

0. BACKGROUND INFORMATION	
PROJECT TITLE	Sunrise Valley (Saulėtekio slėnis) Case Study title: Sunrise on technology
Duration of project	Sunrise Valley comprises a group of projects combining physical infrastructure development with a range of innovation support services in an attempt to transform Vilnius into a 'Knowledge City'. All projects are centred on the 156 ha Sauletekio (Sunrise) Campus in Vilnius. The initiative to create Sunrise Valley emerged in 2001. In 2003 the public body Sunrise Valley was established. The first projects of the Valley were implemented in the programming period 2004-2006. Most of the projects are supported by the Lithuanian 2007-2013 Operational Programmes. In 2008 the Programme for the Development of Sunrise Valley was adopted which foresees the implementation of projects in 2008-2013. In general, it is planned that Sunrise Valley will be developed in phases over a 10-20 year time span.
Member State	Lithuania, Vilnius
Funding:	A budget of 671.4 million LTL was defined in the Programme for the Development of Sunrise Valley (for the period 2008-2013): <ul style="list-style-type: none"> • ERDF – 261.75 million LTL (€75.8 million) • ESF – 5.356 million LTL (€1.6 million) • State Property Renovation Programme – 340 million LTL • National Investment Programme – 10 million LTL • Other sources – 54 294 million LTL
Cohesion Policy Objective:	Convergence
Main reason for Highlighting this case	The project aims to help transform Vilnius into a 'Knowledge City', while capitalising on the research strengths of universities based in Sunrise Valley and improving industry-higher education linkages and co-operation, thereby encouraging greater investment in research and development and innovation. The initiative is backed by very substantial ERDF investment spanning two programming periods and concentrating on this academic district of Vilnius, which is already fully integrated into the city and represents a dynamic and multifunctional environment.
Key Contact person	Prof. J.R. Lazutka Pro-Rector for Strategic Development at Vilnius University Juozas.Lazutka@gf.vu.lt

1. PROJECT DESCRIPTION	
Overall objective / goals:	The overall goal of Sunrise Valley as defined in the Programme for the Development of Sunrise Valley was to create an integrated centre/valley of science, studies and business for the development of the sectors of physical, technological and civil engineering through the development of business, internationally competitive fundamental and applied research, as well as the preparation of human resources to work in the R&D areas mentioned. The main objectives were as follows: <ul style="list-style-type: none"> • to concentrate in one location the available potential for scientific research, studies and knowledge-intensive business as regards physical, technological and civil engineering sciences; to reorganise the network of state institutes of physical sciences; and to develop the research infrastructure which is indispensable for the operation of the breakthrough trends in research and

	<p>study institutions and to mobilise scientific potential;</p> <ul style="list-style-type: none"> • to develop infrastructure for science-business cooperation (STP), including a business incubator to encourage high-tech start-ups, as well as a technology centre to demonstrate and field-test new technologies, and turn them into innovative products and services.
Description of activities:	<p>The main fields of research carried out in the Valley and practically applied by businesses are consistent with the highest level research potential and technological expertise concentrated in the Valley. They are as follows:</p> <ul style="list-style-type: none"> – lasers and optical technologies; – materials science and nanotechnologies; – semiconductor physics and electronics; – civil engineering. <p>The development of Sunrise Valley consisted of a group of different types of projects being or planned to be implemented in one area. Each major project was approved by the responsible ministry. The main actors responsible for the implementation of the key projects were Vilnius university, Vilnius Gediminas Technical University and the public body ‘Sunrise Valley’. Each project was implemented separately.</p> <p>The main actors of Sunrise Valley cooperate through the public body ‘Sunrise Valley’ which was formally incorporated as a public company in May 2003. The founder shareholders in Sunrise Valley include Vilnius University, Vilnius Gediminas Technical University and leading hi-tech companies – such as Alna (IT), Bité (telecommunications) and Ekspla (lasers). At the moment shareholders also include Vilnius City Municipality and the Laser and Light Science Technology Association, while the partners are the Knowledge Economy Forum, LAWIN¹ and MERITS.² Meetings are organised where shareholders and partners discuss and vote on issues related to the development of Sunrise Valley.</p> <p>In addition, the Association of Valleys³ in Vilnius city was established in 2012 (founders included Vilnius University, Vilnius Gediminas Technical University, the Centre for Physical Sciences and Technology, the Institute of Oncology of Vilnius University, the public body ‘Sunrise Valley’ and the public body ‘Visoriai Information Technology Park’). This association was established in order to coordinate and plan effectively the development and activities of valleys being developed in Vilnius city; to ensure public access to the infrastructure created in Vilnius and to represent and coordinate the interests of science, studies and business. This association will help the main partners in the development of Sunrise Valley to cooperate and coordinate their activities better.</p> <p>The main facilities planned in the Sunrise Valley aiming at the development of the R&D and technology transfer infrastructure are:</p> <ul style="list-style-type: none"> – National Centre of Physical and Technological Sciences (which includes construction of the complex of laboratory buildings as well as procurement of open access scientific and technological equipment) with a budget of 200.3 million LTL; – Development of Vilnius University Laser Research Centre (which includes construction of a superstructure on the second and third floors as well as equipment procurement for the Multifunctional Ultra-short Laser Complex Naglis with Open National and International Access) with a budget of 11.43 million LTL ; – Civil Engineering Centre of the Vilnius Gediminas Technical University

¹ LAWIN – group of the leading Baltic law firms. The firm provides services in all major fields of business law and is distinguished by high quality standards, extensive experience and leading specialists in Lithuania.

² MERITS is a specialised tax advisory firm providing tax risk management, tax planning and consulting services.

³ Two Valleys are being developed in Vilnius – Sunrise Valley and Santara Valley

	<p>(which includes procurement of open access scientific and technological equipment) with a budget of 18.9 million LTL;</p> <ul style="list-style-type: none"> - Phase 2 of Science and Technology Park (STP) and National Centre of Physical and Technological Sciences development as well as development of the territory of former military base in Vismaliukai (which includes construction of the second building of STP and building engineering infrastructure, installation of Technology transfer bar of the National Centre of Physical and Technological Sciences and renovation of engineering infrastructure, installation of engineering networks and communication services in the territory of the former military base in Vismaliukai) with an budget of approximately 112.2 million LTL. <p>The construction of the basic infrastructure of the Valley, its provision with basic equipment, and employment of the major scientific workforce has been planned for the period of 2009-2013 in the Programme for the Development of Sunrise Valley (however owing to delays, in practice the basic infrastructure should be finished by 2015). Overall, it is planned that Sunrise Valley will be developed in phases over a 10-20 year time span.</p> <p>Although not defined in the Programme, several other important projects are implemented in Sunrise Valley including:</p> <ul style="list-style-type: none"> - The National Open Access Scholarly Communication and Information Centre, which will open in 2012. This project was financed from the ERDF (85 million LTL) and the national budget (15 million LTL). - Joint Centre for Life sciences⁴ which is planned to be built in 2015. The budget of this project is 125.4 million LTL (106 million LTL of it comes from the ERDF and the rest comes from the national budget). - also, new leisure, sport and commercial facilities are planned to be developed in the medium term. <p>The first projects in the Sunrise Valley were implemented with the EU structural assistance in the programming period of 2004-2006. For example, the ESF supported the 'Sunrise Entrepreneurship School' project, while the ERDF supported projects related to the Technology Transfer Centre as well as the development of the Science and Technology Park (Phase 1) .</p> <p>The public body 'Sunrise Valley' and the Science and Technology Park are responsible for the development of entrepreneurship and innovation driven services (implementing soft projects): access to finance (business angel funds, seed financing, guaranties, microcredits), entrepreneurship education (business plans and ideas competitions, mentors' network, business clinics), technology transfer (licensing, patenting, spin-offs, R&D grants), etc. These services aim to create a hi-tech business support ecosystem.</p>
Beneficiaries:	<p>The initiators of Sunrise Valley:</p> <ul style="list-style-type: none"> • Vilnius University • Vilnius Gediminas Technical University • Vilnius municipality • Centre For Physical Sciences And Technology • Public body 'Sunrise Valley' <p>Indirectly – the partners of Sunrise Valley such as:</p> <ul style="list-style-type: none"> • Public body Northtown Technology Park

⁴ Initially it was planned to build this building in the 'Santara' Valley but decision was made to move it to the Sunrise Valley (although formally it is still in the Programme of Development of 'Santara' Valley).

	<ul style="list-style-type: none"> • Laser and Light Science and Technology Association • Engineering Industries Association of Lithuania (LINPRA) • Knowledge Economy Forum • Public body Intechcentras <p>Ultimate beneficiaries also include scientists and researchers, students, business companies, start-ups and young entrepreneurs and citizens of Vilnius. These beneficiaries are already being involved through the activities organised by public body 'Sunrise Valley' and the Science and Technology Park. For example 'Sunrise Valley' organises various seminars and training sessions for university students and researchers, and helps students with internships and their dissertations. The Sunrise Entrepreneurship School provides business clinics, an entrepreneurship library and training. Business Angels and Mentors networks have also been created, while practical and theoretical help for starting a business is provided through training on the preparation of a business plan, business simulation games, mentoring support etc. The Science and Technology Park provides help with starting business through the business incubator and services provided by it.</p>
Main results:	<p>The creation and development of Sunrise Valley helped to bring together science, studies, business and also local authorities to improve cooperation in the future. Many of the projects are still at the implementation stage, so tangible results are limited, but nevertheless important first steps were made. This initiative encouraged the main partners to start working together in order to achieve common results. The development of Sunrise Valley is expected to contribute to a better quality of science and studies in the area and will also provide much better opportunities for business to benefit from it.</p> <p>As regards infrastructure in Sunrise Valley, results achieved so far include:</p> <ul style="list-style-type: none"> • In October 2008 the first building (6300 sq. m) of the Science and Technology Park was opened for hi-tech companies, including an incubator for spin-offs. • The National Open Access Scholarly Communication and Information Centre will open later in 2012. • The Civil Engineering Centre with 8 laboratories was opened in 2011. • The Multifunctional Ultra-short Laser Complex Naglis with Open National and International Access were scheduled to be completed in 2010 but due to delays this project is expected to be finished by 2013. • The National Centre for Physical and Technology Sciences and the Joint Centre for Life Sciences are currently under construction; it is intended that 33 laboratories will be established by 2013. • also, new leisure, sport and commercial facilities are planned to be developed in the medium term using the public-private initiative. <p>More details on the initiative results are to be found in section 6.3.</p>
Expected impact:	<p>Sunrise Valley aims to help generate new ideas and technologies in the areas mentioned, promote them, develop and roll out new hi-tech products and new services, as well as attract foreign direct investment in high technologies. The Valley – a link between science, studies and business – is expected to develop internationally competitive fundamental and applied research as well as post-graduate studies. Also, a more effective participation of businesses in Valley activities will be encouraged through the Science and Technology Park.</p> <p>The expected impact of the creation of Sunrise Valley, as set out in the Programme for the Development of Sunrise Valley, is:</p> <p>The Valley infrastructure will be available for regular use by scientists and researchers, doctoral students, master's degree students, undergraduates studying or working in the fields of physics, technology and civil engineering.</p> <p>A one-stop-shop with adequate equipment and infrastructure will prevent overlapping functions.</p>

The Valley will strengthen scientific research, maintain the level of scientific research in the established fields, and encourage scientific research in new potential fields.

The quality of studies will undergo an essential improvement and businesses will have bigger influence as regards the development and quality of university study programmes.

The creation of the Valley will contribute to the EU's sustainable R&D policy; high technologies will have more possibilities to compete internationally and impact global markets.

The socio-economic benefit will be demonstrated by a growing competitiveness of high technology-driven businesses; a considerably larger GDP share generated by business, and increased possibilities for it to compete in world markets. With a possible injection of foreign direct investment, the GDP share generated by high-tech companies would increase fourfold.

Close cooperation between business and science in the Valley will improve working conditions for scientists and researchers, and will create new jobs for highly-qualified specialists and high-tech managers.

The large scientific potential and qualified staff will help attract more foreign direct investment.

The conditions provided by the Science and Technology Park for business start-up and development will facilitate the commercialisation of research outcomes, and new spin-offs.

Business will be enabled to access the infrastructure necessary to carry out scientific research, and interaction between business and studies will improve the quality of the studies.

The Valley will increase the competitiveness of Lithuanian scientists participating in EU programmes for fundamental and applied research.

Maps

Figure 1: Plan of key infrastructure in Sunrise Valley

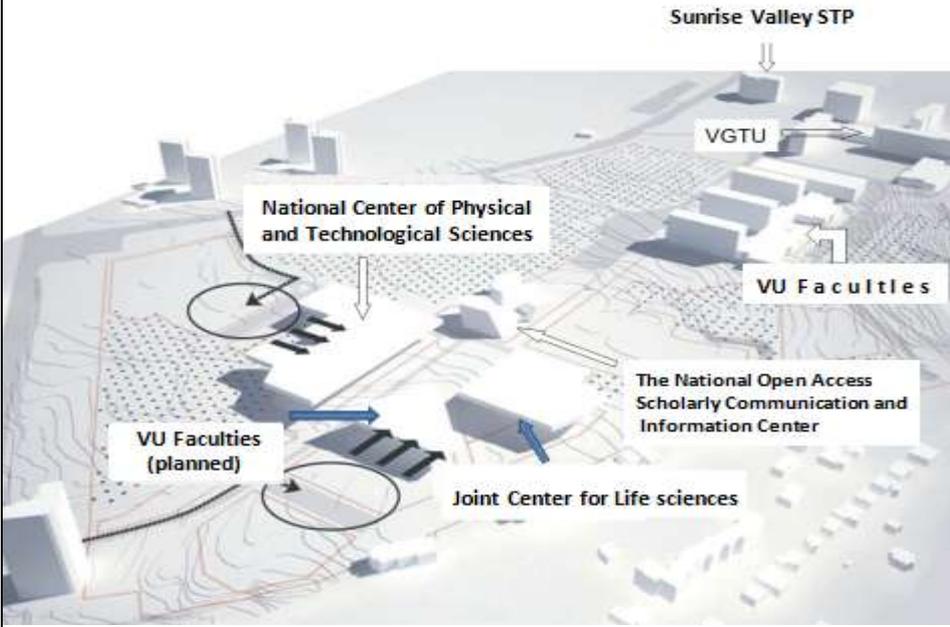


Figure 2: The area of Sunrise Valley



2. POLITICAL AND STRATEGIC CONTEXT

The idea of Sunrise Valley emerged in 2001 when Vilnius municipality approved a vision for Vilnius to become one of the most modern cities in central and eastern Europe as well as an international centre for business, science and culture. One of the city's development priorities, set out in the strategic plan of Vilnius municipality for the period of 2002-2004, was 'to create the infrastructure for the development of sectors of new economy' by paying a particular attention to the establishment of Sunrise Valley area as the nucleus of knowledge economy in the city. At the beginning, a strong role was therefore played by Vilnius city municipality and key politicians. It was decided that Vilnius needs smart growth and development based on technologies which could be achieved through such initiative as Sunrise Valley.

The implementation of the Sunrise Valley idea developed further as follows:

- In 2002 the Association Knowledge Economy Forum created a 'Sunrise Valley' working group, which was responsible for the development of this project.
- In 2002 a Memorandum of Understanding was signed by Vilnius municipality, Vilnius University, Vilnius Gediminas Technical University and the Association Knowledge Economy Forum. The Memorandum provided a framework within which key stakeholders interested in developing Vilnius as a 'Knowledge City' could co-operate.
- In May 2003 'Sunrise Valley' was formally incorporated as a public body. Founding shareholders included Vilnius University, Vilnius Gediminas Technical University and leading companies in key target sectors – such as Alna (IT), Bité (telecommunications) and Ekspla (lasers). In February 2004 Vilnius City Municipality became a shareholder. Public body Sunrise Valley is responsible for developing business support infrastructure including the science and technology park and the business incubator, and for implementing the innovation and entrepreneurship programme. The development of Sunrise Valley was understood as a strategic initiative which needed major investment. The first projects in the Sunrise Valley were implemented in the programming period 2004-2006 using support from ESF and ERDF. In 2008 the Programme for the Development of Sunrise Valley was jointly approved by the Ministries of Economy and Education and Science which identified the main infrastructure projects to be implemented there.

Although at the beginning the role of Vilnius city municipality was central, over time it faded and the municipality became less involved. Eventually the universities and

	<p>the public body 'Sunrise Valley', in consultation with the relevant business partners, remained the most important actors active in the process of development of Sunrise Valley.</p>
<p>The planning context</p>	<p>Although the initial idea was to develop just one or two initiatives such as Sunrise Valley in Lithuania, the Government of the Republic of Lithuania has in the end decided to launch five valleys to be funded by the EU structural assistance in the programming period 2007-2013: 2 valleys in Vilnius (electronics, nanotechnologies, ITT and biomedicine), 2 valleys in Kaunas (ITT, mechatronics, chemistry and agriculture) and 1 maritime valley in Klaipeda (Lithuania's only seaport). In 2007 the Concept of Creation and Development of Integrated Research, Studies and Business Centres (Valleys) was adopted. It determined that Valleys are developed according their individual development programmes, based on goals, objectives and conditions of establishment set out in the plan. Therefore, in 2008 the Programme for the Development of Sunrise Valley (hereinafter – the Programme) for the period of 2008-2013 was approved.</p> <p>The Programme has been drafted in accordance with national strategic documents such as:</p> <ul style="list-style-type: none"> • the Conception of Creation and Development of Integrated Research, Studies and Business Centres (Valleys), • the High Technology Development Programme for 2007-2013, • the Common Cooperation Programme for Research, Science and Business. <p>The development of Sunrise Valley is in line with both regional and municipal legislation: the Vilnius Regional Development Plan for 2007-2013, the Vilnius City Strategic Development Plan approved in 2002, and the Vilnius City Master Plan approved in 2007. The development of the Sunrise Valley remains the priority for the Vilnius municipality in the long term as well. The strategic plan of Vilnius municipality for the period of 2010-2020 provides that the municipality will contribute to the development of this Valley in order to promote the creation of a competitive economy in the city as well as to increase the its international visibility and importance. Also, Vilnius municipality committed itself to creating favourable conditions for developing the knowledge economy and innovations.</p> <p>In addition, the Government's policy promoting the interaction between science and business was set out in the Lithuanian Innovation Strategy 2010-2020. The Strategy determines that one objective is to strengthen the knowledge base and develop integrated centres/valleys of science, studies and business.</p>
<p>3. IMPLEMENTATION</p>	
<p>3.1. PROJECT DESIGN AND PLANNING</p>	<p><u>The Idea</u></p> <p>Sunrise Valley should be seen in the context of wider attempts to promote the growth of knowledge-intensive economic activities in Vilnius. As mentioned above, the idea of the Sunrise Valley was launched in 2001. A few years later the agreement between Vilnius municipality, higher education institutions and business was reached as regards the promotion of research and development in Vilnius and Lithuania in general.</p> <p><u>Project basis</u></p> <p>The analysis of the state of art in the area of research and development in Lithuania pointed to the need to consolidate R&D resources on the institutional and simultaneously on the geographical levels. Attention has also been drawn to this a number of times in the findings of experts who have evaluated the situation since 1996. In 2005 the Sunrise Valley feasibility study was prepared. It contained a market assessment; key propositions with regard to how the Sunrise Valley initiative should be taken forward; an assessment of critical success factors, risks and assumptions; the management framework proposal, investment and development plan.</p>

In the Programme for the Development of Sunrise Valley it was emphasised that fragmentation of the Lithuanian potential for science and studies and the absence of critical mass represented the main reasons why R&D lacked effectiveness and university studies were not sufficiently based on research. It was necessary to bring together people working in R&D and to concentrate and build R&D infrastructure at those institutions that claim to have top researchers and where equipment may be used most efficiently. Therefore, the development of the Sunrise Valley became a strategically important project for Lithuania.

Project selection

Projects implementing separate measures of the Programme have to be in line with:

- Project management and funding rules laid down in Resolution No 1443 of the Government of the Republic of Lithuania of 19 December 2007;
- The conformity rules regulating expenditure and funding of projects implemented in the framework of the Lithuanian Strategy for the Use of European Union Structural Assistance for 2007-2013 and the operational programmes for the implementation of this strategy;
- The National Project Planning Description, approved in 2008;
- Other relevant legal provisions.

Risks

A risk management plan was defined in the Programme for the Development of Sunrise Valley where different types of risks were identified as well as risk reduction instruments. Types of risks:

- Investment and its financing risk (increase in investment value, overestimated financial benefit of the project);
- Economic risk (inaccuracy of economic assumptions and outcomes);
- Technical and technological risk (investment quality, delay);
- Organisational risk.

During the implementation process of Sunrise Valley’s projects it became clear that an important risk of public procurement was not foreseen. This problem became even more important during the economic crisis in Lithuania when the construction sector was affected a lot. As a result, public procurement of the main infrastructure items became a battlefield for many construction companies. Because of that, the building of these items was delayed due to slow public procurement procedures, complaints, trials and etc.

EU structural assistance

EU structural assistance was crucial for the development of Sunrise Valley. Without ERDF funding the main and largest projects of Sunrise Valley could not be implemented due to the lack of national resources.

Funding

The Programme is funded from EU structural funds (2007-2013) and other programmes coordinated by the Ministry of Education and Science, the Ministry of Economy and other ministries. However, the EU structural support is the largest funding source for implementing the Programme for the Development of Sunrise Valley and many projects would not have gone ahead without the EU support. One measure of the Programme (the coordination of the implementation of the Programme) is funded by ESF, while the key investment measures are funded by ERDF and other national funds.

3.2. MANAGEMENT, MONITORING AND EVALUATION SYSTEM

As the development of Sunrise Valley has been based on implementing different projects, it has no single clearly defined and operational management system. Instead, each project has its own manager and management system. The development of Sunrise Valley is an outcome of various interactions and

compromises between partners, political interests.

Management system

As regards management of all 5 Valleys, the overall governing body of the process is the Valleys' Supervisory Council, formed by order of the Minister of Education and Science and Minister of Economy (in total 11 members). Its main function is to consider and submit proposals to the Ministry of Education and Science, the Ministry of Economy and the Government on strategic decisions regarding the development of the valleys and Joint Research Programmes. Implementation and development of the projects in Sunrise Valley is monitored by the Valley's monitoring group which is composed of Lithuanian and foreign experts (in total 14 people). However, the role of these two bodies is rather formal.

In the Programme for the Development of Sunrise Valley it was foreseen that the Association of the Valley would be established to coordinate the development of the Valley and attune the interests of science, studies and business. A Valley Council was also supposed to be established to coordinate the implementation of the Programme. However, neither the Association nor the Council were set up after the adoption of the Programme.

Each large investment project in Sunrise Valley has its own management team and (or) project administration to run the project. Most of the projects are implemented by Vilnius University. Implementation of the projects is monitored by the administrative institutions of the EU structural assistance management system, such as the Central Project Management Agency and the Business Support Agency, the Support Foundation European Social Fund Agency, the Ministry of Education and Science and the Ministry of Economy, following specific indicators.

Evaluation

As the Sunrise Valley is a long-term project and is at the implementation stage, the final evaluation has not been done yet. However, in 2011 the National Audit Office of Lithuania performed an audit (Promotion of interaction between science and business) which evaluated the implementation of integrated science, studies and business centres/valleys (including Sunrise Valley as well). The document may be accessed here – www.vkontrole.lt/failas.aspx?id=2438

EU funds

As support from ESF is used only for one measure of the Programme for the Development of Sunrise Valley (to coordinate the implementation of the Programme) and other measures are implemented by using ERDF support, there are no contradictions during the management process.

**3.3. GOVERNANCE:
PARTNERSHIP,
PARTICIPATION AND
EMPOWERMENT**

Partnership

The Sunrise Valley project could start only as a result of partnership among various stakeholders. As mentioned, in 2003 Sunrise Valley was formally incorporated as a public body. The founding shareholders of this body include Vilnius University, Vilnius Gediminas Technical University and leading companies in key target sectors – such as Alna (IT), Bité (telecommunications) and Ekspla (lasers). In February 2004 Vilnius City Municipality became a shareholder. As one of the goals of this body is to promote networking between universities and businesses, between the businesses themselves, and with partners elsewhere in Lithuania and worldwide, each partner found it useful to be involved in this project and to invest in it.

Overall, the partnerships between science and business in the Valley are still in the development phase. On the other hand, smaller and more effective partnerships between science and business have already been built in various research areas developed in Sunrise Valley (lasers and optical technologies, materials science and nanotechnologies, semiconductor physics and electronics, civil engineering). These partnerships were developed over time in the past. The most important thing in building partnerships is common interests and common goals of all participating partners active in a given technological area.

	<p><u>City municipality and leadership</u></p> <p>Vilnius municipality with its mayor was one of main promoters of the development of Sunrise Valley from the beginning. The city's government has named the development of the knowledge economy as the strategic goal in the development of the city for the period from 2002 to 2011. However over time political support from Vilnius municipality has changed as there was a lack of strategic and continuous policy as regards modern urban development. As regards implementation of the main strategic projects in the Sunrise Valley, lately the main role is played by Vilnius University.</p> <p><u>Political support</u></p> <p>Political support for the development of Sunrise Valley at the highest political level has always existed (more or less during the change of governments).</p> <p><u>Innovative aspects</u></p> <p>The partnership built during the implementation of Sunrise Valley can be called innovative in terms of being able to gather together various stakeholders interested in this initiative. Sunrise Valley is the biggest initiative in Lithuania seeking to build better partnerships between science and business.</p>
4. INNOVATIVE ELEMENTS AND NOVEL APPROACHES	
	<p>In general, the idea of establishing and developing integrated science, studies and business centres in specific geographically delimited areas (valleys) was innovative in Lithuania. The intention is that the development of Sunrise Valley will make Vilnius more attractive to future investors, increase the quality of science and studies as well as will improve cooperation between business and science.</p> <p>Also, while the relative importance and the role of partners (municipality, universities, research organisations, businesses and their associations) has changed over the time, the overall Programme for the Development of Sunrise Valley has been developed through and supported by the whole range of partners.</p> <p>As regards implementation of separate projects in the Valley, their design or planning did not differ much from common practice. In addition, as many projects are at the initial or at the implementation stage it is not possible to evaluate how the results of these projects are exploited.</p>
<p>4.1. KEY IMPLEMENTATION CHALLENGES AND PROBLEM-SOLVING PRACTICES</p>	<p><u>Implementation challenges</u></p> <p>There were challenges in building an effective partnership among the key stakeholders in the period of 2007-2013. The visions of different participants as regards the number and design of valleys were diverse. The initial proposal was that there should be a maximum of two valleys in Lithuania. The political decision was made to create five valleys.</p> <p>Major risks as regards the implementation of the Programme of the Development of Sunrise Valley were not foreseen. The most important risk relevant during the implementation of major projects in Sunrise Valley is related to public procurement. It was planned that public procurement procedures would end quite quickly (in a few months) and all projects would be implemented by 2013. However, practically public procurement procedures take a very long time owing to procurements of very high value (e.g., the public procurement of the National Centre for Physical and technology sciences has already lasted for 2 years, which has delayed project implementation).</p> <p>An effective management system for Sunrise Valley was not created. Although the Programme of the Development of Sunrise Valley foresaw the establishment of the main managing bodies, in practice they were not established owing to the diverging interests of the key stakeholders.</p>
<p>4.2. THEMATIC FOCUS</p>	<p>Europe 2020 smart growth</p> <p>The Sunrise Valley initiative contributes directly to the Europe 2020 goal of smart</p>

growth which seeks to develop a knowledge and innovation-based economy which requires improving the quality of education, strengthening research performance, promoting innovation and knowledge transfer etc.

The Sunrise Valley project, among other objectives, aims at:

- Encouraging greater investment in research, development and innovation;
- Capitalising on the research strengths of the two main universities;
- Fostering a culture of entrepreneurship both within universities and research institutes and amongst the population in Vilnius;
- Attracting new foreign direct investment in high value added activities;
- Creating new employment and wealth creation opportunities for university graduates, scientists, researchers, etc.

5. FUNDING

The Concept of Creation and Development of Integrated Research, Studies and Business Centres (Valleys) determined that the development of Valleys is carried out using financial resources from state and municipal budgets, academic and research institutions involved in the development of these valleys, and other public bodies, as well as private individuals, the European Union Structural Funds, and also funds from the international research and innovation development programme for 2007-2013.

The budget defined in the Programme for the Development of Sunrise Valley (for the period 2008-2013) is:

- ERDF – 261.75 million LTL (€75.8 million)
- ESF – 5.356 million LTL (€1.6 million)
- State Property Renovation Programme – 340 million LTL (€98.5m)
- National Investment Programme – 10 million LTL (€2.9m)
- Other sources – 54.294 million LTL (€15.7m)
- Total – 671.4 million LTL (€194.5m)

As regards the budgets of the main projects in Sunrise Valley, they are as follows:

- National Centre of Physical and Technological Sciences – total 200.3 million LTL (€58.0m), of which 170.3 million LTL (€49.3m) from ERDF;
- Development of Vilnius University Laser Research Centre –total 11.43 million LTL (€3.3m), of which 9.7 million LTL (€2.8m) from ERDF;
- Civil Engineering Centre of the Vilnius Gediminas Technical – total 18.9 million LTL (€5.5m), of which 16.1 million LTL (€4.7m) from ERDF;
- The National Open Access Scholarly Communication and Information Centre – total 100 million LTL (€29.0m), of which 85 million LTL (€24.6m) from ERDF.
- Joint Centre for Life sciences – total 125.4 million LTL (€36.3m), of which 106 million LTL (€30.7m) from ERDF.
- [converted to euros at €1 = 3.4528 LTL]

6. PROJECT ASSESSMENT

6.1. SUSTAINABILITY	<p>As Sunrise Valley is a long-term project, its development will continue after this programming period. Initially it was planned that Sunrise Valley would be developed in phases over a 10-20 year time span. The main promoters of Sunrise Valley are the public body 'Sunrise Valley' and two participating universities (Vilnius University and Vilnius Gediminas Technical University), which are responsible for the implementation of the key infrastructure projects.</p> <p>The future sustainability of the project will depend on the will of the main actors to cooperate and on political support for the project. At the moment it is not known whether the EU structural funds will fund further development of Sunrise Valley in the next programming period.</p> <p>Very important to overall sustainability is the present plan to attract to Sunrise Valley a well-established international manager of science and technology parks (such as Technopolis from Finland). The negotiations are ongoing, and it is expected that the arrival of such experienced intermediary would give a new impetus to building a closer partnership between incumbent science and research institutions on the one hand and (the newly attracted) businesses on the other.</p>
6.2. TRANSFERABILITY	<p>The overall approach has been replicated in the other 4 similar initiatives (valleys) being developed in Lithuania. It has also attracted some international attention in various events where it has been presented.</p>
6.3 PROJECT RESULTS	<p>The results achieved by developing the Sunrise Valley include both 'soft' and 'technical' results. The creation and development of Sunrise Valley helped to gather together science, studies and business for better cooperation in the future. This project encouraged the main partners to start working together in order to achieve common results. Also such beneficiaries as students and young researchers became more involved in entrepreneurship activities, they know where to search for information and how to find the support they need. Moreover, Vilnius is becoming a more attractive city for investors owing to the development of this valley and the potential it will have in the future.</p> <p>As regards 'technical' results achieved, they are as follows:</p> <ul style="list-style-type: none"> • In October 2008 the first building (6300 sq. m) of the Science and Technology Park (STP) was opened for high-tech companies including the incubator for spin-offs. This project was implemented in the previous programming period. <ul style="list-style-type: none"> Building and premises description: <ul style="list-style-type: none"> ○ Business incubator (with furniture); ○ Access to STP building 24/7; ○ Security control, video monitoring; ○ Car parking only for STP tenants (including 1 floor underground parking); ○ 2 conference halls; small kitchens and meeting rooms on each of 9 floors; ○ Broadband internet connection, server rooms. • Services provided in the STP include: <ul style="list-style-type: none"> ○ Joint secretariat (copying, scanning, coffee breaks, reception, call handling, etc.); ○ Technology Transfer Centre (including technology audit, access to potential R&D projects partners in Vilnius universities and private institutes, IPR management); ○ Sunrise Entrepreneurship School (business clinics, entrepreneurship library, trainings); ○ Business Angels and Mentors networks, access to EU structural and national funds support • The National Open Access Scholarly Communication and Information Centre (SCIS) will open in 2012. SCIS will become the centre of communication

between scientific research and studies, scientific research and business, business and studies.

The new building consists of three blocks joined by a common basement. The total area of the new centre building is 13 831.66 square metres, for the closed stacks – 2 750 square meters accommodating about 1.8 million items. It is planned to accommodate about 0.31 million publications in the users' zones of the centre (in the open stacks). The centre will have about 670 workplaces for users and 80 workplaces for the staff. The users' zones will be easily accessible to all visitors to the centre, supplied with computers, copying, scanning and printing devices and wireless internet.

The SCIS will distinguish the form and content variety of information resources, accumulating in one place high quality information resources corresponding to the directions of scientific research in Sunrise Valley. The main task of the centre will be to provide a lifelong learning resource and services based on the most advanced IT technologies, to ensure the interaction of science, studies and commerce and to learn from the best practices around the world.

The Civil Engineering Centre with 8 laboratories was opened in 2011. The goal of this centre is to create an integrated centre of science, studies and business in Vilnius Gediminas Technical University for the purpose of developing the civil engineering sector. The centre manages 8 laboratories for building construction, building materials, geotechnical field experimental research, soil physical and mechanical characteristics, geodesy, energy and microclimate systems in the building, environment technology, and road technology. In the future it is planned to expand the number of laboratories. Three main fields of activities in this centre are: sustainable urban development, economical house, thermal isolation materials.

Development of Vilnius University Laser Research Centre – it was planned to complete this project in 2010 but due to delays it is supposed to be finished by 2013. The project aims to establish the multi-functional laser facility on the basis of Vilnius University Laser Research Centre. New laboratories will be built and modern ultrafast lasers along with diagnostic equipment will be installed which will become a platform for multidisciplinary fundamental and applied research and extended cooperation with private high-tech companies. The facility will offer national and international access.

Currently the project of National Centre for Physical and technology sciences is under implementation. It is supposed to be finished by the end of 2014. This project will be one of the biggest in Sunrise Valley (total budget 200.3 million LTL – €58m). This centre will create a joint physical and technological infrastructure designed for active development of laser light technology, materials science, nanotechnology, semiconductor physics, electronics and related research and development (R&D) activities. In addition, open access points will be installed – infrastructure with open access not only for institutions participating in the project but also for researchers from other science and academic institutions.

The Joint Centre for Life Sciences will be built in Sunrise Valley although formally it is the project of Santara Valley (another Valley in Vilnius). This centre will be devoted to biotechnology and molecular medicine research, studies and technological development. The centre will be equipped with new working places for scientists and researchers, and also 10 new packages of R&D equipment will be procured for open-access centres.

7. CONCLUSIONS: KEY SUCCESS FACTORS AND LESSONS LEARNED

Success factors:

- Partnership between key participants interested in the development of Sunrise Valley helped to implement the idea practically and to achieve tangible results.
- ERDF played a crucial role for the development of Sunrise Valley and implementation of its main projects.
- Investments made in Sunrise Valley will help to maintain an adequate level of

	<p>science in Lithuania and to encourage smart growth.</p> <ul style="list-style-type: none"> • Business (especially in such sectors as lasers or biotechnology) will have tangible benefits from improved infrastructure and research capacity in Sunrise Valley. This will increase cooperation between science and business. • Sunrise Valley helps to attract foreign investments and increases the attractiveness of Vilnius city. <p><u>Lessons learnt:</u></p> <ol style="list-style-type: none"> 1. The creation of integrated centres/valleys of science, studies and business in Lithuania has become too fragmented a process as too many valleys are being developed for such a small country. The total budget for valleys was around 1 billion LTL (€290m) and it was divided among 5 valleys instead of being concentrated. As a result, projects implemented in different valleys are sometimes too small and will not be able to produce real added value. 2. The Sunrise Valley case demonstrates that a lack of strategic thinking (when various interests play a more important role) and a lack of consensus between key stakeholders at the implementation stage can affect negatively the development and implementation of ambitious ideas and can lead to less effective results. 3. Such big projects as Sunrise Valley have to be planned very carefully and a lot of attention has to be paid to real needs assessment. 4. It is important to ensure an effective management system in order to avoid misunderstandings and to manage risks effectively. 5. Vilnius municipality could play a more active role in developing Sunrise Valley. Although initially the municipality's role was very active and important, over time the interest diminished owing to the lack of continuous policy towards modern urban development. More could be done as regards using existing opportunities to exploit the potential of Sunrise Valley. 6. It has been learnt that real partnerships can be strong and effective if they are based on common interests and goals and are formed through bottom-up processes. Such partnerships cannot be created artificially, by applying a top-down approach.
8. MORE INFORMATION	
	<p>Main persons to be contacted:</p> <p>Juozas Lazutka, Pro-Rector for Strategic Development at Vilnius University, juozas.lazutka@gf.vu.lt, tel. +370 5 268 7017</p> <p>Andrius Bagdonas, Director of public body 'Sunrise Valley', andrius.bagdonas@sunrisevalley.lt, tel. +370 5 250 0601; +370 5 250 0600</p> <p>The website about integrated science, studies and business centres (valleys) http://www.smm.lt/en/smt/valleys.htm</p> <p>The website of public body 'Sunrise Valley' http://www.sunrisevalley.lt</p>
Name of expert	Aurelija Unguvaitienė, Haroldas Brožaitis

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