equality between men and women.

IG 21 - Promote flexibility combined with employment security and reduce labor market segmentation, having due regard to the role of social partners

The basic principles of the labor code as an instrument to protect the legitimate objectives of employees will be respected. Balance between flexibility and employment security will still be guaranteed with care to defend the interests of employees and companies on an equal basis. The Government will continue to oppose deregulation of labor law and of protection against layoffs. It will support certain modifications to the labor law as a part and result of social dialogue. The Government will use a safeguard policy for professional careers based on the four pillars set out in the area by the EU, as follows:

- The flexibility and safeguarding of contractual provisions from the perspectives of both employers and employees, within the framework of social dialogue at all levels
- General lifelong learning strategies to guarantee the capacity to adapt and a permanent aptitude to work on the part of employees, especially the most vulnerable ones
- Effective active labor market policies that enable individuals to face up to rapidly appearing changes, to avoid periods of unemployment and to facilitate transition to new jobs, such as the job retention policy
- Modern Social Security systems that provide an adequate income, encourage employment and facilitate mobility on the labor market.

A policy such as this, which melds flexibility with safety can only be achieved in the framework of social dialogue at all levels. The Government will continue to promote concluding inter-professional agreements with the social partners.

The Government will consult the social partners with a view to determining issues for negotiated agreements among the social partners and determining a tight agenda to adhere to for the respective discussions. If there is a lack of agreement between the social partners within a reasonable time period, legislators will intervene in the areas under discussion between the social partners such as adapting regulations for work performed voluntarily outside of legal working hours on a part-time basis, as well as in other domains laid out by the Government after consultation with the social partners.

¹⁰⁰ For more details see: <http://www.fonction-publique.public.lu/fr/structure-organisationnelle/inap/>

OBJECTIVE: Reduce segmentation of the labor market

In May 2008 the Government submitted a proposed law introducing linguistic leave. This project is in line with the government policy to reinforce professional training. In this context, following an ECS opinion dated 8 December 1993, a framework law on continuing professional training was introduced and recently a law was approved that established individual training leave, of which this project is a supplementary section. It was proposed that a special supplementary leave be introduced for the purpose of allowing employees of all nationalities to learn Luxembourgish or to perfect their knowledge of the language in order to facilitate their integration into society by way of the labor market. From this perspective the opportunity is available to all employees having worked at least one month for an employer based on Luxembourg territory. The right to leave for linguistic purposes is not tied to any condition of residency. Naturally, this leave may also be useful to employees seeking to obtain Luxembourg nationality so that they may acquire the linguistic certifications required by the new legislation in the area of citizenship. The total length of the linguistic leave is limited to two hundred hours that must be split into two sections of 80 and 120 hours each for each beneficiary over the course of their professional career. A candidate must complete a degree or certificate program for the first section in order to pursue the second part of the course. Employees who benefit from the linguistic leave may receive indemnities equal to their hourly salary for each hour passed in coursework, limited to four times the minimum wage for non-qualified employees. The indemnity is paid by the employer, who is later reimbursed by the State for the indemnity amount, plus employers' social contributions.

OBJECTIVE: Retain jobs

The Government will pursue its efforts to provide incentive and to help companies retain jobs and avoid massive layoffs.

To face the impact of the worsening of the economic and financial situation in as much as possible, legislation on short-time working was adapted to suit the situation. For 2009 and 2010, companies in difficulty due to the economy can benefit from greater flexibility with regard to the reference period under consideration. The eligibility period has been extended to a maximum of 24 months, or the entire two years of 2009 and 2010, and monthly durations are now more flexible in that it can now extend beyond 50% of the normal work time of an employee, provided that the annual average does not exceed 50% of work time. To provide incentive to employees affected by short-time work to participate in training periods, compensation for loss in salary will go from 80 % to 90 % under the following conditions:

- 1) If an employee participates in a training or professional re-education program set up by the State or the employer during the effective periods of short time work due to the state of the economy and resulting from economic dependency
- 2) If an employee participates in a training or professional re-education program set up by the State or the employer during the effective periods of short time work, as part of a maintaining of employment level plan approved by the ministry responsible for allotting the employment.

In both cases the 90% will be applied for each hour of training completed up to 16 hours monthly. If the number of hours in training exceeds 16 hours, the higher rate will be applied for the entire month.

With regard to the re-employment grant, it should be noted that for employees that are temporarily seconded as part of a maintaining of employment level plan, this grant covers the residual cost of the secondment up to 90 % of the salary of the seconded person and will be paid to that person's employer.

Employment policies will seek to make the pool of existing labor available to the Luxembourg economy, and those making up the pool should meet the requirements of the labor market. In order to guarantee socially responsible growth of employment, the Government will promote active collaboration between the economic sector and Public Employment Service. It will support companies that commit to creating new jobs by targeting people that risk being cast off from the labor market. Those for whom the measures are particularly intended include employees over 50, women wishing to re-enter the job market after having devoted several years to bringing up their children, young people without professional experience and non-qualified workers. In this context, the Government will consider introducing a bonus system to encourage creating jobs in the categories of risk being targeted. The social partners will play a major role in this domain.

Companies that wish to establish a presence in Luxembourg will immediately be put in contact with the appropriate public entities responsible for training and placement so that they can understand the requirements in terms of qualified personnel. This action path will enable the State to react, or even act in anticipation of these requirements.

OBJECTIVE: Set out new forms of labor organization

There will be no overall reduction of the duration of working time, but the Government will continue to support the initiatives of the social partners in introducing new work models, including those that have components involving reductions of working time.

The Government will oppose extensive store opening hours on Sunday. It is prepared to discuss practical ways of applying the current rules as set by the law with the social partners. It will however recommend more extensive opening of stores during the work week and until 20h00 on Saturdays to help Luxembourg merchandisers be more competitive in the Greater Region. It will recommend adjustments to these opening hours in 2009 following consultation with the social partners about practical ways of applying the rules, highlighting the relationship between professional and family life.

The Government is not considering increasing additional leave periods. Special leave period rules currently in force can be adapted as required.

Introducing a system for compensatory days will make for more flexibility in the management of working time for both companies and employees, especially for such issues as continuing education and balancing work and family life. Draft laws based on the pertinent recommendations of the Economic and Social Council meeting of 23 July 2004, concerning employees under private sector contracts and government workers under public sector contracts, will be discussed in the framework of the respective social dialogues.

IG 22 - Ensure employment-friendly labor cost developments and wage-setting mechanisms
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The Government will retain the revaluation mechanism for statutory minimum wages at the current twice yearly rate on the basis of technical reports prepared for this program.

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. 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 public administration. These measures are limited in time (from 2006 to 2009) and consist chiefly of adapting the application methods to the automatic wage indexation system by carrying over the next application figures. In accordance with the law of June 27th, 2006 the adaptation was triggered when the application figures were exceeded in June 2008 and will go into effect in March 2009. Based on the law now in force, no other adaptation can be made of stipends, salaries, pensions and annuities between 2006-2009¹⁰¹. In the 2009-2014 government program, the Government is strongly in favor of implementing structural measures that will impact pricing policies, as it is planned in the Action Plan against excessive inflation. This is chiefly a wage policy that must adhere to changes in overall productivity of the economy.

IG 23 – Expand and improve investments in human capital

OBJECTIVE: Improve the fairness of educational and training systems and promote successful studies to reduce the number of students who leave school early

In 2009, the Government continued reforms to improve the fairness of educational and training systems and to promote successful studies to reduce the number of students who leave school early. Major draft laws such as the one concerning fundamental schooling, which encompasses early childhood education, preschool and primary school that went into effect at the beginning of the 2009 academic year, the reform of professional training which will go into effect at the beginning of the 2010 training year and the school of second chances which will go into effect at the beginning of the 2010 academic year, were all approved.

In the 2009-2014 government program, Luxembourg commits to successful academic experiences, with the objective of bringing the greatest number of students to a baccalaureate diploma or equivalent and 50% of a group to a degree above the level of the baccalaureate to meet the requirements of the job market. Simultaneously, the Government reaffirms its commitment to stop academic failure and reduce the number of people dropping out of school without any certification. To reach these objectives, the reforms that were undertaken will be continued and broadened. New measures entering into effect in 2009 are as follows:

- Fundamental schooling: Multi-professional teams, established by law into fundamental education programs will seek to detect children with learning or behavior difficulties early off and will address the issues in a more adequate fashion.
- Secondary and secondary vocational schools education: Transition from secondary vocational schools to standard secondary school programs, which is rare in standard schools, is more frequently accomplished in schools with both types of education. For this reason, all secondary schools that have the standard lower grades programs will now also institute the secondary vocational schools program.

¹⁰¹ According to the latest STATEC forecast, the next adaptation to salaries, stipends and pensions is to be 2.5% , but will not enter into effect until mid-2010.

For more details see: http://www.statistiques.public.lu/fr/communiqués/economie/prix_salaires/2009/10/20091007/index.html

Specific measures will be put in place to avoid repeating grades, or, when repeating a grade proves inevitable, to ensure that students can take classes that are adapted to their requirements and will progress, instead of hovering aimlessly.

Basic professional training, which leads to the CCP, or Certificate of Professional Capacity, is intended for students who, at the end of the lowest grade of secondary technical education, do not meet the admissions criteria for a professional training program. This training aims to help young people acquire professional and social skills that are essential for an initial entry onto the job market.

- The school of second chances: This constitutes a teaching offer for students with post-primary backgrounds who have dropped out and have found no occupation. The dual objective of this program is help young dropouts to rediscover the motivation to commit to an academic course and to develop general, practical and social skills that will allow them to rejoin the traditional or technical secondary programs, an apprenticeship or the labor market.

OBJECTIVE: Promote access to education and training on a lifelong basis

The lifelong basis-training offering will be extended in scope and grounded in a context that gives it greater visibility and greater effectiveness. A Lifelong Learning advisory service (LLL) will also be developed, which will hold all information available about the possibilities for training, for validating experience and to have training programs recognized and certified. The efforts to develop a pedagogy adapted to adults will be continued and more distance training and guided self-training programs will be made available.

IG 24 – Adapt education and training systems in response to new skill requirements
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OBJECTIVE: Promote teaching by skill and quality assurance

Since 2005, the skills-based approach to basic education and the lower grades of secondary and technical studies has been introduced successively into the school system. The principle of the skills-based concept is grounded in recent legislation directed at basic education and on the reform of the professional training system. Skill levels to be attained at different stages of the academic process will be set by system guidelines and diplomas will be awarded that certify levels achieved at the end of a student's academic career. This type of certification must provide information about what a student has learned and will be part of a continuing education perspective in which each student is entitled to continue on their academic path on the basis of prior certifications acquired.

The 2009-2014 government program provides for ensuring that the repercussions of the principles of skills-based learning and the autonomy of students will also extend to the programs and methods of the upper echelons of secondary education. A different organization of the higher grades should initiate students to research, documentation and summary analysis work that they complete autonomously. They can thus chart individualized courses, while adhering to an essential skills core requirement common to all before completing secondary education. This organizational effort, which will be at least in part modular, will allow for a moderate degree of specialization without anticipating a given orientation for future studies.

Through the introduction of various steering instruments, the quality of Luxembourg's educational system goes hand in hand with greater autonomy granted to schools. Schools will be required to put this autonomy to use to foster success among their students. A monitoring system will be developed to provide academic communities with information about their students' performance and to allow the Government to control the educational system. In addition to ongoing participation in international studies such as the PISA and PIRLS¹⁰² programs, this will involve multi-annual evaluations carried out by University institutions acting under an agreement concluded with the Government. Using the information gathered through the evaluations, academic communities can develop projects for ensuring quality in teaching and the success of their students.

The Agency for Developing Quality in Education was established in 2009, with the mission of coordinating all the initiatives relating to guidance and quality assurance in education and training, together with internal and external partners.

¹⁰² *Programme for International Student Assessment and Progress in International Reading Literacy Study.*

5. Coordination between the National Reform Program and Structural Funds

Coordination is necessary here because the Lisbon strategy also contains a Community action program. Consequently, the Community budget is set from a Lisbon perspective. This is all the more true for Community structural funds that should draw heavily from the IG (*earmarking Lisbon*). Furthermore, the European Commission's recovery package adopted at the end of 2008 aims at facilitating the use of operational programs co-financed by the European Social Fund (FSE) and the European Regional Development Fund (FEDER) with the objective of combating the economic and social crisis within the limits of the European budget capability. Luxembourg has seized the opportunity of extending the length of its Objective 2, Objective 3 and EQUAL programs by six months to counter the slowdown in implementing these programs. Secondly, programs for the period 2007-2013 have benefited from an additional advance to be used to accelerate their implementation. Thus several simplifications to regulations governing the European cohesion policy will now likely find a specific application in Luxembourg.

5.1 The European Regional Development Fund (FEDER)

5.1.1 Economic and social reconversion in the regions (2000-2006)

The Objective 2 program (2000-2006) for economic and social re-conversion of some of the country's regions contributes in particular to IG 7, IG 8, IG 9, IG 10, IG 11 and IG 15. Many projects concern the areas of water, waste and wild lands that come under IG 11, as well as economic development and innovation. The program, extended through 30 June 2009 with regard to eligible expenditure, is currently being closed out.

5.1.2 Regional competitiveness and employment program (2007-2013)

The regional and employment competitiveness objective for the new period 2007-2013 aims at increasing the attraction and competitiveness of the regions of Luxembourg. The National Strategic Reference Framework (NSRF) was adopted on October 8th, 2007. With regard to the FEDER section, two avenues of approach were laid out, with a Community co-financing mechanism totaling €25 mn to be applied to measures and actions resulting from each of them. The first avenue focuses on measures of attraction to the Luxembourg site, with a priority on employment and investments, while the second bolsters knowledge and innovation as growth factors. The program should contribute to the IG 7, 8, 9, 10, 11 and 15. The Luxembourg "Regional Competitiveness and Employment" operational program, which was approved by Decision number C (2007)6821 dated 20 December, 2007 of the European Commission, has at this stage been the basis for three public project tenders.

5.2 The European Social Fund (ESF)

The strategy chosen by national authorities for ESF intervention in Luxembourg during the 2007-2013 programming period falls completely in line with the context of the guidelines of the Lisbon-2 strategy. As illustrated by the table below, the priority areas and specific objectives of the Operational Program (OP) support each of the integrated guidelines except for IG 22.

Table 4 : Intervention of the European Social Fund (ESF) in Luxembourg during the 2007-2013 programming period

OP Priorities 2007-2013	Lisbon Strategy Integrated Guidelines
<p>Priority Area 1: Improve access to employment and lasting inclusion in the labor market</p> <p>Increase the employment rate Facilitate the insertion of young people in the labor market Activate persons who are far removed from the labor market</p>	<p>IG 17: Implement employment policies aiming at achieving full employment, improving quality and productivity at work and strengthening social and territorial cohesion IG 18: Promote a lifecycle approach to work IG 19: Ensure inclusive labor markets, enhance work attractiveness and make work pay for job-seekers, including disadvantaged people and the inactive</p>
<p>Priority Area 2: Increase adaptability of workers and companies</p> <p>Improve anticipative management of changes in the economy Adapt skills and knowledge of employees to labor market requirements Support innovative mechanisms of career transitions</p>	<p>IG 20: Improve matching of labor market needs IG 21: Promote flexibility combined with employment security and reduce labor market segmentation, having due regard to the role of social partners IG 24: Adapt education and training systems in response to new skill requirements</p>
<p>Priority Area 3: Build up human capital</p> <p>Bring university level institutions, research centers and companies closer together, in particular in the areas of innovation and research Modernize labor organization and working conditions Support the actions of the social partners</p>	<p>IG 21: Promote flexibility combined with employment security and reduce labor market segmentation, having due regard to the role of social partners IG 23: Expand and improve investments in human capital IG 24: Adapt education and training systems in response to new skill requirements</p>

Appendix 1: Evaluation Grid

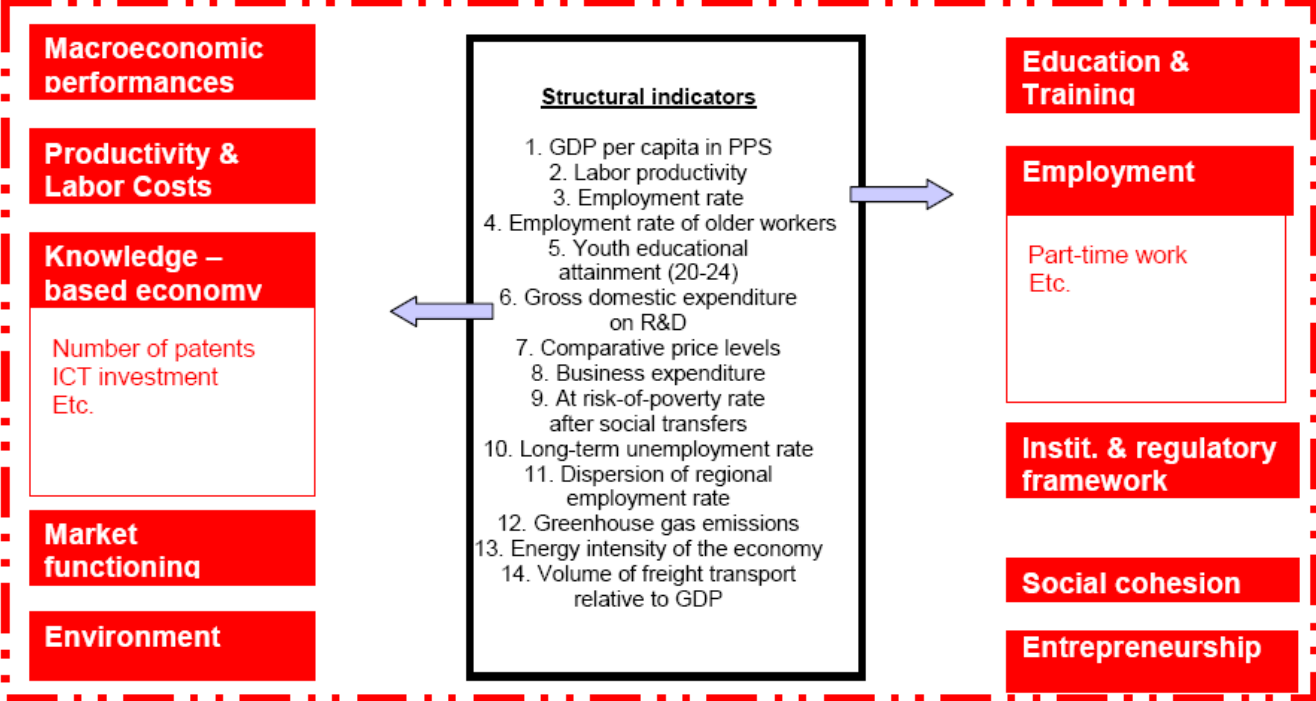
Apart from the implementation report that contains updated technical information on measures adopted after the National Plan for Innovation and Full Employment (2005), as of 2006, the European Commission has requested Member states to add an evaluation grid to this situation report to measure and monitor major progress achieved in implementation. The evaluation grid is structured as follows:

1. Part I includes the content, justification and calendar of reforms.
2. Part II classifies individual reforms according to different criteria.
3. Part III summarizes the manner in which Member states evaluate progress achieved, through indicators, as well as information on the subject of budget allotments.

It is noteworthy that this evaluation grid includes only a limited number of the measures described in the National Plan for Innovation and Full Employment and the implementation reports. It should therefore be considered as information complementary to reports drawn up as part of the Lisbon strategy, intended to provide a summary view of the national reform program.

The evaluation grid of the 2009 report may be consulted through the following link: <http://www.odc.public.lu/publications/pnr/index.html>

Appendix 2: Competitiveness Scoreboard



Lisbon Structural Indicators (1999-2008) and the list of indicators from the Competitiveness Scoreboard (2008)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Nat'l target 2010	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	EU-27 Target 2010	
GDP per capita in purchasing power parities (PPS) (EU-25 = 100)	237,9	243,7	234,1	240,3	247,7	253,4	254,1	266,9	267,4	252,8		100	100	100	100	100	100	100	100	100	100	100	
Productivity per wage earner	175,8	175,7	162,1	163,1	167	170	169	176,2	173,9	160,8		100	100	100	100	100	100	100	100	100	100	100	
Overall employment rate	61,7	62,7	63,1	63,4	62,2	62,5	63,6	63,6	64,2	63,4		61,8	62,2	62,6	62,4	62,6	63	63,6	64,5	65,4	65,9	70	
Employment rate of women	48,6	50,1	50,9	51,6	50,9	51,9	53,7	54,6	56,1	55,1		53	53,7	54,3	54,4	54,9	55,5	56,3	57,3	58,3	59,1		
Employment rate of men	74,5	75	75	75,1	73,3	72,8	73,3	72,6	72,3	71,5		70,7	70,8	70,9	70,4	70,3	70,4	70,8	71,7	72,5	72,8		
Employment rate of older workers	26,4	26,7	25,6	28,1	30,3	30,4	31,7	33,2	32	34,1		36,5	36,9	37,7	38,5	40	40,7	42,3	43,5	44,7	45,6		
Employment rate of older workers - women	17,2	16,4	15,2	18,4	20,6	22,2	24,9	27,8	28,6	29,3		26,7	27,4	28,2	29,1	30,7	31,6	33,6	34,9	36	36,9		
Employment rate of older workers - men	35,8	37,2	35,9	37,7	39,7	38,3	38,3	38,7	35,6	38,7		46,9	47,1	47,7	48,4	49,9	50,3	51,6	52,7	53,9	55		
Internal expenditure for R & D as a % of GDP	:	1,65	:	:	1,65	1,63	1,56	1,66	1,62 (p)		3	1,84 (s)	1,85 (s)	1,86 (s)	1,87 (s)	1,86 (s)	1,82 (s)	1,82 (s)	1,85 (s)	1,85 (s)	1,85 (s)	3	
Youth educational attainment (20-24) - total	71,2 (b)	77,5	68	69,8	72,7 (b)	72,5	71,1	69,3	70,9	72,8		:	76,6	76,6	76,7	76,9	77,1	77,5	77,9	78,1	78,5		
Youth educational level - females	72,8 (b)	75,8	69	65,5	75,6 (b)	73,4	75,8	74,5	76,4	77,4		:	79,3	79,2	79,3	79,4	79,9	80,2	80,8	80,8	81,4		
Youth educational level - males	69,6 (b)	79,2	67	74	69,7 (b)	71,6	66,6	64	65,6	68,3		:	73,8	74	74	74,4	74,4	74,9	75	75,5	75,7		
Comparative price levels	102,8	101,4	103,5	102,1	103,2	103	111,6 (b)	111,8	112,4	116,2		100	100	100	100	100	100	100	100	100	100		
Business investment	19,2	17	18,3	17,7	17,6	16,9	15,9	14,9	16,2	16,2		18,1	18,4	17,8	17,3	17	17,2	17,7	18,2	18,8	18,5		
At-risk of poverty rate after social transfers - total	13	12	12	: ^(f)	12	13	14	14	14			16 ^(s)	16 ^(s)	16 ^(s)	: ^(f)	15 ^(s)	16 ^(s)	16	16	16			
Poverty risk rate after social transfers - women	13	12	13	: ^(f)	13	13	14	14	14			17 ^(s)	17 ^(s)	17 ^(s)	: ^(f)	16 ^(s)	17 ^(s)	17	17	17			
Poverty risk rate after social transfers - men	12	12	12	: ^(f)	11	12	13	14	13			15 ^(s)	15 ^(s)	15 ^(s)	: ^(f)	14 ^(s)	15 ^(s)	15	15	15			
Long-term unemployment rate	0,8	0,5	0,5	0,7	1	1	1,2	1,4	1,2	1,6		:	4	3,9	4	4,1	4,2	:	3,7	3	2,6		
Long-term unemployment rate - women	0,8	0,5	0,6	0,8	0,9	1,3	1,2	1,6	1,1	2,1		:	4,6	4,4	4,5	4,5	4,6	:	4	3,3	2,8		
Long-term unemployment rate - men	0,7	0,5	0,6	0,6	0,9	0,8	1,2	1,3	1,3	1,2		:	3,5	3,5	3,6	3,8	3,8	:	3,5	2,8	2,4		
Total greenhouse gas emissions	71,5	75,7	78,1	86,1	89,4	100,9	101,7	101	98,1			90,8	90,8	91,8	91	92,6	92,6	91,9	91,8	90,7			
Energy intensity of the economy	169,99	165,31	167,4	169,94	176,49	185,36	179,78	168,84	158,53			193,2	187,39	187,85	185	187,28	184,88	181,51	176,06	169,39			
Volume of freight transports by rail as % of GDP	91,6	100	109,2	109,4	111,6	106,9	92,3	87,5	89,3			100,1 (s)	100	99,0 (s)	100 ^(s)	99,4 (s)	105,5 (bs)	105,4 (s)	106,3 (s)	106,8 (s)			

Note: (b) break in series (f) forecast; (s) Eurostat estimate (p) temporary figure (e) estimated value

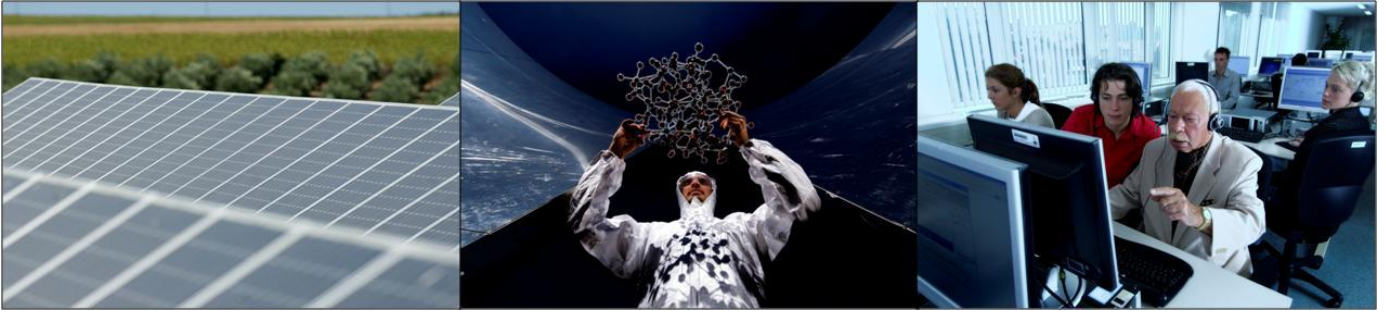
Source: Eurostat (August 2009)

http://epp.eurostat.ec.europa.eu/portal/page/portal/structural_indicators/introduction

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

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

Source: Ministry of the Economy and Foreign Trade, *Observatoire de la Compétitivité*
http://www.odc.public.lu/publications/bilan_compete/index.html



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