

INNOVATION IN LOCAL AND GLOBAL LEARNING SYSTEMS FOR SUSTAINABILITY

# ACADEMIA AND COMMUNITIES: ENGAGING FOR CHANGE

LEARNING CONTRIBUTIONS OF  
REGIONAL CENTRES OF EXPERTISE  
ON EDUCATION FOR SUSTAINABLE  
DEVELOPMENT

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# Table of Contents

Foreword by UNU-IAS	2				
Foreword by IAU	3				
Global Map of RCEs	4				
<b>Editorial:</b> From Knowledge Transfer to Knowledge Co-creation	6				
<b>Part I</b> <b>Education for Transformation</b>	18				
■ <b>Chapter 1</b> Community Knowledge Mobilisation for Sustainable Development in Saskatchewan	20	■ <b>Chapter 6</b> Participatory Approaches in Promoting Sustainable Communities through Education in China	100	■ <b>Chapter 12</b> The Value of Service-learning in Addressing Community Problems	184
■ <b>Chapter 2</b> A Mountainous Journey in Lesotho: Seeking University- community Engagement	46	■ <b>Chapter 7</b> Engagement between Knowledge Institutions and Communities: Design Process and Wicked Problems	118	■ <b>Chapter 13</b> University and Community Partnerships for Sustainable Urban Development in Okayama, Japan	194
■ <b>Chapter 3</b> Transformational Research Methodology and Strategies for Community Engagement in the State of Chihuahua, México	58	■ <b>Chapter 8</b> Peer Learning Methods for Transformative Education Towards Achieving Biodiversity and Development Goals on the Ground	132	<b>Part III</b> <b>Multi-stakeholder Learning Networks</b>	208
■ <b>Chapter 4</b> Deliberative Democracy and Learning for Sustainable Mobility in Pune	76	<b>Part II</b> <b>Education as Transformation</b>	144	■ <b>Chapter 14</b> Decolonising the Paradigm of Sustainable Development through the Traditional Concept of <i>Sejahtera</i>	210
■ <b>Chapter 5</b> Developing Local Sustainability Initiatives in Western Sydney	90	■ <b>Chapter 9</b> Higher Education and Sustainability: A Review of Some ESD Trajectories of Risk, Learning and Change in a Southern African Curriculum Context	146	■ <b>Chapter 15</b> Affirmation of Cultural Diversity through Participatory Education and Research	220
		■ <b>Chapter 10</b> Sustainability Learning Based on an Andean Amazonian Worldview	156	■ <b>Chapter 16</b> Co-engaged Multi-stakeholder Learning within RCE Bordeaux Aquitaine, France	228
		■ <b>Chapter 11</b> Putting Sustainability Theory into Practice in Nizhny Novgorod, Russia	174	■ <b>Chapter 17</b> Lessons Learned from the Co-creative Process of Developing an RCE in Tongyeong, Republic of Korea	236
				List of Abbreviations	248
				Contacts	250

Chapter 11

Putting Sustainability Theory into Practice in Nizhny Novgorod, Russia

Summary



ESD Innovation

The two cases – cognitive modelling methodology for sustainable thinking training and a public socioeducational program, ‘The Academy of New Faces’, introduce some new public education methods developed in Russia’s sociocultural environment. These methods are now used in local collaboration for societal projects. Cognitive modelling supports a new framework to bring together expert contributions, public strategy discussions, and educational seminars for graduate and postgraduate students. A new training framework for team building for regional business start-up projects is also planned.

‘The Academy of New Faces’ is about practices and strategies to support and develop citizens’ public initiatives in the city of Nizhny Novgorod. These were in the form of an ‘incubator’ where creative groups of youth, students, and citizens can have different resources, such as human resources and funding, for the development of their projects. This societal education program aims to shape and promote a new generation of local social moderators, public leaders, and NGO managers, and to support an associated project-making network.

Societal Transformation

The cognitive modelling methodology, first developed at the university, became a tool for engagement with professional experts and contributed to the formulation of a regional vision and strategy of sustainability. The long-term results of the cognitive modelling methodology include (a) the development of an educational and training network based on cognitive methodology and the methodology behind the creation of digital simulators of social and economic regional development in Russia, and (b) the creation of a network of regional experts for regional strategy discussions and for identifying scenarios of sustainable regional development.

RCE Nizhny Novgorod’s second strategy (The Academy of New Faces) has evolved from a students’ network into a multi-stakeholder network of students, businesses, state institutions, and the municipality working for development of the city. Its long-term outcomes include (a) a working infrastructure for sustainability (public project offices, public-art incubators, etc., which can be organised in The Academy of New Faces framework), and (b) the building of local human capacities (social

moderators, public leaders, NGO managers, etc.).

Implications of Development for Knowledge Institutions

To become ‘transformative’, knowledge institutions have to introduce new practices of ‘sustainable thinking’ and ‘sustainable partnerships’. Sustainable thinking assumes a holistic vision of regional development based on social, economic, cultural, and environmental considerations. This work has demonstrated the ability to develop such thinking through the cognitive modelling method. Sustainable partnerships require a basic knowledge of societal communication and engagement, partnerships, and social competitions toward common regional goals. ‘The Academy of New Faces’ process described in the article demonstrates the application of actions leading to a lasting collective engagement between universities and communities. Among other things, the methodologies lead to the development of a framework for a new research project with the participation of experts from the cities of Nizhny Novgorod, Samara, and Saransk.

## Socio-political Development in Russia

Public policy transformations in Russia basically include two dimensions. On the one hand, the State order started to move from the Soviet principle of *"one state, one actor of politics and public policy"* (the Soviet State was understood to be a single actor) to the principle of *"one state, many actors of politics and public policy."* The latter principle produces an environment in which different political parties, NGOs, and other public institutions act as policy makers. On the other hand, the self-understanding of the State institutions and the State political class changed from the principle of *"to do on behalf of the people and for the people"* to *"to do from itself and according to its own competence and jurisdiction"* (Dakhin 2008). The latter principle reflects the well-known idea of flexible interdependence of relations between 'the State' and the 'civil society' in Russia. It leads to progress in public practices of collaboration between different participants of public policy activity. This is the essence of the mental sociopolitical transition in Russia.

Describing institutional, structural, and practical aspects of these transitional processes, it is necessary to identify several stages at which different elements of independence and cooperation in the relationship between the State and civil society were established.

The first stage (1985–1991), 'perestroika' in the framework of the USSR, marked a move from an authoritarian state toward a system of 'the State and the civil society.' In this framework, a diversity of political parties (more than 60 in 1991) appeared, and a new order of competitiveness in political elections was established. A feature of the new

Soviet institution was that not only formal political parties but also representatives of non-formal civil movements could be candidates in elections.<sup>1</sup>

The second stage (1991–1999), was characterised by the main trend 'diversification of political and social-economic institutions' within the framework of independent Russia. National Russian structures and institutions of 'State–civil society' cooperation developed exceptionally well as a result of citizens' participation in the activities of political parties. The popular official and non-official vision was that citizens' political activity must be formalised to become activities of political parties or their institutions. Therefore the aim of the transition toward democracy was related to the idea of a representative political democracy. At the same time, social research and other such civil society activities and projects were often developed and supported by international foundations (such as the Open Society Institute, the MacArthur Foundation, or the Friedrich Ebert Foundation). At this stage, the two sociopolitical arenas developed separately: (a) the political parties' arena was managed and regulated by the State institution of elections; and (b) the NGO–civil society arena was managed by different international foundations. Although these two trends appear to be positive sociopolitical developments, the management features of the two imply contradictions in their coexistence.

The third stage (2000–2012) was marked by the process of centralisation of the power of political parties in Russia and the creation of a new 'party of State power'. The main goal was to involve most citizens as electoral followers of the party *Edinaia Rossiia* (United Russia); yet, the electoral arena was limited (Dakhin 2006). Other forms of citizens' movement were not a priority, but the activities of international foundations were converted, under an

<sup>1</sup> For example, Boris Nemtsov was approved as the representative of a local non-formal city movement for the elections in 1998, when his political career began. Nemtsov was governor of Nizhny Novgorod Oblast' from 1991 to 1997, a leader of the political party *Sous Pravykh Sil* [The Union of Right Forces] from 1997 to 2000, and leader of the political opposition in the early years of the twenty-first century. He was killed in Moscow on 27 February, 2015 (Dakhin 2012).

order, to become a part of newly assembled Russian foundations.

The fourth stage of 'State and civil society' development started in 2012 when State politics started to facilitate, support, and help develop active social projects, the non-commercial activities of NGOs, and citizens' public art groups.<sup>2</sup> The main emerging trend is that along with processes and institutions of representative democracy,

some practices, structures, and institutions for participatory democracy are in a stage of progressive development (*Dakhin et al. 2013*).

## Education and Knowledge to Transform Society

In the context of the long-term socio-political process, different institutions and communities

RCE (Regional Centre of Expertise) Nizhny Novgorod was acknowledged in 2009. The key members of RCE Nizhny Novgorod are Nizhny Novgorod State University of Architecture and Civil Engineering, Volgo-Vyatsty Public Administration Academy<sup>3</sup>, the NGO Social Rehabilitation, the Nizhny Novgorod Centre of Socio-Economic Expertise (NIC SENEX), MEGA-IKEA Nizhny Novgorod, and Secondary School No. 47.

Nizhny Novgorod is growing and will become a megapolis within the next 15 years. This transformation will affect all aspects of city planning and policy. Aspects of sustainable development will need extra attention to ensure that the megapolis will be a better place to live, work, and study. RCE Nizhny Novgorod's long-term goal is to develop a strong scientific and educational network that uses the best scientific and other expertise in the region and good international sustainable development (SD) and education for sustainable development (ESD) practices. The RCE aspires to work toward transforming the educational system, facilitating

the application of innovative approaches, conducting research, and enabling the exchange of knowledge and good practices among all organisations in the Nizhny Novgorod region. The special role of RCE Nizhny Novgorod in local ESD activities has thus been to provide a platform for engagement, both locally and internationally.

Two streams of the project activities that have proven to be most successful since the inception of RCE Nizhny Novgorod are those associated with methods and technologies of facilitation and incubation of social projects and those based on cognitive modelling methodologies. By pursuing participatory local societal development in the city, RCE Nizhny Novgorod has developed project frameworks based on principles and methodologies from several critical fields. These fields include cognitive modelling, which focuses on communications with experts groups, and 'richly populated' social technologies that aim at producing creative, socially-oriented art projects and teams (i.e. social projects) in the city. The following sections demonstrate how this was done.

### Box 1: RCE Nizhny Novgorod.

<sup>2</sup> Public art groups are engaged in creating legal graffiti, open air art exhibitions, and other art projects accessible to the public.

<sup>3</sup> Currently it is Nizhny Novgorod Institute of Management, a branch of the Russia Academy of National Economics and Public Administration under President of Russian Federation (NIM RANEPa).

are changing. Among these are universities and citizens who are partners of RCE Nizhny Novgorod. RCE Nizhny Novgorod focuses on two areas of work: transforming universities (changing practices of teaching, learning, and research) and transforming the urban society (linking actions and knowledge). Russia's sociopolitical 'climate' facilitates the needed development; for example, creating new links between formal and non-formal education, between teaching and research, between thinking and action competencies, creating value-based foundations, and creating a culture of sustainable development. The main trends that have opened new fields for collaboration among the RCE stakeholders are:

- a) digitalisation in social sciences and the humanities as well as in the sciences
- b) engaging experts from the relevant fields in public discussions and activities
- c) citizens' demand for creative participation in the city's public projects, programs, and events
- d) informational and partnership transparency of the city municipal institutions and officials

The following cases show how RCE Nizhny Novgorod capitalises on these trends and what the new features of the sociopolitical environment are for promoting sustainable development in Nizhny Novgorod through ESD activities. The presented practices were organised on the basis of the educational programs of Nizhny Novgorod State University of Architecture and Civil Engineering (NNGASU) and Volgo-Vyatsty Public Administration Academy (VVAGS), with participation of the Nizhny Novgorod Centre of Socio-Economic Expertise.

## Methods and Technologies for Facilitation and Incubation of Social Projects

### Students' Innovation and Research for the City's Sustainability Practices

In 2009–2010, RCE Nizhny Novgorod organised a public competition of students' 'social adaptation projects for Nizhny Novgorod's sustainable development.' In 2010–2011 the topic for the competition was 'innovative projects for sustainable development of Nizhny Novgorod agglomeration'. During the first cycle, seven groups presented their ideas and the jury selected the four best projects that continued to the final stage of the competition, where the jury selected the best project. The first prize was granted to two projects: 'Marketing of services for disabled persons' and 'Technology incubator for disabled persons: training, job placement and career.' Annotations of these two projects were published in the NIC SENEX Bulletin<sup>4</sup>. In the second cycle, 10 projects were submitted. All the projects were concerned with problems of the location of a new stadium for the hosting of World Cup football (in 2018), new centres for tourists, etc.

To promote educational activity within the framework of sustainable development for Nizhny Novgorod agglomeration, in 2011 RCE Nizhny Novgorod created the public city club 'New Nizhny Novgorod'. Its aim was to promote public discussion on topics related to the strategy for sustainable development of Nizhny Novgorod agglomeration. The key themes of the students' competition were included in the main topics of the public discussions.

In the 2009–2010 phase of RCE Nizhny Novgorod's activity, a target group of 50 students was

<sup>4</sup> *Prizëry konkursa proektov "Social'naia reabilitatsia dlia ustoichivogo rasvitiia Nizhnego Novgoroda"*. Soetbal'no-politicheskie resursy ustoichivogo rasvitiia v situatsii ekonomicheskogo spade [Summaries of the prize-winning students' projects 'Social rehabilitation projects for Nizhny Novgorod sustainable development.' Socio-political sources for sustainable development in the context of economic crisis]. NIC SENEX. 2010. *Information bulletin NIC SENEX*. June–November, 199–208. N.Novgorod: VVAGS.



involved in a project with the NGO Social Rehabilitation, which works to improve the lives of the disabled. Nehem International, Heemstede (of the Netherlands), provided financial support to the project. It is a concrete example of how students and experts on disabilities participated in developing a public education program. This was the first experience of RCE Nizhny Novgorod in working to bring the disabled into the mainstream of the city's public activities. It was also a discrete step toward *informational transparency* in public activities, which was borne out by the participation of some of the otherwise uninterested municipal officials in the project's events. The case shows that social demands are realised by 'small steps,' where a small, specific target group and a main collaborator are selected to work together.

### Students' Engagement in Hi-tech Innovations

Sustainable development ideas for architecture and building construction were realised in the 'Wyksa District of Tomorrow' project, a sister project of the 'District of Tomorrow,' which had been launched in the Netherlands and where the first 'test house' was ready. It was the first experience of discussions on zero-energy house renovation ideas in Russia. The District of Tomorrow was run by Zuyd University in the Netherlands. In 2012, the program attracted the attention of RCE Nizhny Novgorod and the Nizhny Novgorod government. J. Spaubeck, a Professor of Zuyd University and member of the Steering Committee of RCE Nizhny Novgorod, supported this initiative. He and Prof. J. Hermans discussed with the governor of Nizhegorodskaya Oblast', Valery Schantcev, the prospect of the District of Tomorrow project in the region. Later in the year, the Russian District of Tomorrow was launched in the city of Wyksa (Nizhegorodskaya Oblast').

The target group of this project were 60 students of architecture and building construction, regional



*Student participants of RCE Nizhny Novgorod's project 'District of Tomorrow' during their visit to the construction site of zero-energy buildings in Holland.*

management and local government/governance education programs. The Design Studio at the Zuyd University welcomes international students and has changed its language of communication and instruction to English. Russian researchers and students worked with students from Finland, China, Spain, and Nepal as interns and researchers on the district project.

Students from Nizhny Novgorod State University of Architecture and Civil Engineering designed the first 'zero-energy' apartment houses as well as a temple for the Russian Orthodox Church.

This case shows that the stated needs were realised by another 'small step' in which students and experts from the local builders' community



*An architectural decision for a zero-energy building, elaborated in the framework of the RCE Nizhny Novgorod project 'District of Tomorrow'.*



participated in the public experience of building zero-energy housing. The main collaborators in this case were Zuyd University, which provided support for the students to visit the 'District of Tomorrow' in the Netherlands, and the association for low-space flat housing. This was one more experience of RCE Nizhny Novgorod in 'translating' a new, technically-sophisticated experience into the consciousness of the public and experts of the region, and one more step toward *informational transparency* in the public activity of Vyksa and Nizhny Novgorod cities, as indicated by the participation of municipal officials to some extent in the project's events.

Both cases – the social adaptation project and The District of Tomorrow – had to be developed so as to link them to the line of RCE Nizhny Novgorod's activities. Currently, the RCE works with students as a priority target group.

Each project involved new participants from the local student community. Both projects contain practices of business communication between students and different expert communities, where some informal education was achieved. At the same time, some methods for inculcating new social or technologically complex ideas among the public were employed. Another common element was the participation, though limited, of municipal officials. This list of common elements of the two



During a workshop of the public socio-educational program 'The Academy of New Faces' in 2016.



During a public lecture of the public socio-educational program 'The Academy of New Faces' in 2016.



The 'Second life of plastic' project in a secondary school, part of 'The Academy of New Faces' program, taken in 2017.



Poster of the city competitiveness exposition of social projects, titled 'Generator', part of 'The Academy of New Faces' program, taken in 2016.

cases indicates that they could be successfully tried in other projects. With all of the achievements, the challenge was to retain the participants within the projects and thereby to sustain RCE processes. This challenge was addressed in the next generation of projects described in the next section.

### **‘The Academy of New Faces’: New Phase of Development in Addressing the City’s Development**

Since 2015, RCE Nizhny Novgorod has made efforts to develop an incubator for facilitating and supporting the social initiatives of active groups of citizens. RCE Nizhny Novgorod’s main partners in this venture are the Nizhny Novgorod city administration and the Nizhny Novgorod regional branch of Russia’s association of municipal communities. The project called ‘The Academy of New Faces’ aims to generate new social project groups, volunteers, project moderators, project leaders, and front persons in the city’s civil society activism. The project has a one-year cycle that supports some ongoing events and activities including public lectures, a competition for project teams called ‘City’s Generator’, the activities of public project offices, platforms for presentations and discussions of public projects, ‘Social Projects for Living Areas Development’ (for collaboration in developing business activities in the city), and ‘Social Projects for Public City Strategy’ (for collaboration with the city strategy planning committee). In any one year, about 100 participants take part in the permanent events, and about 1,500 participants are connected with the program through an internet group called ‘V Kontakte’. Every May, close to 60 project teams share their results, project experiences, and aspirations for the future.

As a next step, there are plans to develop a regional incubator for pursuing citizen initiatives with branches located in different areas of the city and with a diverse network of partners. The 2017–2018

season will be started in cooperation with the new City Public Chamber established in August 2017.

### **Developing Research, Educational and Training Networks Based on Cognitive Methodology**

Since 2010, the university and its partners have looked for ways to continue ESD in the region. A permanent students’ colloquium was started, with Prof. Andrey Dakhin as the head, on scientific and educational projects based on the methodology of cognitive modelling of sustainability for sociopolitical processes. Several topics on advancing sustainable development in the city have been addressed so far with the participation of the Nizhny Novgorod Institute of Management, a branch of RANEPa (formerly VVAGS). These included ‘Cognitive modelling of sustainability of sociopolitical processes and a factor of collective memory’ (in 2009), ‘Cognitive modelling of sustainability for regional business space’ (in 2010), ‘Cognitive modelling of sustainability for regional NGO activity’ (in 2011), and ‘Cognitive modelling of sustainability for regional governance space’ (in 2012) (Dakhin et al. 2011; Dakhin et al. 2013). The goal of these events is to draw students into modelling complex social processes related to the sustainable development of the region. The targets of this project were the students of regional management, local government/governance, public policy, and regional policy education programs.

Based on the research experience, a training module was created. The training rests on the premise that the practice of producing sustainable objects such as ‘green bags,’ ‘green pencils,’ or ‘green houses’ is the result of a special culture of thinking. The first point here is that a ‘green bag’ looks like a *usual bag*, until we *think* of it as an element in the complex environmental system with different links between the bag and some other environmental elements. In other words, if we look at ‘this thing’

as an object by itself, not as a part of a complex interrelated whole, we can see only a 'usual thing.' This emphasised the relations between 'how we think' and 'what we see,' where 'what we see' depends on 'how we think.'

The second point that leads to a sustainable activity rests on the correlation between 'what we see' and 'what we do.' If we see an object as a 'green one,' it sets us thinking about what we actually mean by 'green' in that context. It also provides us with an opportunity to elaborate what we mean by a 'usual thing.' Sustainable action thus is the result of a particular vision, which in turn is caused by a particular culture of thinking. In other words, if a person uses sustainable thinking, underlined by a set of values, he or she is efficiently motivated to sustainable practices and actions, such as producing 'green things.' So, if teachers teach people to act in ways that are sustainable, the educational task should be to train people in the culture of *sustainable thinking*.

What is this culture? As explained earlier, it is necessary to think of a single object as an element in a complex environmental system, where it has special interactions and relations with other elements of the environment. Some critical elements in these interactions and relations can provide sustainability to the system, but others can produce only unsustainability and cause the system to collapse. The culture of sustainable thinking consists of the capacity of the consciousness to look for agents and subjects of interactions, which can provide sustainability to the environmental system.

How to train people to develop these capabilities to act? A method of education using a cognitive math model of the environmental system seems to be reasonable, usable, and effective. A student collides with sustainable tasks on the imitative math model, which consists of several interactions between subjects (factors). The training is focused

on solving a typical task: what factors are necessary to activate for the sustainable development of the environmental system? What is needed here is the culture of thinking of any one element in its own environmental system.

The training includes three main levels of activity with practical tasks characterised by an increasing degree of difficulty.

On the first (or 'elementary') level, students work with the fully 'completed' model. It requires them to create optimal scenarios of activation of separate factors for achieving the sustainable development effect for the environmental system as a whole. On the second (or 'free user's') level, students also work with the completed model but they are now required to (a) rethink and correct the main interactions between factors according to their own understanding and experience, and (b) create optimal scenarios of activation of separate factors for achieving the sustainable development effect for the environmental system as a whole.

On the third (or Master's) level, students work with a partly completed model. This level demands that students (a) change or correct the list of factors to give their definitions of the factors and to describe them, (b) rethink and correct the main interactions between factors according to their own understanding and experience, and (c) create optimal scenarios of activation of separate factors for achieving the sustainable development effect for the environmental system as a whole.

Each level of assignment is completed with a handbook and certified software with a usable interface. The first level requires 12 hours, the second 24 hours, and the third 32 hours of learning. In 2017, in cooperation with Zuyd University (with Prof. Spaubeck as the head) RCE Nizhny Novgorod started a new research project: 'The impact of start-ups on regional development,' which rests on



the methodology of cognitive modelling. Together with participants from Samarskaia Oblast' (Samara Region) and the Republic of Mordovia, RCE Nizhny Novgorod makes contact and converses with regional experts of start-up activities, businessmen, sociologists, and economists, discussing issues such as reasons for successful and failed start-ups related to sustainability, the role of budgeting, and the factors leading to the success of private financial support to start-up projects. The RCE Nizhny Novgorod project team plans to convert this research experience into a new training program for business communities in Russia and abroad. This case shows how bringing together research and education to the societal platforms works to achieve the aims of sustainability.

## Reflections

The cases described here represent the RCE's experience of creating a growing but sustainable community involved in its project activities. The RCE's target group is the local community, including students, experts, and city activists. The projects undertaken since 2012 include an element of infrastructure for business communications serving the community of participants, where informal education gives deeper meaning to the learning by relating it to the local context. The learning and action community is expanded and strengthened through the procedure of inculcation of the new cognitive modelling methodology in various public settings. Further strengthening the sustainable actions and its communities of practice are partnerships with the municipality through the project The Academy of New Faces. These latter elements – through methodological development and critical partnerships – can be reproduced and developed in future projects.

The innovative feature of the first project

relates to the inculcation of cognitive modelling methodology, which was previously used only in closed professional circles, in public practices of expert communications, and for developing a culture of 'sustainable thinking.' The distinctiveness of RCE Nizhny Novgorod's second project is that the new structure of The Academy of New Faces not only supports some existing NGOs, but also facilitates the education of new public project teams working toward sustainable development of the city, helping activists to form NGOs and to develop partnerships. Contrary to 'thinly populated' technologies<sup>5</sup> of industrial economics, the structure of The Academy of New Faces inculcates 'richly populated' social technologies, where people help each other to develop individual and collective capacities.

Reflecting on all these experiences and looking ahead, it is possible to conclude that:

- a) RCE Nizhny Novgorod and its stakeholders identify and implement solutions for local environmental challenges
- b) For greater effectiveness, RCE Nizhny Novgorod recognises the need to change target groups and the framework of activity, and to look for new sources for communities of social networks
- c) The present priority projects of RCE Nizhny Novgorod are aimed at producing and promoting public knowledge, including 'sustainable thinking' and 'sustainable partnerships'
- d) The priority projects of RCE Nizhny Novgorod have proven to be successful in developing and supporting practices and infrastructure for participatory democracy

<sup>5</sup> 'Thinly populated' technology refers to production places dominated by technology or robots with no or minimum engagement of people. 'Richly populated' social technologies refer to working places with no or minimum technology or robotics.



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