



Sustainable Production
through Innovation in SMEs

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Boosting sustainable innovations in small and medium-sized enterprises in the Baltic Sea Region

SPIN Strategic Actions for decision makers



Project part-financed by the
European Union (European
Regional Development Fund)



Baltic Sea Region
Programme 2007-2013

» Imprint

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THE REPORT WAS COMMISSIONED BY:

Federal Ministry for the Environment, Nature Protection and Nuclear Safety (BMU) Germany

FUNDED BY:

EU Baltic Sea Region Programme 2007–2013

DESIGN:

design_idee_erfurt GbR, Erfurt

PRINTING:

BMU, November 2011

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Innovations in sustainable production can make especially small and medium-sized enterprises (SMEs) more competitive, profitable and environmentally friendly. The Baltic Sea Region (BSR) has a great R&D potential, yet the application of sustainable innovations especially by SMEs is still scarce. The question is: How to match supply and demand of sustainable innovations? On one side, many SMEs still struggle to respond to requirements imposed by EU directives, as they do not have access to the existing technological or managerial solutions. On the other side, a large number of new sustainable technologies and innovative managerial solutions are being developed that cannot find a market. To overcome this mismatch, the SPIN project has been developed.

The project "SPIN – Sustainable Production through Innovation in Small and Medium sized Enterprises (SME)" aims to increase the application of sustainable innovations in SMEs throughout the Baltic Sea Region (BSR). SPIN has brought together SMEs from the supply and demand side and has developed recommendations how to improve the policy framework for sustainable innovations in the BSR. SPIN is part-financed by the European Union (European Regional Development Fund and European Neighbourhood and Partnership Instrument) through the BSR Programme (2007-2013). Project partners from Denmark, Estonia, Finland, Germany, Lithuania, Poland and Sweden are involved in SPIN, including public authorities, technology centres, R&D institutes and universities. SPIN is a designated flagship project in the EU Strategy for the Baltic Sea Region. Furthermore, SPIN was nominated a Council of the Baltic Sea States (CBSS) Baltic 21 Lighthouse Project. More information on SPIN is available from the project website: <http://www.spin-project.eu>.

The **SPIN Strategic Actions** presented in this paper recommend a coherent approach for the whole BSR to support the development and application of sustainable innovations by SMEs. Within SPIN push and pull factors for sustainable innovations and barriers and incentives for SMEs supplying or applying sustainable innovations have been analysed. The aim of this paper is to turn these findings into Strategic Actions to improve the framework conditions for sustainable innovations in SMEs in the BSR. Country differences within the BSR need to be considered (e.g. regarding market maturity, innovation performance, legislation and taxation, national priorities) but there are many areas of common interest to be addressed throughout the BSR. Target groups addressed by the Strategic Actions are policy makers on EU, national and regional level but also public authorities, financing institutions, business networks and associations. At the end of the report an overview table of the recommendations for different target groups is presented as a quick reference.

The SPIN Strategic Actions are in line with the aims of the EU Strategy for the Baltic Sea Region to intensify cooperation between the BSR countries and to support sustainable development of the BSR within the framework of Baltic 21. They should contribute to national and European policy on sustainable consumption and production, sustainable industrial policy and resource efficiency, including Europe 2020 Strategy and its flagship initiatives.

This report has been written by Project Management Jülich (PtJ) at Forschungszentrum Jülich GmbH under supervision of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) with support and input from the SPIN project partners. It is based on the results of the SPIN project including discussions with the project partners and feedback from policy makers through the SPIN Advisory Board.

» Executive Summary

This report presents results of the European project "SPIN - Sustainable Production through Innovation in Small and Medium sized Enterprises (SMEs)" which aims to increase the application of sustainable innovations in SMEs throughout the Baltic Sea Region (BSR).

SMEs are the backbone of Europe's economy. There is a large potential for making SME operations more sustainable through application of innovations but still SMEs struggle to apply available sustainable innovations. Creating a climate of innovation in business and society is a challenging task which is dependent on the framework conditions set by policy makers, legislation and norms, authorities and institutions, and the market for sustainable innovations.

The SPIN Strategic Actions presented in this paper recommend a coherent approach for the whole BSR to support the development and application of sustainable innovations by SMEs. The aim is to improve the framework conditions both for SMEs in demand of sustainable innovations but also for SMEs which are suppliers of such innovations. Target groups addressed by the Strategic Actions are policy makers on EU, national and regional level but also public authorities, financing institutions, business networks and associations. The SPIN Strategic Actions are focused on the following three activity areas which were found to be most relevant to improve the framework conditions for sustainable innovations in SMEs.

A. Increasing awareness and competences of SMEs

SMEs often have limited awareness of the actual environmental impact of their activities, of improvement potential to make their processes more sustainable, and of existing innovative solutions which could help them to be more profitable and sustainable. This is due to limited capacity and time and lack of specific competences in SMEs. Therefore increasing awareness and competences of SMEs is the first step to increase demand for sustainable innovations and to help SMEs in applying them. SMEs should be more aware of their potential for sustainability, what they can do, how they can be involved and supported and how to measure the

success of sustainable innovations. SPIN therefore recommends actions to increase the internal and external know-how available for SMEs to support the application of sustainable innovations:

1. Help SMEs to help themselves: Promotion of tools for integration of sustainability in SMEs' operations
2. Train the disseminators and train the SMEs: Multiply competence for implementation of sustainable innovations
3. Information and innovation services for SMEs: Linking SMEs with external competences
4. Demonstration and dissemination of best practice projects: Tell the success story of sustainable innovation
5. Sustainability from the start: Integrate sustainability in secondary and higher education

B. Access to finance for sustainable innovations

Lack of finance is one major barrier to implementation of sustainable innovations in SMEs. Due to limited own capital SMEs often depend on external financing from private or public capital sources which are difficult to access. Also perceived long payback times beyond the short-term financial planning of SMEs hinder investments in sustainable innovations. Better access to finance is needed particularly in early innovation phases to create ideas and initiate innovation processes in SMEs. However, also for growing SMEs which are potential suppliers of sustainable innovations it is difficult to finance first reference projects for scaling-up their innovative ideas to commercially viable products. SPIN recommends adjusting existing public support schemes to the needs of SMEs and a better coordination of public support to increase leverage of private capital:

6. Financial support to initiate innovation processes in SMEs: Sustainable transnational innovation vouchers
7. Improve SMEs' access to private capital for sustainable innovations: Public support for private investments
8. Improve SMEs' access to public support schemes: Clear information, transparent structures, slim and quick procedures

C. Support market transformation and the uptake of sustainable innovations

Many sustainable innovations which are available in the BSR have not yet fully exploited their market potential because of insufficient links between supply and demand side and other market barriers. The demand side should be supported to increase public and private demand for sustainable innovations. Transparent and reliable sustainability standards help suppliers to access new markets and initiate transnational business cooperation. Information flows and networks between suppliers and users of sustainable innovations should be strengthened to support matchmaking between supply and demand. Involvement of consumers and society will further increase the pull for sustainable innovations. Therefore, SPIN recommends the following actions:

9. Legislation to push SMEs towards sustainable production: Implementing a targeted, stable and reliable legal framework
10. Supply Chain Management: Increase transnational business cooperation for sustainable production
11. Integration of retailers and end-users: Initiatives to support private sustainable consumption
12. Standards, norms and labelling to support transnational cooperation: Promotion of harmonized market conditions for sustainable innovations
13. Sustainable Public Innovation Procurement: Public sector taking the lead in implementing sustainable innovations
14. Policy dialogue with industry and society: Develop a common roadmap towards sustainable production and consumption

SPIN has focussed its activities on four industry sectors:

- Biogas
- Decentralized water treatment
- Sustainable construction
- Surface treatment and resource efficiency

Based on the experience from industry workshops and additional background studies, some examples of recommended actions for these sectors are presented in this report. These examples should make the general recommendations more tangible to show what could be done to support sustainable innovations in the selected industry sectors.

The SPIN Strategic Actions address decision makers at different type of organisations from local, regional and national to European level (see overview table on p. 34). Implementation of the SPIN recommendations needs to be coordinated to involve all relevant decision makers, as well as practitioners, investors and consumers to really make a change. SPIN recommendations should contribute to ongoing and upcoming policy initiatives on EU and national level, including the EU Strategy for the Baltic Sea Region, the EU Action Plan for Sustainable Consumption and Production (SCP) and Sustainable Industrial Policy (SIP), the EU 2020 Strategy including its flagship initiatives: Innovation Union, Resource efficient Europe, Industrial policy for the globalisation era.

A SPIN Transnational Forum with representatives from all SPIN countries should continue network activities and facilitate transnational implementation of the SPIN recommendations. National Contact Points within the SPIN Transnational Forum will support the national implementation of the SPIN recommendations (see contact information at the end of this report).

» Innovations for sustainable production and their application by SMEs

SMEs are the true backbone of Europe's economy. More than 99 % of all European businesses are SMEs with less than 250 employees, 90 % of them are even micro enterprises with less than 10 employees. SMEs contribute to more than half of the total value-added created by businesses in the EU and they provide two out of three jobs in the private sector. This means that SMEs are being primarily responsible for wealth and economic growth, next to their key role in innovation and R&D. Because of their flexibility, fast decision-making and manageable size, SMEs are important innovation actors. But SMEs are also responsible for more than 60 % of the total environmental impact of European industry. Hence there is a large potential to increase sustainability and competitiveness of SMEs through application of sustainable innovations. Within the Baltic Sea Region (BSR) a large R&D potential exists and some BSR countries are among the world leading suppliers of eco-innovations.

The application of sustainable innovations in SMEs leads to the creation of public benefits and private profits whilst reducing economic and environmental costs. Company performance – both in the production and service sector – can be made more sustainable in terms of environmental, economical and social performance through technical and organisational innovations.

Therefore, the SPIN Strategic Actions cover sustainable innovations as a broad term which goes beyond eco-innovations which are solely targeted on environmental performance. Sustainable innovations to be supported by the SPIN Strategic Actions include product, process and organisational innovations to be applied in SMEs to increase the environmental, economic or social performance of the company or its products and services – taking into account a balanced and holistic perspective of all three sustainability aspects.

Available sustainable innovations are not fully used by SMEs. This is due to several barriers limiting SMEs' capability to apply these innovations. Two different target groups of SMEs are addressed by SPIN. The first group are SMEs

that (potentially) demand sustainable innovations. The second group are SMEs supplying sustainable innovations. Both groups of SMEs are affected by different barriers.

Relevant barriers on the demand side which have been identified in the SPIN project are:

- Environmental legislation and regulations set ambitious targets but sometimes lack proper enforcement or are not properly applied by SMEs because of limited knowledge of SMEs on applicable law and limited control measures.
- SMEs often have limited awareness of their actual environmental impact and existing options to make the company's activities more sustainable. In a typical SME of 10 to 15 employees the actual innovation capacity and know-how is often limited to one or a few key persons.
- Because of limited capacity and time to acquire information on available innovations (including from neighbouring industry sectors), SMEs are insufficiently informed about potential benefits and opportunities of innovations, be it in-house measures for improvement of production processes or new equipment. Associated risks of investment are sometimes overestimated by SMEs.
- "Innovation" often remains an abstract term for SMEs. R&D organisations often speak a different language than SMEs and they are hardly linked to each other.
- Investments in sustainable innovations are sometimes limited by perceived long-term payback periods which are beyond the scope of the short-term financial planning of typical SMEs.
- Limited access to finance and information and risk aversion may result in SMEs being innovation followers behind the large enterprises (but with clear differences between industry sectors, in some sectors SMEs are the innovation forerunners).

- The barriers on the demand side also affect the suppliers of sustainable innovations by limiting their accessible market potential. Specific additional barriers for SMEs that want to supply sustainable innovations to the market are:
- SMEs willing to introduce innovations to the market are often lacking venture capital to support demonstration and up-scaling to industrial scale, marketing and market penetration.
- Access to markets is sometimes hindered by insufficient information about the demand side, regulatory and administrative burdens and misleading incentives (e.g. tax relief for heavy polluting industries).
- SMEs developing innovative solutions are sometimes facing Intellectual Property Rights (IPR) issues because it is too expensive or complicated to sufficiently protect their own know-how against potential competitors and across countries.
- National market size is limited in some smaller BSR countries. SMEs from these countries have to concentrate on export and transnational cooperation.

There are of course differences between SMEs of different size (micro vs. medium enterprises) meaning that micro enterprises are usually stronger affected by barriers such as limited capacity, time, competence and finances. Of course there are also differences when it comes to SMEs from different industry sectors or different countries (traditional vs. new economy sectors, R&D&I performance, specific market conditions). SPIN has focussed on the most important barriers and incentives which have been observed across most of the sectors and BSR countries. The SPIN Strategic Actions presented in this paper aim to improve the framework conditions to reduce barriers for SMEs and set incentives to apply innovations for sustainable production.

Attitudes of European entrepreneurs towards eco-innovation: Increasing need and willingness of SMEs to eco-innovate

A study issued by the European Commission in 2011 showed that European SMEs claim to be willing to increase their eco-innovation activities but still observe several barriers. Objective of the survey was to investigate the behaviour, attitudes and expectations of entrepreneurs towards the development and uptake of eco-innovation as a response to rising prices of resources and resource scarcity. A total of 5222 managers of SMEs of different sectors in all 27 EU Member States were interviewed by telephone.

Already today material constitutes the biggest cost share for SMEs in the production sector. Almost 90 % of all interviewed SMEs expect a further increase of material cost in future. Therefore, three out of four SMEs have implemented changes to reduce material cost in the past five years.

There are still barriers to eco-innovation in SMEs although some differences between BSR countries exist. Most relevant barriers for SMEs are related to financing and market constraints (demand side, return on investments, payback period, internal and external funds, and access to subsidies). Barriers related to limited competence, information and networks are second priority.

The most important drivers towards eco-innovation are energy and material prices. Also market expectations, business partners and capabilities are relevant drivers for eco-innovations in SMEs. Regulation is another driver, particularly if it influences prices and market conditions for SMEs.

Full text of the study available at: http://ec.europa.eu/public_opinion/flash/fl_315_en.pdf

» How to improve the framework conditions for sustainable innovations in SMEs

A. Increasing awareness and competences of SMEs

1. Help SMEs to help themselves: Promotion of tools for integration of sustainability in SMEs' operations

What are the challenges?

Even though a variety of tools exist to support enterprises in implementing sustainability aspects, still SMEs are either not aware of these tools or have problems to apply and implement these tools.

What needs to be done?

Instruments should be further developed and promoted which help SMEs to include sustainability in their daily operations and to introduce sustainable innovations, e.g. new processes, new business models or product-service systems. These instruments include:

- **Integrated Management Systems (IMS):** Although many SME already have implemented Environmental Management Systems as they are suppliers to bigger companies demanding this, there is still a need for support of implementing environmental management systems. Enterprises often use a "certificate-driven approach" and in this case the impact of the management systems on actual performance and development of sustainable innovations is very limited. Authorities, standardization bodies and associations have to support development, acceptance and application of integrated management systems (incl. environment) in SMEs by fitting them to their needs and by communicating and utilizing the benefits. Promotion could be achieved through administrative benefits and easier access to financing for certified SMEs.
- **Corporate Social Responsibility (CSR):** In many countries corporate social responsibility is still at an infancy stage. Missing CSR knowledge and practical skills are often the crucial points not to engage more into business responsibility. Corporate social responsibility (CSR) and sustainable consumption and production are concepts that are closely linked. However, in CSR social aspects (such as fair treatment of employees and community contribution) are emphasised and reporting activities have a central role. The ISO 26000 standard on social responsibility defines key social responsibility areas to be considered, including environmental protection. Thus in order to improve reporting and communication to the wider public, support for SMEs on how to integrate CSR

concepts is needed. Online tools and other initiatives are in development, which need to be widely spread. Also the exchange of experience between SMEs themselves through best practice examples should be encouraged.

- **Other tools helping SMEs to develop and implement eco-innovation:** The tools to be promoted should be successful, transferable (to other countries) and cover different categories. Examples of tools helping SMEs to implement sustainable innovations are tools for the identification of potentials, for planning of innovation processes, for product and process optimisation. Action is needed to bundle the already existing tools, to make the tools accessible (free of charge and in national language) to SMEs and to make SMEs aware of these tools.

It is also important to provide assistance, e.g. by branch organisations or national contact points, in choosing those tools that really work for an SME in a certain context and branch.

Working examples

The **InnoTrain CSR project** - funded by the Leonardo da Vinci Programme of the European Union - provides material on Corporate Social Responsibility for vocational education and training.
<http://www.csr-training.eu>

In order to facilitate the process towards EMAS-registration and to facilitate maintenance of EMAS registration for SMEs, **EMAS easy**, a lean and standardized methodology has been developed. This methodology covers all requirements of the environmental management standards for EMAS and/or ISO 14001. Its simplicity to use is advertised as doing it "in 10 days, with 10 people, on 10 pages, in 30 steps".
http://ec.europa.eu/environment/emas/tools/emaseasy_en.htm

The **SPIN toolbox** is a transnational database of successful tools which help SMEs in implementing sustainable innovations. It includes tools for identifying improvement potential, for calculating investments and payback of innovations and for organising innovation processes in SMEs.
<http://spin-project.eu>

2. Train the disseminators and train the SMEs: Multiply competence for implementation of sustainable innovations

What are the challenges?

An important barrier for business between sustainable technology suppliers and other industries is lack of information and knowledge about the latest developments and potential of these technologies, awareness of possibilities and costs and capacity for adoption.

What needs to be done?

Training activities are a key success factor for capacity building in the area of sustainable innovations. But it should be noted that the success of training is highly dependent on context and very different in different economic sectors and target groups. Precondition is the identification of existing training needs, e.g. through a sustainability audit to identify the training needs of SMEs. Training is more suitable on regional or national level as it is important to address SMEs in their mother tongue and to have knowledge of the local context. As SMEs usually have strong connections with local communities, the trainings should be carried out by organisations operating closely to them, at local level. Business associations, SME support organisations and education institutions would be capable to carry out these trainings and act as disseminators. Specific workshop formats could be offered for a transnational audience (similar to SPIN industry workshops). Different formats of training exist, from short-term (up to 2 days) training programmes to raise awareness and promote development and implementation of sustainable innovations to long-term (6-12 months) training programmes parallel to the job combining theoretical training and practical work on innovation projects.

The following training instruments are of high priority:

- **"Train the disseminator"**: A regular qualification of disseminators – like consultants, associations, trainers, craftsmen, retailers – on sustainable innovative solutions is essential (e.g. craftsmen should be aware of eco-innovative technologies for cooling/refrigeration which they could install in SMEs requesting new cooling technology).
- **"Sustainable Innovation Workshops"**: Focused workshops for specific SME audience (e.g. SMEs from a certain sector) to promote information exchange and disseminate information on sustainable innovations in business context are a suitable instrument. The more precise the topic, the more relevant to a certain group of SMEs.

- **"Commercial Competence Training"**: Trainings/workshops to improve suppliers' competence in commercialisation of their sustainable innovations (e.g. creating awareness, marketing, networking with business consultants, using support schemes).

Working examples

The Swedish **ALMI business counselling and Entrepreneur Stockholm** provide both environmental and ordinary business counselling which is funded by ALMI and Stockholm County Board.

<http://www.almi.se/ifs-radgivning/radgivning/Sprak/Engelska>

The Swedish **TVV programme Environmental Driven Markets** has a specific target on commercial competence issues.

<http://www.tillvaxtverket.se>

Clean Business Clubs (16 of them are currently running, bringing together 500 SMEs from all over Poland) ensure access to information on environment protection through the Ecological Information Centre, consultancy with regard to environment protection issues, ecological audits of companies, assistance for a company in establishing its environmental policy, the possibility of participation in seminars and workshops, subscription to the monthly bulletin issued by the Programme (the "Clean Business Bulletin"), and the possibility of participating in partner projects and the company network of the Clean Business Programme.

<http://czystybiznes.pl/en/clean-business-clubs>

In Germany, the **„VDI-Zentrum Ressourcen Effizienz und Klimaschutz"** offers a dedicated **training programme on resource efficiency** for energy-efficiency consultants to qualify them for supporting SMEs in increasing their resource efficiency as well. These qualified resource efficiency consultants are important disseminators to multiply knowledge and bring it targeted into the SMEs.

<http://www.kmu-re-berater.de>

3. Information and innovation services for SMEs: Linking SMEs with external competences

What are the challenges?

Lack of time is often one of the most important obstacles for increasing competence and implementation of new solutions in SMEs. Because of limited own capacity, competence and time SMEs often lack direct access to information and consultancy on innovations, funding programmes etc.

What needs to be done?

With support for external expertise, knowledge transfer for increased competence can be achieved and implementation of innovations facilitated. Improved SMEs' access to external know-how and capacity on sustainable innovations is needed. This includes networking and collaboration with R&D experts, consultants and other SMEs, also across countries to support transnational cooperation.

- **National Contact point/ Regional advisory centers:** Close-to-SME network links which are usual contact points of SMEs (e.g. industry associations, SME support services, Chambers of Commerce) can provide convenient information and consultancy on relevant legislation, innovations, funding programmes etc. directly to the SMEs in a concrete, down-to-earth manner that makes sense to SMEs. This supports credibility and wide dissemination of information and will reach more SMEs than information and funding sources which are scattered and difficult to access. Depending on country size and needs either one national contact point or several advisory centres for different regions can be established based on existing structures. The implementation is preferred to be on a national/regional scale, but the contact points should establish links to national/regional contact points in other BSR countries, e.g. to Enterprise Europe Network and ECAP and focus on sustainable innovations. These centres provide advice to SMEs with concrete eco-innovation ideas (e.g. arrange contacts to business consultants and link to innovation voucher schemes). An international expert database can be used for offering consultancy for SMEs through the centres.

- **Innovation assistants:** Another option is to support SMEs in hiring innovation assistants, i.e. young professionals or university graduates for R&D&I tasks. Innovation assistant programmes should be (further) developed to ensure public co-financing of personnel costs for SMEs. These programmes could be open for applicants from the BSR to support transnational cooperation.

- **Transnational collaborative network:** Existing or new collaborative networks are an instrument to promote sustainable innovations as a focus topic, to network SMEs with external expertise, to create R&D and SME partnership and support Industrial Symbiosis concepts. Especially open innovation networks are very suitable to link SME clusters and to create industrial transformation across industries and along value chains, thus leading to joint innovation in networks of proactive SMEs. Existing networks (e.g. the Baltic 21 Institute or SPIN) can act as a nucleus to facilitate transnational networking between national networks.

Working examples

Enterprise Estonia regional offices, the county development centres, are organisations located in each county providing free-of-charge consultation service on all measures of Enterprise Estonia, other institutions' financing projects, structural funds, Interreg and private consultants. Enterprise Estonia also has a mentor program for SMEs. The mentors support young entrepreneurs.

<http://www.eas.ee/index.php?setlang=en-GB>

The German **Network Resource Efficiency** intends to bundle know-how and experience regarding resource efficient production, products and management. It provides possibilities for mutual exchange of information on innovative solutions.

<http://www.netzwerk-ressourceneffizienz.de> (in German)

The objective of the **Green Business Parks** project, operated by the Polish Environmental Partnership Foundation, is to improve attractiveness of industrial areas for both existing companies and new inward investors. The motivation is to stimulate economic development by revitalizing a specific site and providing new jobs. Green Business Parks offer additional elements, including fostering cooperation among companies located on a specific site and joint implementation of environmental improvement activities, which reduce environmental impacts and reduce operational costs of companies located on the site.

<http://czystybiznes.pl/en/green-business-parks>

The **Enterprise Europe Network (EEN)** helps small businesses to make the most of the European marketplace. Working through local business organisations, it supports SMEs in developing their business into new markets, sourcing or licensing new technologies as well as accessing finance and funding. Its services include support for technology transfer, access to finance and research funding, advice on EU law and standards and intellectual property and patents issues.

http://www.enterprise-europe-network.ec.europa.eu/index_en.htm

4. Demonstration and dissemination of best practice projects: Tell the success story of sustainable innovation

What are the challenges?

Several awards for (environmental) innovation as well as good reference projects of sustainable innovations are existing in the BSR. But SMEs still have limited awareness of existing innovative options to make the company's activities more sustainable.

What needs to be done?

Therefore it is important to put a stronger focus on sustainable innovations and to sensibilise industry and public for sustainable innovations. This could be done by pulling best practice examples into the spotlight and thus showing the potential of sustainable innovations and proving their benefits. The BSR region could be promoted as an excellence region for innovation and transnational cooperation for sustainability. The following demonstration and dissemination actions are of high priority:

- **Demonstration projects / reference plants:** The aim is to make reference projects accessible for visitors (also from abroad) in order to show the economic and environmental benefits. Several demonstration projects/plants exist in the BSR and should be collected, e.g. examples from the LIFE+ programme. The establishment and advertisement of a common transnational portal by the national contact points and the documentation of reference projects in a transnational technology database would significantly improve the visibility, cross-border dissemination and long-lasting impact of best practices. Connections to multipliers like branch organisations should be made. Visits to demonstration projects/plants should be part of training programmes. Funding for demonstration projects has been identified as a limiting factor, thus funding for a critical mass of demonstration projects / reference projects has to be provided.
- **"SME Sustainable Innovation Award":** Awards and prizes can act as catalysts for implementing new technologies. If they are specifically granted for sustainable innovation highlights or sustainable enterprises, the impact towards a better understanding of the need to produce on a "greener base" is high. A yearly competition for SMEs could be a suitable instrument to highlight and promote outstanding sustainable innovations. The excellent performance primarily should serve as best practice for other enterprises. The advantages should be so convincing that it motivates other SME to follow the good example. Therefore, the exemplary character and the potential for multiplication should constitute an important aspect during selection of the award winner. In some countries national environmental awards already exist, the additional benefit of the "SME Sustainable Innovation Award" is the transnational scope i.e. either focus on transnational cooperation projects in the BSR or be open for applicants from the BSR. BSR-wide organisations like e.g. the Baltic Development Forum could possibly be an appropriate organiser.
- **"Year of Eco-Innovation":** This would be a unique year for promoting eco-innovation awareness, exchanging ideas and launching projects within the BSR. The "Year of Eco-Innovation" would include eco-innovation-related training events, conferences, competitions, open days etc. In order to increase the impact, a joint initiative of the BSR national governments and appropriate business associations is needed.

Working examples

The **German material efficiency prize** is awarded by the German Federal Ministry of Economics and Technology to enterprises that are exemplars in increasing their own material efficiency or those of their customers. The competition is open to all SMEs that have implemented innovations which clearly demonstrate reduced and profitable material use and re-use.

<http://www.demea.de/was-ist-materialeffizienz/materialeffizienzpreis>

With a view to solutions facilitating reduction in greenhouse gas emissions being promoted, the **"Polish Product of the Future"** Competition organised from 1997 by PARP (with the honorary patronage of the Prime Minister) has since 2008 offered the **Special "eCO₂ Innovation" Award** of the Minister of Economy for the product showing the greatest potential for reducing greenhouse gas emissions.

http://www.pi.gov.pl/eng/chapter_86537.asp

The **European Award for Environment and Corporate Sustainability** considers business operations in a social, cultural, economic and environmental context. Winning models look beyond the legislative requirements and endeavour to improve a company's green credentials through innovation and moral modernisation. This award celebrates businesses that have conscientiously implemented and evolved these practices.

<http://www.businessawardseurope.com/categories>

The **Estonian Year of Innovation 2009** project was launched by the Estonian Ministry of Economic Affairs and Communication on the basis of the Innovation Awareness Programme developed by Enterprise Estonia.

<http://www.in.ee/en>

The **SPIN Innovation database** collects sustainable innovations from the whole BSR and as such it is a ready-to-use instrument for SMEs wanting to push their innovative products and for enterprises seeking an innovative solution for their specific situation.

<http://spin-project.eu>

5. Sustainability from the start: Integrate sustainability in secondary and higher education

What are the challenges?

Sustainability issues are not sufficiently covered in secondary and higher education. Often SME have a shortage of specialised staff to cope with new developments and innovations, thus well-educated experts and opportunities to acquire additional know-how are needed.

What needs to be done?

Since today's students are tomorrow's entrepreneurs the role of education and good examples is crucial. Moreover beginning awareness rising on the job is too late thus sustainability issues have to be integrated already in secondary and higher education:

- **High school/secondary education courses:** Start including sustainability issues and eco-innovation topics in high schools as this may impact students where and what they want to do after graduating. Sustainability issues could be an integrated horizontal aspect of other subjects.
- **Higher education for sustainable entrepreneurship in engineering and business management (MBA) education programmes:** Including issues of sustainability, innovative environmental techniques and ways to run a successful business into the curriculum of students is an important step to take. Action is mainly needed by universities, but also student exchange services could help to support transnational mobility of students and build early career contacts within BSR.

Working examples

The **Estonian School of Technology**, an initiative of the Tallinn University of Technology organises camps and workshops on environmental and technical subjects for high school, vocational school and younger students as well as their teachers. <http://www.ttu.ee/en>

With **REN Week** the Danish Ministry of Environment puts a focus on how waste is treated and how waste can be prevented. The goal is that students learn what the consequences are if waste is littered in nature or sorted incorrectly. Thus, they become aware of how much waste they produce themselves. REN Week is organised to be included in the course of the three grade levels. <http://www.renuge.dk> (in Danish)

B. Access to finance for sustainable innovations

6. Financial support to initiate innovation processes in SMEs: Sustainable transnational innovation vouchers

What are the challenges?

SMEs have limited capacity and are often missing systematic structures to develop ideas for sustainable innovations. They are often lacking time and qualified personnel to thoroughly analyze their production processes and identify improvement potentials. Financial support for getting assistance from external expertise would be a good starting point to develop ideas and initiate innovation processes within SMEs.

What needs to be done?

Public support schemes for small-scale cooperation projects in early innovation phases help to initiate innovation processes in SMEs. Usually these schemes reimburse a fixed share of SME's cost for hiring external consultancy (e.g. from research institutes, business consultants) to identify innovation potential within the operations and processes of the SME. Some of these innovation voucher schemes already exist in BSR countries. They promote co-operation between business and research and build up capacity in SMEs. The vouchers can be easily administered and they are quite popular among SMEs.

Existing national innovation voucher systems should be further developed to support sustainable innovations and transnational collaboration within the BSR.

- **Proven sustainability criteria should be included** in the innovation voucher schemes (and other funding schemes) to emphasize sustainable innovations. Sustainability criteria could be either a pre-requisite for funding or used as a bonus to get additional funding. Relevant criteria for accepting sustainable innovations could be e.g. a certain reduction of energy or material consumption by x %, a justified improvement of working conditions or health and safety issues within the company.

- The schemes should be **open for cooperation with consultants or R&D institutes from other countries of the BSR**. This would support transnational cooperation within the BSR and would accelerate access to new knowledge and innovations especially in the smaller countries. Baltech – The virtual Baltic Sea University of Science and Technology – could e.g. catalyze the transnational co-operation of SMEs with technical universities from BSR countries.

The future of today's "innovation vouchers" should be "sustainable transnational innovation vouchers". Criteria and funding conditions in innovation voucher schemes should be harmonized between BSR countries to enable easier access for SMEs operating in different countries.

Working examples

There is already a transnational innovation voucher system in place in Central Europe but without focus on sustainable innovations. The **Centrope_tt_voucher** for technology transfer and innovation support in the bordering regions of Austria, Czech Republic, Hungary and Slovakia is designed to help SME to purchase the R&D provider's expertise within the CENTROPE region to support the innovation of products and processes. SME can apply for the centrope_tt voucher in the value of 5000 EUR per service. National contact points are offered in each of the participating countries which also assist in establishing contact with transnational R&D providers. <http://www.centrope-tt.info/innovation-voucher-systems-in-centrope-en>

In Sweden, a **product development program for SMEs** was implemented which comprises both goods and services. External consultants are paid half the sum for the development and the company pay the other half. Due to this incentive, in 2010 almost two third of the granted SMEs reported an environmentally oriented product development. Incubators can get grants as well. <http://www.chalmers.se/tme/EN/organization/divisions/operations-management/research-project/incubators-in-sweden>

7. Improve SMEs' access to private capital for sustainable innovations: Public support for private investments

What are the challenges?

Since most SMEs lack own financial resources for investments in sustainable innovations they depend on private capital from external sources. However, many private capital sources are difficult to access for innovative SMEs, particularly in early stages. There are also severe financing gaps between public support schemes and private capital which make it hard for SMEs to bring innovations from the lab to the market.

What needs to be done?

Public money for SME support programmes and private capital should be better coordinated

- to close financing gaps along the innovation chain (e.g. for SMEs developing sustainable innovations it is difficult to finance the step from public supported R&D to developing a commercial scale demonstrator as a first market reference because it is too close to market for most public support programmes but still too risky for most private investors)
- to set public incentives for triggering private money to SMEs (e.g. public-private risk sharing which reduces risks for private investments that would not be taken otherwise)
- to better fit financial instruments to the needs of SMEs (e.g. small-scale bank loans that would meet SME needs but are often not profitable for private banks)

Effective use of public money should be combined with different sources of private capital to make them better accessible for SMEs supplying or applying sustainable innovations. This would also contribute to the strategic action mentioned in the EU BSR strategy to "secure access to capital for SMEs". The following capital sources could be addressed:

- **SMEs' own capital:** motivating tax systems to stimulate SMEs to invest in own R&D&I activities (e.g. lower tax rate for innovative SMEs or tax-free innovation investments – if appropriate within the given national tax system and regulations)

- **Venture capital funds (VC), business angels (BA) and other private risk capital:** public incentives for private investors in the form of e.g. public-private risk sharing, public guarantees, lower interest rates, grace periods, subordinate loans, tax reduction for investors; in smaller BSR countries with limited VC market, public support schemes for SMEs to access European or global VC markets are needed or transnational VC markets in BSR could be developed

- **Revolving funds:** public support for set-up of revolving funds to finance sustainable innovation projects in SMEs which generate income from the projects financed through the fund and could leverage public funds in contrast to grants

- **Bank loans:** improve information basis and risk management for private bank loans (risks in emerging eco-innovation sectors are difficult to assess for banks); offer small scale bank loans tailored to SME needs (public guarantee schemes needed if not profitable for private banks); improve risk management within SMEs to make bank loans acceptable

Private investors and investment companies can play an important role to channel investments to companies which are sustainability leaders. Special stock exchange indices and investment strategies focusing on sustainability performance should be further developed for sustainable investment strategies.

Working examples

The revolving facility to finance cleaner production investments established by the Nordic Environment Finance Corporation (NEFCO) in 1998 was one of the most effective mechanisms to promote development and implementation of sustainable innovations in Lithuania. Financing was provided till 2009. The main objective of this facility was to provide soft loans for the implementation of high-priority investments with rapid payback that yield environmental and economical benefits ("win-win projects").

The **Finnish Vigo Programme** is an acceleration programme designed to bridge the gap between early stage technology firms and international venture funding; backbone of the programme is formed by the Vigo Accelerators, selected independent companies which invest in startups as co-entrepreneurs.
<http://www.vigo.fi/frontpage>

The German **High-Tech Gründerfonds (HTG)** finances young technology companies with attractive investment terms and provides support with its strong network as well as entrepreneurial knowledge and expertise. HTG is the right partner for innovative business when seeking Venture Capital to turn an innovation into a real business opportunity.
<http://www.en.high-tech-gruenderfonds.de>

The **SME Guarantee Facility** is part of the European Commission's Growth & Employment Initiative and is aimed to increase the availability of loans to small or newly established firms through risk sharing with national guarantee schemes, mutual guarantee schemes and other appropriate institutions, including the European Investment Bank (EIB). The size of the guarantees will be set contractually and could amount to 5-10 % of the original face value of the underlying loans. The SME Guarantee Facility is managed on behalf of the European Commission by the European Investment Fund.
<http://cordis.europa.eu/finance/src/sme.htm>

In 2009 the Warsaw Stock Exchange launched Poland's first index of socially-responsible companies. This is the *Respect Index*, where the name represents an acronym of words that reflect the essence of CSR, i.e. *Responsibility, Ecology, Sustainability, Participation, Environment, Community and Transparency*. The primary aim of the initiative is to raise investors' interest in companies demonstrating exceptional involvement in CSR initiatives. The companies included in the Index are analysed according to the definition of social responsibility, whereby it is a management strategy and philosophy of doing business. In assessing the enterprises, the share prices and income from dividends and rights issues are utilised. Currently the Index is performing in line with expectations, i.e. is more stable and less volatile than other indices, at the same time ensuring a profitable rate of return.
<http://www.respectindex.pl>

8. Improve SMEs' access to public support schemes: Clear information, transparent structures, slim and quick procedures

What are the challenges?

There are a number of public support schemes in all BSR countries which provide financial support for SMEs supplying or applying sustainable innovations. However, it is very difficult for SMEs to get an overview in the "funding jungle" and get to know the right support scheme which fits to a specific innovation project. Even if support schemes are known to SMEs they often refrain from participation because they are considered too complicated to access.

What needs to be done?

It is very difficult for SME to get an overview on existing national and EU initiatives which support eco-innovation or sustainable production. Few information platforms exist (e.g. www.proinno-europe.eu) but they could be improved to make information easier accessible. Central contact points on national or regional level are convenient and competent information providers for SMEs when it comes to finding the right support scheme. These SME contact points should be established in all BSR countries – if not yet existing.

Some of the EU funding programmes are implemented through national institutions (e.g. CIP EU backed bank loans). But these national access points are not yet available in every BSR country (e.g. missing in Lithuania, Estonia, Sweden, Finland and Denmark – see contact points at <http://www.access2finance.eu>). They should be established to make better use of these EU programmes in the BSR.

SME access to existing public support programmes should be improved by making application, decision and monitoring procedures

- **easy** (low administration efforts, understandable information, easy-to-use application tools, simple reporting)
- **quick** (fast track from project idea to approval and implementation)
- **transparent** (e.g. on funding criteria and expected success rate)

Public authorities and financing institutions should check their support programmes against these criteria and improve their accessibility for SMEs as far as possible. The dependency of national procedures for implementation of funding programmes on European regulation needs to be taken into account.

Working examples

The Federal **"Research and Innovation" Funding Advisory Service** is the central point of contact for any questions concerning research and innovation funding. Via this service potential applicants get information about the federal research structure, funding programmes and the persons to contact as well as about current funding priorities and initiatives.
<http://www.foerderinfo.bund.de/en/index.php>

The initiative **"no wrong door"** from Swedish innovation financing agency Vinnova supports quick access for SMEs to funding schemes. No matter where a company takes its first contact they should get good information about the funding opportunities offered in Sweden and within the EU.

C. Support market transformation and the uptake of sustainable innovations

9. Legislation to push SMEs towards sustainable production: Implementing a targeted, stable and reliable legal framework

What are the challenges?

Legal regulations are specific for every country since the regional conditions might differ. EU regulation affects national legislation and should be implemented coherently. Legislation was found to be a strong incentive for SMEs to change towards more sustainability. Policies and targets exist in all countries, but often no penalty mechanisms are implemented for failure in achieving the targets, enforcement of legislation is sometimes insufficient.

What needs to be done?

In order to adapt to new legal framework conditions, SMEs are forced to invest. Their driving force is to avoid penalties as well as accessing new customers and clients. Hence, legislation can be a powerful instrument towards a more sustainable production in SMEs. The challenge is not to order a top-down regulation, but to make SMEs understand the rationale behind a new framework.

The legislative framework should provide low-barrier information to SMEs and implement effective control mechanisms to enforce the law. Implementation, enforcement and monitoring of legislation which supports innovations for sustainable production should

- set effective and demanding environmental standards (e.g. regarding emissions, energy consumption etc.) or effective market incentives to introduce sustainable innovations (e.g. certificates, taxes, tariffs)
- include the requirement of applying best available technology when issuing environmental permits
- keep legislative standards up-to-date with current and anticipated state-of-the-art technologies (to keep momentum of the legal incentive)
- be stable and predictable by setting a reliable time frame for implementation and early communication of future tightening of the standards
- be effectively communicated together with its implications to SMEs

SMEs can cope with new legal demands the better the more transparent and reliable the framework is. Such an approach implicates early and comprising public relations. This should be in strong collaboration of public authorities with industry associations and regional organisations to make information as clear and transparent as possible. Support actions like training sessions or additional information material might be considered as well as a public campaigning to raise awareness if new legal and regulatory measures could have a deep impact on SMEs.

Working examples

In Germany, the **EnEV directive on energy performance** of buildings is regularly updated every 3 years to increase performance standards. These increasing performance standards are predictable for SMEs in the building sector and thus become part of their product development and marketing strategy.
<http://www.enev-online.de> (in German)

In Sweden, TVV operates "Verksamt" an **internet portal** for information to SME, implemented in cooperation between the national Swedish Tax Agency and the national Swedish Registration Company Office/Bolagsverket.
<http://www.verksamt.se> (in Swedish)

In Germany, the Hessen region has set up an internet portal for efficient communication of existing and upcoming legislation and their implications to SMEs: Innovationsradar Hessen <http://www.itb-hessen.de/itb/innovationsradar>

The **European Small Business Portal** gathers together all the information provided by the EU on and for SMEs, ranging from practical advice to policy issues, from local contact points to networking links. It collects and provides all support actions and facilities of the EU to boost small businesses in Europe and on the global market
http://ec.europa.eu/small-business/index_en.htm

10. Supply Chain Management: Increase transnational business communication and cooperation for sustainable production

What are the challenges?

An increasing number of sectors have cross-border value chains which consequently gives rise to transnational effects. An efficient management of the supply chain is thus crucial to improve the sustainability performance of the end product and its producer. The challenge is to extend own sustainability standards along the supply chain.

What needs to be done?

In the concept of Supply Chain Management (SCM) the individual company extend its own sustainability standards to its suppliers and customers. On a global level SCM can support the transformation across whole industry sectors. Better communication along supply chains is a first step, e.g. to define product requirements jointly and reduce efforts for handling and further processing down the value chain. Cooperation along supply chains including joint management of resources and production planning can realize potentials for improvement which a single SME could not realize alone.

To this end, cooperation along supply chains has to be fostered. One instrument is to set requirements to support sustainable innovations at suppliers. Business network services can help to implement these new approaches within their client group.

There are a number of examples of large supply chains including many SMEs on different production steps, e.g. in automotive industry. Dialogue within supply chains is important, e.g. when supplying SMEs have innovative ideas that

should be accepted by the large customer setting demands. SCM could be an instrument to include many SMEs in sustainable innovation activities by

- promoting the life cycle approach
- raising awareness for complex interactions in supply chains
- fostering the cooperation along supply chains
- improving information flow and joint planning and management of resources along supply chains

Working examples

The **Danish Environmental Protection Agency** has published a practical guide for companies on how to implement **Environmental Supply Chain Management**. Companies with different level of experience and ambition are addressed separately: Beginners, Improvers, Achievers. A short introduction of available tools is included as well.

<http://www.mst.dk/English>

Increasing demand of customers for **organic food** has led to establishment of a number of labels on European and national level for organic food. Behind the labelling schemes there are criteria which affect the whole supply chain from the farmer to the food producer, e.g. for meat products there are criteria on the feed used for the animals and even on chemical use for growing the crops. Through Supply Chain Management the customer requirements and label criteria are managed along the whole food supply chain for organic food.

11. Integration of retailers and end-users: Initiatives to support private sustainable consumption

What are the challenges?

User-driven innovation is an instrument to involve the end-user as the final client in the innovation process. Making private consumption a driver towards sustainability would therefore be a solution to increase the sustainable innovation performance of SMEs. Hence, the challenge is to support retailers and customers in requesting sustainable products and processes and to integrate them in the innovation environment.

What needs to be done?

An important first step is to raise **consumers' awareness towards sustainability** as an issue as well as to increase the understanding of the role of the clients and customers as a part of the value chain. Customers should be aware of their role and motivated to increase demand for sustainable products. SMEs themselves are relevant customers to purchase sustainable innovations but also private persons. This should increase the development of sustainable innovations in SMEs, since they will try to meet the requests of the customers. Consumer campaigns organised by branch organisations or public services are one possible way to increase their awareness.

Initiatives aimed at the **retail sector** should be developed to raise the awareness of the retail sector about their role in creating demand for sustainable innovations. Retailers have a significant role as gatekeepers between producers and consumers. Being in direct contact with consumers, they have influence on what products consumers want to buy, and how they use and dispose them. On the other hand, they reach out to suppliers worldwide. If retailer initiatives join forces for a certain sector (e.g. retailers of electrical household appliances) they have a strong pull on producers' willingness to innovate for more sustainable products. Retailers' voluntary sustainability commitments are a possible way, e.g. for making sustainable products better available, phasing out less environmentally friendly products etc.

Development of a **communication platform for sustainable consumption** could mobilize the private demand from SMEs being customers but also from private persons: proactive communication about sustainability is known as being a motor for business development. Here, not only individual persons but also SMEs in demand of sustainable innovations can be attracted as potential clients. Such a platform could be linked on European or transnational basis covering the BSR.

Working examples

In the close-to-border regions of Germany and Denmark (Schleswig-Holstein and Southern Denmark) **user-driven innovation centres** exist which support transnational cooperation and strengthen the expertise in user-driven innovation. The individual end-user may join in with innovative ideas.
<http://www.userdriveninnovation.eu>

The **Danish Forum on Sustainable Purchasing** is an initiative under the Ministry of Environment to gather and disseminate tools, experience and guidance in sustainable procurement for all stakeholders - across industries and sectors. The forum should support networking and exchange of information between companies on sustainable purchasing.
<http://www.gronindkobsportal.dk>

Germany offers a **sustainable retail initiative**. The platform provides guidance towards sustainable consumption for individuals.
<http://www.nachhaltig-einkaufen.de>

12. Standards, norms and labelling to support transnational cooperation: Promotion of harmonized market conditions

What are the challenges?

Standards and norms provide orientation and guidance for SMEs as well as for their clients. They give long-term security and a stable framework. Via technology standards and norms SMEs get easier access to markets within the BSR and beyond. Labels and certificates are the vehicle as well as the external indication of implementing these standards. The challenge is to create and use a system of standards and norms which is transparent to SMEs and supports explicitly sustainability.

What needs to be done?

Setting effective environmental standards or joint standards through European bodies can ease market access of innovative SMEs. Standards need to be transparent and demanding to avoid adverse effects on innovation activities. Standards should be developed in different target fields (e.g. regarding emissions, energy use, environmental technology standards etc.). Means could be certificates or labels used as an incentive depending on performance.

Promotion of transparent labelling and certification is an efficient instrument to increase credibility and customer trust in innovative technologies. Intense public relations will help to increase understanding amongst the target group SMEs, their clients and end-users.

The following steps have to be taken

- defining target fields for harmonized standards in the EU and internationally (potential markets with added value from transnational cooperation)
- setting harmonized standards to enable easier market access within BSR and EU and support export beyond Europe
- promoting labelling and certification to increase credibility and customer trust in innovative technologies (e.g. Environmental Product Declarations)

Actions of standardisation bodies and labelling initiatives should be coordinated to avoid creating confusion with too many new labels in the market. Harmonization of standards between BSR countries still has to take into account particular market differences between these countries in some cases. Standards should minimize administrative burdens

for SMEs. There is also the risk associated with harmonization that it could lower e.g. the environmental standard to the least acceptable for all countries. This would counteract efforts of countries which are forerunners in setting and implementing environmental standards. Not up-to date standards can also have log-in effects, preventing more efficient and environmental friendly innovations from accessing markets. These potential drawbacks have to be taken into account.

Working examples

The **EU Ecolabel** has been established as a well-known label for clients and consumers to guide them towards more sustainable products and services offered by and to SMEs.
<http://www.ecolabel.eu>

The **ISO standards 14000 et seq.** on environmental management systems, life cycle assessment and environmental product declarations (EPD) form a solid basis for improving and communicating the environmental performance of processes and products. Application of these standards in SMEs should be further developed and supported.

The **Nordic Eco-label** was established in 1989 by the Nordic Council of Ministers, and is locally implemented by the governments of Sweden, Norway, Iceland, Denmark and Finland. It is the official eco-label in the Nordic countries. Today it is the world's leading eco-label with over 3000 products and services in a total of 66 product areas. This Scandinavian official environmental label for eco-products enables consumers to select products that are the least harmful to the environment.
<http://www.nordic-ecolabel.org>

The German internet portal **label-online.de** guides individuals through the "label jungle" by providing consumers, companies and stakeholders with expert information and evaluations of more than 400 eco-labels, CSR codes and selected management standards and certification systems. Its mission is to provide consumers with in-depth transparent information about labels and underlying standards in order to enable them to make informed choices.
<http://www.label-online.de>

13. Sustainable Public Innovation Procurement: Public sector taking the lead in implementing sustainable innovations

What are the challenges?

Public procurement could be a major driver for helping sustainable innovations to penetrate the market. However, sustainability criteria in public procurement are often used as secondary or voluntary decision criteria – if at all. Public procurement is usually characterized by strong risk averseness, preventing procurement of innovative solutions which are not yet standard technology. Thus, the potential of public procurement of sustainable innovative solutions is not yet sufficiently used.

What needs to be done?

The concept of Green Public Procurement should be extended to include sustainability criteria (i.e. environmental and social criteria and life cycle cost) and to favour innovative solutions which go beyond current state-of- technology. Because of the strong role of the public sector within the BSR economies, this would be an important measure for stimulating the demand side and for creation of new markets for sustainable innovations. Positive spill-over effects on private procurement are also expected if private customers accept the same procurement standards.

The potential of "Sustainable Public Innovation Procurement" should be better exploited by

- **setting sustainability criteria** in public procurement in defined application areas (first to be introduced in areas where the impact or the potential for eco-innovation in terms of new products and services is the largest to avoid market shocks);
- **awareness raising, information and training for public sector employees** to enable them to select and successfully apply sustainability criteria in procurement
- supporting pre-commercial procurement (PCP) of innovative solutions (serving as first reference projects for supplying SMEs) by **addressing risk averseness of public procurement** to make higher risk innovative solutions acceptable (e.g. through guarantees or financial incentives from national or EU level) – the Small Business Research Initiative (SBRI) implemented in the UK could provide a model for European or BSR activities (see working example)

The established Green Public Procurement network of the BSR could be a basis to join transnational efforts and use synergies towards these common goals.

Working examples

The **Danish web portal on Sustainable Procurement** is a central point of information and guidance for public authorities how to implement sustainability criteria in their procurement processes:

<http://www.ansvarligeindkob.dk>

Green procurement criteria are provided by the Swedish Environmental Management Council. Green Public Procurement (GPP) policies are in place in the local municipality level and often also on the regional level in Sweden. But there is still a lack of practical knowledge on implementing GPP and what to demand when a public procurement is to be made.

<http://www.ms.se>

In 2010 the Polish Council of Ministers adopted a new three-year "**National Action Plan on sustainable public procurement for 2010-2012**" setting out the objectives, timing and system of coordination and monitoring of actions concerning both green and socially responsible procurement. At the same time, a number of initiatives being implemented seek to create in Poland a modern system that would guarantee disbursement of public funds to stimulate the development of an innovative economy, this goal being consistent with the Ministry of Economy/Public Procurement Office document entitled "*A new approach to public procurement. Procurement and small and medium-sized enterprises, innovation and sustainable development*" (as adopted by the Council of Ministers on 8 April 2008). Among other things, this document highlights the need for wider use to be made of criteria relating to environmental protection and CSR in contract award proceedings.

The **Small Business Research Initiative (SBRI)** programme of UK aims to use government procurement to drive innovation. It provides business opportunities for innovative companies whilst solving the needs of government departments. Competitions for new technologies and ideas are run in specific areas and aim to engage a broad range of companies in short-term development contracts. SBRI enables government departments and public sector organisations to procure new technologies faster and with managed risk through a phased development programme.

<http://www.innovateuk.org/deliveringinnovation/small-businessresearchinitiative.ashx>

14. Policy dialogue with industry and society: Develop a common roadmap towards sustainable production and consumption

What are the challenges?

Dialogue means in the first place people. Hence, meetings between industry and politics (both being part of the society) on a regular base are the prerequisite of a reliable relationship. Only based like this, strategic perspectives and long-term goals can be developed and discussed. A common understanding of the main challenges and an agreement on the best implementation are necessary to jointly act towards policy and industry actions combined with societal acceptance.

What needs to be done?

The creation of a platform for an open dialogue between policy makers, industry representatives and society could be appropriate to develop a common understanding and suggest measures to be implemented to reach a desired strategic goal, e.g. pushing sustainable innovations in SMEs. This dialogue would set a long term perspective (road map) and reliable framework how such a goal should be reached in concerted actions of industry (e.g. voluntary agreements, producer responsibility initiatives, industrial campaigns) and policy (e.g. legislation, public campaigns, financial support schemes).

Because of the participation and transparency of such dialogue processes a strong commitment and good societal acceptance for implementing the agreed measures can be anticipated. The steps to be taken are:

- setting of a joint strategic goal
- creating a dialogue scheme and providing a platform for communication
- run the dialogue process within the participatory network
- agree on joint measures and their implementation
- follow-up of implementation

Working examples

The **Confederation of Swedish Enterprise (Svenskt Näringsliv)**, works with an established dialogue system between stakeholders.

<http://www.svensktnaringsliv.se/>

In **Lithuania** and **Estonia**, a policy-industry dialogue related to sustainable development is ensured via a **Sustainable Development Committee** in each of these countries.

In **Poland** the **Group for Corporate Social Responsibility** issues was appointed in 2009 as an auxiliary body under the Prime Minister in order to ensure consistency and coordination of initiatives undertaken to promote CSR at national level. The Working Groups formed for the effective implementation of the Group's tasks deal with: The system for promoting CSR in Poland, Responsible investments, Education within the scope of CSR, Sustainable consumption. The Group and its component Working Groups bring together representative experts from government, as well as business partners, social organisations, trade unions and academia.

<http://www.csr.gov.pl>

In **Germany**, a **Climate Dialogue** was initiated by BMU, comprising measures and framework conditions to reduce greenhouse gas emissions. To reach the political goal of reducing green house gas emission, industry and government discuss potential approaches.

On 16 July 2008 the European Commission presented the **Sustainable Consumption and Production and Sustainable Industrial Policy (SCP/SIP) Action Plan**. It includes a series of proposals on sustainable consumption and production that will contribute to improving the environmental performance of products and increase the demand for more sustainable goods and production technologies. It also seeks to encourage EU industry to take advantage of opportunities to innovate. The Council endorsed the Action Plan in its conclusions adopted on 4 December 2008. Ongoing works should further develop the Action Plan on SCP/SIP.

http://ec.europa.eu/enterprise/policies/sustainable-business/environment-action-plan/index_en.htm

» Examples from selected industry sectors

The work within the SPIN project has focused on the following four industry sectors:

- Biogas
- Decentralized water treatment
- Sustainable construction
- Surface treatment and resource efficiency

In this section examples from these sectors are presented to illustrate how the SPIN Strategic Actions could be implemented in these sectors. The sector specific recommendations are based on SPIN partners' experience collected during SME industry workshops in these sectors and from background studies compiled by SPIN partners together with sector representatives.

The presented examples are not meant to be complete considering all relevant sector issues but they are to show what could be done in different sectors to support sustainable innovations and to make the SPIN Strategic Actions more tangible.

Sector example: Biogas

Energy from biogas is a renewable energy source with large potential for sustainable energy production in the BSR. Innovations in the biogas sector should support sustainable production and efficient use of biogas for production of electricity, heat and fuels. Power production from biogas has a potential for supporting net stability and controlling peak demands in the electricity grid.

In the BSR the biogas sector is most developed in Germany, followed by Sweden, Denmark, Finland, and Poland. The three Baltic States are in an early development stage, although test digesters at universities in Lithuania have been in operation for about a decade already. Many biogas projects have been also launched in Latvia, often applying German technology and funded by German investors.

Measures to support the biogas sector must be coordinated in a coherent manner taking into account holistic strategies including other sources of renewable energy to achieve the national goals established for renewable energy.

Feed-in tariffs and investment support schemes: Making energy from biomass a business case

What are the challenges?

The financial perspective for biogas investments and expected payback based on the income from power, gas or heat production can be a major driver or a massive barrier for development of a biogas market. Without targeted public intervention biogas cannot penetrate young markets as long as there is no business case.

What needs to be done?

Two main strategies for public authorities to support biogas investments are direct investment support or support for generating income from biogas production through e.g. feed-in tariffs for electric power produced from biogas.

Public support schemes should differentiate to promote more sustainable forms of biogas production and use and avoid negative incentives (e.g. avoid shift from diverse agriculture products to mono cultures of energy crops and issues of land use change). Conditional public support should be linked to the compliance with environmental performance and other sustainability requirements. Direct **public support for investments** should then focus on preferential biogas applications adapted to regional requirements, e.g.:

- using biogas in public transport and developing necessary infrastructure
- biogas production in wastewater treatment plants
- production of biogas from biogenic residues, usage of fermentation residue as fertiliser
- demand driven electricity production from biogas for increasing grid stability
- substituting upgraded biogas for natural gas and injecting it into the gas grid

Appropriate guaranteed **feed-in tariffs** by law for energy from biogas (and other sources of renewable energy) help to make it a business case and initiate market penetration of innovative technologies. Feed-in tariffs need to consider national price/cost levels for bioenergy to be competitive and really work as an incentive for early investors without over-subsidizing the sector. To meet political targets such tariffs should be variable depending on

- size of biogas plants (to promote decentralized small scale solutions),
- actual investment and running costs (cost degression with growing markets),
- use of residues instead of or combined with energy crops (to promote the use of by-products, residues, wastes)
- the used energy crops (to encourage environmentally sound and locally adapted energy crops via crop premia)
- a possible bonus for combined heat and power production (CHP, to promote efficient use of biogas for both heat and power)
- supporting net stability and controlling peak demands in the electricity grid

Working examples

The **German Renewable Energy Act** (in German: Erneuerbare-Energien-Gesetz, EEG) was designed for sustainable development of electricity supply. It encourages cost reductions based on improved energy efficiency from economies of scale over time. The Act came into force in the year 2000 and was the initial spark of a tremendous boost of renewable energies in Germany. The three main principles of the EEG are: a) Investment protection through guaranteed feed-in tariffs and connection requirement. b) No charge to Germany's public purse. c) Innovation by falling feed-in-tariffs over time. The details of the EEG are subject to regular adjustment over time.

Legislation for bioenergy: Setting clear priority for sustainable renewable energy

What are the challenges?

Legislation is setting the framework for development of the biogas market. The legal framework is crucial for developing the biogas market based on sustainable use of renewable resources.

What needs to be done?

There is a need for reliable and stable legislation that developers, operators, investors and farmers can rely on when planning their business. This should ensure a medium to long-term perspective with sufficient reliability regarding demand, prices and technology requirements to make biogas innovations a business case.

Transparent certification schemes and sustainability standards for biomass should be used for biogas production but also for efficient process control and monitoring in biogas plants.

Priority of sustainable renewable energy should be ensured through preferential access to grids, e.g. electricity grid operators are obliged to buy electricity from renewable sources such as biogas to feed them in the grid, obliging gas pipeline networks to purchase gas from biogas producers.

Working examples

Global Bioenergy Partnership (GBEP) brings together public, private and civil society stakeholders in a joint commitment to promote bioenergy for sustainable development. This includes sustainability certification processes for bioenergy and biomass.
<http://www.globalbioenergy.org>

Transnational information exchange: Connect biogas know-how and learn from experience in the BSR

What are the challenges?

Because of the different development stages of biogas markets in the BSR countries there is a large potential for transnational cooperation and learning from each other. This would combine transnational know-how and would help to create new business relations.

What needs to be done?

A transnational information exchange on biogas technologies and support schemes should be supported to share experience and learn from learning curves of other countries (on technical and political level). The aim is to collect trustworthy information on bio-energy and to disseminate it, both as information and in the form of training possibilities. Best practices of different types of subsidies and support mechanisms that might be transferable to other countries can be shared through transnational exchange. Increasing technical competence for planners and operators of biogas plants, e.g. on process control and monitoring, would support the uptake of innovations in the biogas sector. Different stakeholder groups should be involved, e.g. policy-makers, national and local authorities, industry unions and relevant R&D institutions.

This would also address the problem of lacking qualified personnel in some BSR countries with less developed biogas market. There is a need for education opportunities at local level or information import from abroad to increase competence and accelerate the application of innovations in the emerging biogas markets.

But copying other countries' innovations and solutions must be treated with caution. Imported technologies, although proven well-working in the location of their origin, are not always suitable in different conditions and need to be adjusted to the local conditions and requirements of the local market.

Demand-driven biogas production: Develop new cooperation for regional biogas implementation

What are the challenges?

Regional energy concepts which are sustainable and profitable would help to create value-added in the region, support transformation towards sustainable energy production and use and serve as demonstration cases for biogas innovations.

What needs to be done?

The formation of bio-energy (or renewable energy) villages and regions should be fostered. These are areas that cover their energy demand with regional renewable sources to a great extent. In case that surplus energy is produced, it would easily be sold to the grid. Bio-energy cooperatives should be promoted to involve the regional stakeholders. The shareholders of such cooperative are the residents of the settlement (consumers and the producers of the raw material (e.g. farmers) and energy (biogas plant operators).

This would provide regional sustainable solutions which would also serve as demonstration projects for further development and market penetration of biogas technologies.

Working examples

There are many well-established **biogas energy cooperatives in Sweden** which have organised that slurry, waste and silage from an area are taken to one point where there is a stable heat consumer nearby. Fermentation residue is taken back to the fields, thus creating sustainable regional business concepts.

Sector example: Decentralized water treatment

Water reuse systems as well as storm water management to protect the resource water are key elements of a sustainable water management. The goal is not only to recycle used water to the point that it can be fed back safely to the environment, but to treat it to a level for reuse. With the decentralisation, the existing demand for water supply and waste water disposal can be covered efficiently. This is a chance for SMEs, since an adapted water management leads to the reduction of investment and operation costs. Decentralised treatment systems have environmental and economic advantages, particular in remote and less densely populated areas. They help to reduce energy and material consumption for long distance pipe transport, they support local and regional nutrient and water cycles and they are more flexible to adopt to changing demand, e.g. because of demographic changes. But water quality management and regular monitoring need attention when implementing decentralised solutions.

Fair regulation and financing: Equal chances for decentralized and centralized systems

What are the challenges?

In some countries suitable decentralized water treatment systems are discriminated by law against central treatment systems: Existing regulation forces households and SMEs to connect to centralized water treatment, although they have functioning decentralized solutions installed. Moreover higher VAT on decentralized systems is another disadvantage which can be observed.

Traditionally a lot of subsidies on EU and national level have been spent to support central wastewater treatment systems which have been thought being a solution for all cases

without considering decentralised alternatives. This sometimes has created overcapacity of central plants and sewer systems which are now expensive to be maintained. These framework conditions established a significant barrier to the installation of decentralized systems, even in places where they are more feasible and economic than central ones.

What needs to be done?

Central water treatment systems have been crucial for improvement and protection of water quality in the EU. Whilst the quality and protection level needs to be ensured, regulation and support schemes should be more flexible to allow high quality decentralized water treatment systems in regions where they are better suited than centralized systems. Besides this authorities have to develop concepts for the integration of centralized (existing urban infrastructure) and decentralized (rural surroundings or newly developed urban areas) water treatment systems to make the infrastructure more flexible to future changes.

Quality standards: Improving the quality of small-scale treatment systems

What are the challenges?

Quality standards provide security for both the investor and the client. A generally accepted standard amongst the variety of small-scale treatment systems in the BSR could allow for better exchange and better business opportunities as well as more sustainable solutions.

What needs to be done?

National governments and related authorities have to develop clear, probably more demanding and forward looking rules for small-scale treatment and quality standards to be achieved. Transnational information exchange should support spreading of lessons learnt in operating decentralized treatment systems and ensuring good water quality.

Moreover effective monitoring systems for water quality have to be applied to ensure that decentralized systems meet quality requirements. Good solutions are service contracts offered by SMEs together with the treatment technology to make sure that the desired water quality will be reached not only after installation but also in the future. The joint aim of the BSR countries to improve the Baltic Sea water quality could be supported by harmonising quality standards and monitoring of decentralized systems within the BSR countries.

Sector example: Sustainable construction

Sustainable construction is one of the major areas to significantly reduce impact on the environment: Buildings and the construction sector use 50 % of the materials taken from the earth's crust. During their life cycles, buildings constitute the sector with the largest energy consumption: they consume almost half of the primary energy and generate about 40 % of all greenhouse gas emissions in Europe. Waste produced from building materials amount to 25 % of all waste generated. The building sector also has a major economic impact (greening processes in the construction sector will impact the whole value chain of services, from design, planning, construction or refurbishing processes down to the maintenance and destruction of residential and commercial buildings).

Sustainable construction is a process involving different actors with different interests which might actually hinder the application of viable innovative solutions, e.g. because the actor paying for innovations is not the one who is taking the benefits of the innovation. Focussed information, communication and incentives should be made available to raise awareness in this very traditional as well as fragmented industry sector which mostly comprises very small SMEs.

Sustainability in construction projects: developing sustainability criteria for public construction projects

What are the challenges?

The construction sector comprises many different crafts and tasks. Coordination between all stakeholders is often far from being optimal. Here lies a great potential for streamlining the process and better cooperation within construction projects. Even though energy saving is becoming a relevant issue in the sector, the life cycle approach is mostly not applied in planning and designing of buildings.

What needs to be done?

- establishing long-term goals (e.g. on buildings' energy performance) adapted to the development of the construction sector
- establishing mandatory performance criteria which are ambitious and adjust over time (e.g. for building components or whole buildings)
- establishing sustainable public procurement rules for the construction sector

Reliable long-term policy goals have to be established particularly for the construction sector. These could be based on 20-20-20 targets of the EU: reduction in EU greenhouse gas emissions of at least 20 % below 1990 levels, 20 % of EU energy consumption to come from renewable resources as well as a 20 % reduction in primary energy use compared with projected levels, to be achieved by improving energy efficiency. These goals have to be translated into transparent and stable concrete requirements to be included in legislation. To reach an improved sustainability performance in this very energy-consuming sector a coordinated approach is needed. This should include the setting of obligatory sustainability criteria for public construction projects (like e.g. the German certificate of sustainable construction "Gütesiegel Nachhaltiges Bauen"). Focussing on renovation instead of new construction, using the life cycle approach when calculating impact and costs as well as encouraging innovative methods and materials are some of the examples to cover this area. A continuous tightening of standards should be included to take innovation cycles in building components into account. Additional legislation on housing or tenancy law should provide favourable conditions to support house owners investing in energy efficient modernization of housing stocks.

Working examples

In Germany, the **certificat "Gütesiegel Nachhaltiges Bauen"** silver level is required for public construction projects. This certificate includes many more criteria than pure energy saving, e.g. several indicators for ecological quality, life cycle costs, socio-cultural, functional and technical quality.

http://www.dgnb.de/_en/index.php

In Estonia, public procurement is **used to encourage the usage of timber in construction**. This action is listed in Estonian sectoral development strategy.

http://valitsus.ee/UserFiles/valitsus/en/government-office/growth-and-jobs/sustainable-development/the-estonian-national-strategy-on/Estonia_SDS_2005.pdf

Better performance in the construction sector: developing energy passports for buildings

What are the challenges?

Standardization of criteria and developing a passport as a requirement for new buildings or renovation is still in process. Saving energy is often the first step to more sustainability of a process, since it seems more obvious than criteria like social impact or resource efficiency. Even if the energy performance of a building is only a part of its ecological footprint, its management is an important first step.

What needs to be done?

- defining criteria for the energy passport
- creating a certificate and certification process (which allows for adaptation)
- informing SMEs and associations in the sector, raising awareness at the end-users

An "energy passport" for buildings allows for comparison and specific customer demand for energy efficient buildings. An obligatory "energy passport" for buildings should describe its energy performance in quantitative and objective measures. This increases transparency of energy performance and related costs, allows for comparison between different buildings, setting benchmarks and include it in customers decision-making. In order to reach a high sustainability level in the BSR and Europe a harmonized set of information in energy passports is desirable.

Working examples

The **energy passport for buildings** is legally enforced in Germany. The house owner must provide it on enquiry. It provides information on the energetic performance of the building thus helping to estimate future operational costs. With the help of the passport different offers become comparable and competition for energy performance becomes possible.

New approaches need new skills: qualification for sustainability

What are the challenges?

Lack of qualification is constantly mentioned as a barrier to more sustainability in the construction sector. The paradigm shift towards life cycle thinking requires new approaches and ideas and better cooperation between stakeholders which have not been used to it.

What needs to be done?

- education, qualification and training for all stakeholder groups
- developing training material
- standardised teaching process

Qualification initiatives for relevant stakeholders involved in house construction, operation and renovation will push innovative energetic solutions.

The target group of such an initiative should include energy consultants, architects as well as craftspeople. For architects an obligatory part of the education could be sustainability in construction. Craftsperson and their respective branches, branch organisations and associations could have specific responsibility for these issues. Bigger companies could also in dialogue with their suppliers have qualification towards sustainability as an integrated part when making orders.

Working examples

In Germany, the association DGNB (Deutsche Gesellschaft für Nachhaltiges Bauen) provides **certified trainings for different crafts** in the construction sector.

No business without customer: information campaign to increase the market pull for sustainable construction

What are the challenges?

Raising awareness at the end-users as well as at the main providers of construction work will open many new business opportunities. Once the market pull includes sustainability as a major criterion, the providers will follow this demand. The challenge is to address big companies as well as all stakeholders of a value chain and additionally the end-users, be it individual house-owners or municipalities.

What needs to be done?

- providing information, focused on the stakeholder group
- implementing transparent and reliable labels and certificates
- developing show cases by public procurement to include them in the campaigns

Good public relations allow for information, transparency and acceptance in the field of sustainable construction which is still not known enough. A harmonized certification system for organisations along the building value chain can be a very good reference system to increase visibility and trust, such increasing also the demand for better construction processes.

Working examples

In Germany, different entities, for instance municipalities or the Chamber of Crafts offer **"energy saving days"** where the public gets information on sustainability aspects in construction.

Sector example: Surface treatment and resource efficiency

The European surface treatment industry consists of more than 10,000 mainly small and medium-sized companies, which supply fast-moving industry sectors such as automotive and aeronautics with high-tech surfaces but also mass markets such as fixtures or sanitary fittings. For the production and treatment of surfaces significant amounts of chemical substances, water, energy and materials are needed. So far the potentials of environmental innovations and resource-efficiency are not sufficiently used.

Facilitate implementation: SME-friendly support instruments

What are the challenges?

SMEs face increasing material cost but struggle to find an approach to implement sustainable innovations to reduce their material consumption. Tailor-made support instruments for increasing resource efficiency of SMEs in the surface treatment sector and others are needed.

What needs to be done?

Better understanding the sector and its resource efficiency potential through R&D and analysis of material flows, product properties, waste and recycling methods is the basis for designing SME support instruments.

Recommended instruments for SMEs are:

- A flexible SME fast-track resource efficiency program on EU level (quicker funding decisions, streamlined applications)
- The possibility to outsource project coordination and professional project management
- Resource efficiency vouchers
- Launching dedicated R&D calls to improve resource efficiency across entire supply chains
- Setting-up SME research networks for practical and ad-hoc research cooperation on relevant issues, e.g. by dedicated calls within existing instruments

Clear rules to support innovations in the surface treatment sector: better use of legislation and standards

What are the challenges?

Different legislative frameworks and standards hinder the transfer and application of innovations in the surface treatment sector. Environmental legislation and resource efficiency are key drivers for the competitiveness of the sector. However, to accelerate and improve the application of environmental-friendly processes and technologies, European standards and criteria need to be defined, harmonized and implemented.

Currently, so-called Best Available Techniques (BAT) are setting de facto standards for technologies and industrial installations that potentially have a strong impact on the environment. Whilst the setting of standards is desired and necessary for existing technologies, it might at the same time hamper the introduction of innovative approaches.

What needs to be done?

- Making better use of (de facto) standards, norms and regulations to foster innovation and the market introduction of resource efficient products and processes
- Increasing the flexibility of regulative measures in order not to impose restrictions to development and implementation of innovative products and processes
- Harmonizing the speed and depth of deployment for the relevant European legislations to create a level playing field for surface finishing companies across Europe
- Ensuring that the rules for practical application of European legislations are more transparent and less dependent of Member States' interpretations
- Setting of sustainability standards through Supply Chain Management will affect SMEs in the surface finishing industry which are often suppliers to large enterprises from other sectors

» Outreach to the target groups for implementation

The Strategic Actions proposed in this paper address decision makers at different type of organisations from local, regional and national to European level. The following table presents an overview of the SPIN recommendations of the previous chapters sorted by the target group which is addressed. This should serve as a quick reference for the reader and for identification of the key organisations and positions which should take action to improve the framework conditions for sustainable innovations in SMEs in the Baltic Sea Region.

Target Group	Action in following areas needed	See Recommendations No.
European Commission	<ul style="list-style-type: none"> legislative framework on EU level which affects SME operations EU financing and project funding schemes for SMEs EU support for national and transnational initiatives that support SMEs 	7, 8, 9, 12, 13, 14
National Governments	<ul style="list-style-type: none"> legislative framework on national level which affects SME operations taxation and subsidies schemes financing and project funding schemes for SMEs 	3, 4, 6, 7, 8, 9, 12, 13, 14
Public authorities	<ul style="list-style-type: none"> administration affecting SMEs' operations financing and project funding schemes for SMEs SME support and information services SME awareness and training programmes SME tools 	1, 2, 3, 4, 6, 7, 8, 11, 12, 13, 14
Financing institutions	<ul style="list-style-type: none"> financing and investment schemes for SMEs 	3, 4, 6, 7, 8, 11, 13
Standardisation bodies	<ul style="list-style-type: none"> standards, norms and labelling 	1, 12
Universities, Educational organisations	<ul style="list-style-type: none"> education for sustainability training for SMEs and disseminators 	2, 5, 14
Industry associations, Business networks	<ul style="list-style-type: none"> industry initiatives in supply chains including retailers networking of SMEs SME support and information services SME awareness and training programmes SME tools 	1, 2, 3, 4, 7, 10, 11, 12, 14

Implementation of the SPIN recommendations needs to be coordinated to involve the relevant decision makers, as well as practitioners, investors and consumers to really make a change. SPIN recommendations are based on active discussions with the project partners, political decision makers from the Baltic Sea Region (SPIN Advisory Board), CBSS Baltic 21 expert group, national networks and SME representatives to ensure high relevance for implementation.

SPIN recommendations should contribute to ongoing and upcoming policy initiatives on EU and national level, including the EU Strategy for the Baltic Sea Region, the EU Action

Plan for Sustainable Consumption and Production (SCP) and Sustainable Industrial Policy (SIP), the EU 2020 Strategy including its flagship initiatives: Innovation Union, Resource efficient Europe, An industrial policy for the globalisation era.

SPIN partners offer their support in implementing the recommendations to improve the framework conditions for innovations for sustainable production in SMEs in the Baltic Sea Region. The partners of the SPIN project are available for further information:

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