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Nysa Science Festival as international instrument of knowledge diffusion in regional economic and non economic network organizations

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Introduction

Science is treated as an indicator of human knowledge and accomplishments. It is a measure of development of the human thought, and therefore a measure of this thought being translated into the progress in answering difficult questions, which as a consequence results in the actual technical progress. Science inspires curiosity, the desire to hold knowledge about everything associated with our existence, dreams and needs. It inspires people to satisfy their needs that are continuously arising and constitute a dimension of our development, a manner of perceiving and defining reality. These needs are a never-ending source of a pursuit of a better tomorrow, improvements in everyday life, health and well-being. They facilitate defining things which satisfy intellectual expectations that pertain to individuality and uniqueness of each of us.

What exists within the notion of science? According to the definition, "science" is an autonomous part of the culture, which provides explanation for functioning of the world in which human lives. Science is constructed and developed by research activities, which lead to publishing results of scientific enquiries. This research is then many times verified and scrutinised in various aspects. However, the notion of *science* also encompasses its more ordinary perception. It is understood as obtaining knowledge, knowledge in general and at each level of education. Finally, we use it to determine a person's knowledge, wisdom and skills that are being acquired day by day. Such definition of science allows to point to its systematic and generational expansion through tradition, i.e. a more or less direct transfer. This form is exceptionally firmly rooted in the human history. It is the only continuous element "teaching" the contemporaries – even in the prehistoric times – how to act in order to satisfy own needs, especially the existential ones.

Today this definition is being narrowed down to the meaning of the English word *science*. However, in popular understanding the word "science" is used to express the need of learning and discovering the foundations of particular sciences that were defined a long time ago, e.g. maths, history, philology, physics. It seems evident that the phrase "We learn throughout the whole life" is based both on the academic understanding of "science" implemented through scientific research, basic

science, and traditional transfer of the knowledge and experiences of our ancestors. This magnificent and broad approach and the definition of "science" result in the fact that we are dealing with an obvious transgression from learning basic things, through acquiring more advanced tasks, ending with science on the academic level. By employing such approach to science, we point to the possibility of its development by anyone, we do not divide it into science which is accessible to all, and the one reserved for the chosen people. Everyone may and should apply this definition in their lives and actions. To encourage especially young people to perceive science by use of this wide approach, one should popularize science and its achievements.

Multi-directional development of science, the stage of progress of which establishes the level of knowledge, skills and needs of society, must be linked to networks of economic and non-economic organizations. This complex system of cooperation, which involves numerous actors, requires efficient methods of knowledge management and properly focused knowledge diffusion. The primary goal of cooperation of science and organizational networks is stimulation and assistance in regional development. It requires system activities and construction of a regional network of knowledge, integrated in the present systems of education, administration, law and economy.

Part I

Society based on knowledge and a science festival

1. Science, knowledge, science popularization

1.1. Science and knowledge

Saying "You must learn" alone is not particularly encouraging for young people. Learning is associated, after all, with a considerable intellectual effort, and is often perceived as an uninteresting obligation imposed by a parent or a teacher. The natural pursuit of personal freedom, seeking simplicity, avoiding difficulties, particularly the ones that have been introduced against our will, are not conducive to learning as well. Life perversity lies in the lack of understanding of the need of science at an early age, which easily subsides in the years to come in order to become the purpose of life in the senior age. A young person today has difficulties in accepting this "natural" course of changes in one's actions and approach to reality, and this is caused by poorly developed abstract thinking and serious attitude to life, and sometimes by the lack of the concern about the future. These concerns are not understood and, as a consequence, unacceptable for teenagers. They will find their time, which results from the natural sequence of events, which is based on personal emotional and physical development. Adults, however, and parents in particular, are experienced enough to speak about their feelings and relentlessly encourage their children to accept science. Therefore, how to reconcile these two seemingly distant poles? On one hand, the power of experience and full awareness in constructing one's future, the non-negotiable need of science, having good profession, the concern for the future, and, on the other hand, free understanding of the need to possess knowledge, revolt against the effort necessary for learning something that does not yield measurable benefits here and now (Malczyk T., 1/2009).

A change in the approach to the method of transfer of knowledge might be helpful here. It is inciting interest in discovery and exploration, indicating full applicability of science and its use in everyday life. Presentation of indispensability of science in the aspect of creation of a better life, pursuit of own interests, satisfying present and more remote needs, deriving joy from possession and application of knowledge. Of course such act of encouraging and inciting interest is not simple, it requires something of a metamorphosis of difficult and extensive knowledge into simple and practical one, adapted to the individual needs and perception of a young person.

1.2. Popularization of science as a global and a regional instrument of knowledge diffusion

A great role to perform is also left for popularization of science, which consists in permanent transfer of information based on scientific achievements and adjusted to the recipient. This transfer is a precisely composed stream of data, which aptly feeds a complex material in a simple manner. This difficult task should have an expressly marked usability characteristics of the transferred material, most preferably on the examples of its use in everyday life.

Popularization of science brings measurable benefits, including the most important one, young people's interest, which is proved by numerous questions posed during the discussion on a given subject. Complex problems should be precisely divided, so as not to lose their purpose and the main focus, and knowledge should be transferred in such a way so as to leave a spark of interest in the recipient as to what will follow. Interest brings about the need for knowledge, a unique information famine that must and may be satisfied by reading, learning, experimenting, conversations, etc. Explanations of a given problem absorbed in such a way remain in our memory for a long time, and they are remembered without any problems.

Popularization of science therefore holds a tremendous potential for action and development. It becomes an important instrument connecting science with social, economic or political life. Owing to the fact that science by definition serves solution of problems of human life, it thereby becomes a determinant of a certain quality, and frequently also an important or a key argument needed to make a decision of global importance. Decisions are made on political, economic, medical, sociological, educational planes, etc., they apply to all spheres of life. However, each field of science, and in particular the one at the level of high advancement, uses specific, often incomprehensible and difficult language. For this reason, popularization of science helps to translate the specialist language into the one which is understandable for most recipients, it leads to generalization of results, and therefore makes it possible for a person from outside of a given industry to make a valid decision. It leads to the situation in which we, not being specialists, know about the discoveries made, directions of currently conducted tests, and the stage of their advancement. This knowledge satisfies the desire to possess an appropriate source of information, inspires hope to solve difficult, e.g. medical or technical, challenges, brings about needs, stimulates analysis, research and learning, and makes it possible to prepare for acceptance

of the approaching events and conditions, develops intellectually. An additional benefit of having extensive knowledge is good memory, fast comprehension and memorization of new things, which, in turn, are the bases of further focused development. Knowledge makes it possible to conduct innovative activities, it creates cognitive, inventive attitudes, and becomes a gate for introduction into the world of capital "S" Science. In this way scientific pioneers are born, unquestioned specialists and authorities, on the basis of the opinion of whom serious decisions are made.

Popularization of science may become a new direction in teaching, requiring extensive knowledge in many fields of study (particularly the ones related to each other), knowledge of the methods of learning and teaching, human psychics, and the stages of its development (Malczyk T., 1/2009). Its key elements are collection of materials, their presentation in an appropriate sequence, and development of methodology for providing information in a an accessible and encouraging manner. A person who popularizes science is not only a deliverer, a person rich in own knowledge, who in a responsible manner communicates with the society, but is also fascinated by scientific achievements and observes the research, their results and interpretations on scientific forums. Such person is on a mission to transfer new and verified information. A person who popularizes science is a sort of a spokesperson who speaks in the name of science to society, management, politics, education, etc. (Fig. 1).

Such representation, however, may be bilateral. A person who popularizes science as a person having close contact with a recipient of scientific achievements, knows social expectations, questions and doubts, the needs of economic and educational market, etc. The needs are expressed in a more or less detailed and competent manner, and thus such person standardizes the obtained comments, and using specialist language and vocabulary defines new needs and presents own comments. Such person simply asks questions on behalf of the interested persons and environments, and represents different social groups in the world of science.

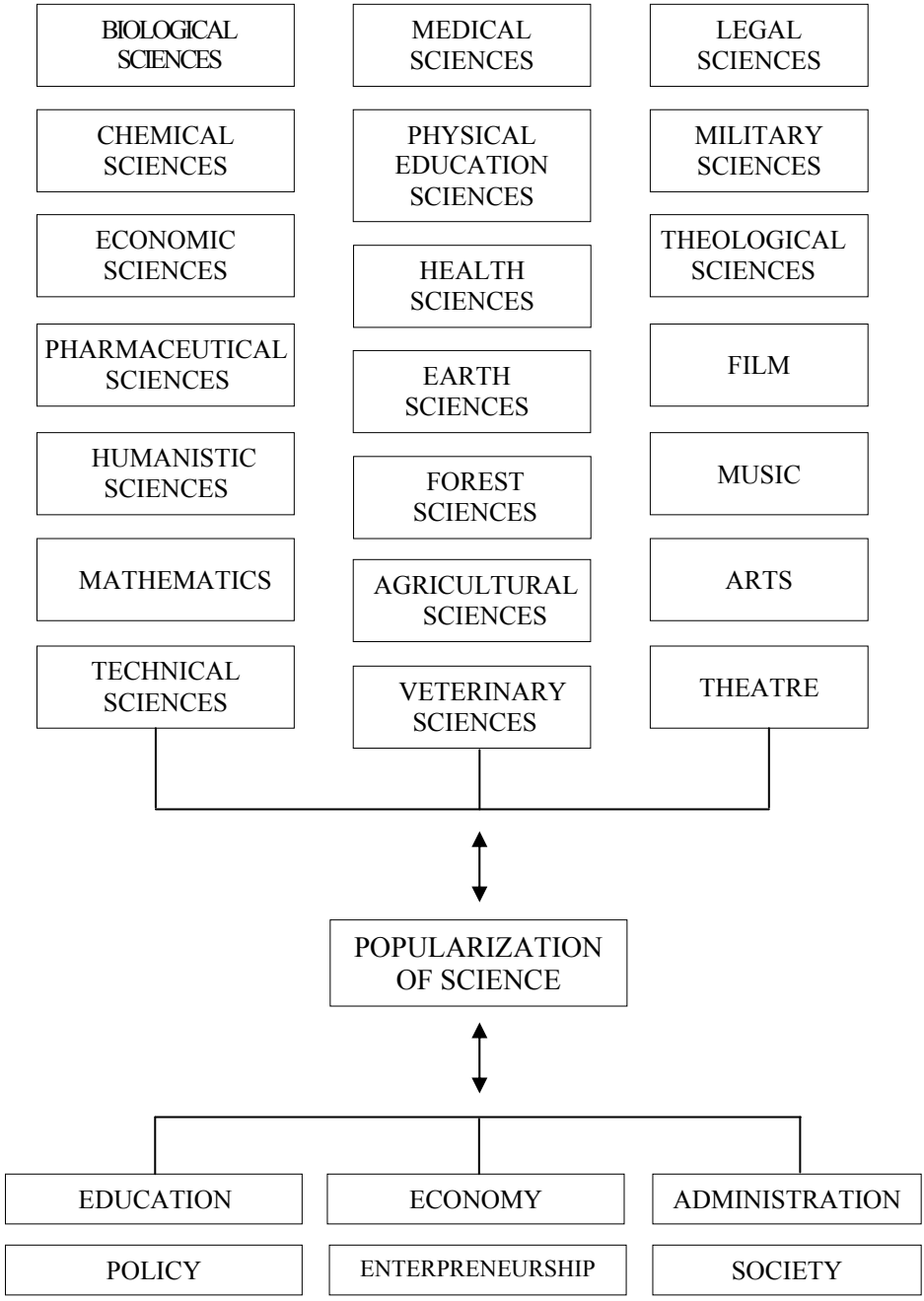


Fig. 1. The role of science popularization in the structure of interrelations between the mutual transfer on knowledge, problems and needs by different groups
Source: author's compilation

2. Innovation, identity, society based on knowledge

2.1. Innovation

Semantics of the word "innovation" is clearly associated with progress, uniqueness, new approach to solution of a specific problem, etc. In reality this notion refers to the Latin word *innowatio* – "innovation", that is renewal (Martinez-Brawley E.E., 1995). It means approval, by new ways, of goals dictated by the values existing in a given social group or specific community. According to the further part of the definition, these ways may not be accepted by a given axio-normative system, strongly connected with a group of rules and values typical for a given culture. Innovative behaviour should be understood as behaviour and actions focused on dissemination of a new approach to solution of a given problem, new ways of implementation of scientific research, etc. (Malczyk T., 2009).

This unique form of progress in understanding, redefining specific values in the name of creation of something new and better, often meets lack of acceptation, sometimes unfounded criticism, neglect, resistance of a given social group. Strengthening of a new activity supported by verified examples lead to a situation where the new views and methods are popularized and become conformist, as they result from submission to the impacts of a given social group to which the innovative activities are addressed to.

The synonyms of the term "innovation" include: invention, creativity, ingenuity, creative attitude, creative thinking, rationalism. The antonyms are fossilization, narrow-minded thinking. In the colloquial understanding, "innovation" is related to introduction of something improved or completely new, it may apply to all domains of our life, and impacts in different directions of human operations. Thus it may refer to industry and services, reforms of social and political systems, the most advanced technologies and elements of everyday life. This specific reference to all spheres of life provides the basis for a review of the meaning of introduction of an innovative activity or assumption of an innovative attitude, and explanation how to do it in the light of the present stage of the scientific research, social groups and entire societies.

The process of introduction of innovation is not simple, since it requires a perfect determination of a given reality, condition of its comprehension and definition, designation of the areas that have not been meticulously examined, and indication of weak points, determination of

the need for dealing with a problem or a specific action. This process of inspiring motivation for intentional action shapes the whole innovation process. It identifies the aim and constitutes the basis for enlisting leading assumptions of the action plan in the designed direction of interest. Persons taking-up innovative activities face a number of problems which hinder implementation of a plan. They include the so-called "thought barrier", which is the question of what to do in order for actions to be innovative. One should specify here the anticipated economic profits, that often determine the need for creative activities, arouse interest in potential recipients and possible sponsors, who are first of all interested in measurable profits (Malczyk T., 2009).

This most often involves considerable expenses, which, in turn, stimulate the risk factor that effectively hampers any innovative actions. This factor is a natural dimension of benefits, and it increases in proportion to the expected profits. This uncomplicated economic language renders an unambiguous answer as to whether it is worth investing in innovative actions that lead to implementations, or if one should back down early enough. Finances are a driving motor for scientific research and any work of an inventive, implementation and innovative nature. Currently our banking system is not completely open and prepared for accepting highly risky creative activities. It is connected with a lack of financial and investment stabilization on the global, European and national markets. Investing in innovation requires relevant and sound foundations, a long-term financial policy determined on the basis of stable and foreseeable economic indicators, and moderately stable political activities and decisions on the international and national arena.

Innovation can always be treated as required for the development of the human thought and technological progress, however, at limited financing, priorities should be defined. Here the market, political and legislative indicators are collected and compared, and priority activities are determined. Only then can one also specify the level of financing of the priority directions of development. The risk of financing decreases if tests, or other forms of innovative activities, are ordered to large and recognized economic or research units. This in turn makes it difficult for a potential citizen with an interesting idea to distinguish himself or herself, and raise the interest of financing units to earmark specific funds on development works. For this reason many interesting ideas fill the shelves of research centres, laboratories or apartments. This "on shelf" production, however, always involves a favourable research, cognitive and empirical aspect for the author of a work himself or herself. Knowledge and

experience continue to increase, and they provide the basis for a more and more perfect and improved ideas (Malczyk T., 2009).

Therefore, how to find one's place in these financial economic circumstances? How to be innovative, if the road that one has to tackle does not encourage work in this direction, and finally how to find the strength within oneself to avoid obstructions that can effectively spoil even the best idea, and is it worth to be innovative? Identification of one's own identity may, to a certain degree, help in answering the above questions, and, what follows, specification of one's future and the role in life.

Innovation is also treated as an indicator of effectiveness of knowledge diffusion in a company. It shall be deemed that the measure of knowledge diffusion is not the number of trainings which the company employees have undergone, but the relations between the diffusion and innovativeness and/or patents worked out in the company (Glenn H, Rajshree A., 2007). The indicated factors are also taken into account when assessing the degree of company development. In the unified Europe, and in quick international contacts subject to informatization that link the whole world by means of a network, knowledge diffusion is in the final summary more fruitful and more effective. It includes 'innovation', patents and implementations. Expanded international contacts breed large amount of empirical knowledge and encourage development (Pedro M., 2010). The EU member states take particular care of the above, as they are concerned about technological research and tests in the case of all members, especially the peripheral states. These activities include innovations and cooperation and are supported by the European Commission, which develops international networks of scientific cooperation (Roediger-Schluga T., Barber M., 2008). Cooperation networks execute an important social and economic objective, which prompts Europe into creation of a region which is intense in terms of science, and is likely to compete with the states from around the world (Cassi L., Corrocher N., Marelba F., Vonortas N., 2008). Innovation and knowledge diffusion creates innovative knowledge, which is compatible with the model of knowledge diffusion (Tsai C. M., 2009). Innovative knowledge brings benefits to the entrepreneurs, and its scope requires relevant management and combining with knowledge diffusion. Mutual relations between the existing level of knowledge, the level of innovative knowledge, and benefits of entrepreneurs occur (Górzyński M., Woodward R., 2004). In the microeconomic perspective the meaning of innovations is emphasized as the basic factor of changes both in companies and in regional units (Adamkiewicz-Drwiłło H., 2008).

2.2. Identity

The definition of oneself, establishing objective in one's private and professional life, are the necessary, almost existential, bases of our existence, typical for the human kind, an introduction to the definition of identity of a human, a social group and the whole community. Identity is a vision of one's self related to one's appearance, psychology, behaviour, constituting its individual character from the point of view of uniqueness in the case of other persons (Smolski M. and R., Stadtmüller E. H., 1999). This definition refers to the basis of our existence, namely to the approach towards oneself and other people, as well as to the tradition and culture developed by our ancestors and contemporaries. This is a great step in the life of one of thousands species living on our Earth. Human auto-definition gives us sense of uniqueness, which is so significant for our development, and a bit of freedom among tight social bonds firmly rooted in tradition and culture, that through respect to our ancestors obligate us to their preservation and enrichment. Alike, but at the same time different, unable to live outside of the community, and looking for freedom and liberty, of similar physical , but not mental construction. Here are humans with their constitution full of contradictions, which pushes them into defining own demands and looking for the methods of their execution. Inextinguishable and thinking in abstract terms, a fundamental part of all societies living on the Earth's continents (Malczyk T., 2009).

In such understanding and definition of ourselves and the surrounding reality should we seek answers to the question whether there are any real obstacles hindering our progress, entrepreneurship and innovation. The seems to be one answer – no. The power of the human thought and experience cannot be in any manner restricted by problems so tiny as finances, which are, after all, controlled by people, and politics, which is also created by them. This gives us the possibility of creating conditions for development of innovative attitudes, and the lack of external factors leads to the situation in which we are able to define everything in a manner more or less conducive to the development of ourselves . Nothing is able to hinder our progress, provided that we want it ourselves, and we pursue our dreams and social expectations (Malczyk T., 2009).

One may even speak about a certain obligation to being innovative, that comes out of the need to satisfy the needs of everyday and global life, many a time extending beyond our dimension. Innovation is the method for realization of ourselves, it is a fulfilment of our life expectations, finally it is the only way to reach the sense of happiness, and therefore

self-realization. On the other hand, this self-realization allows us to achieve the internal peace of mind, which is an indicator of productive fulfillment of our life (Malczyk T., 2009). In this way we subscribe to implementation of the ever-present cravings of the human kind, these little and great ones, of which the life of each of us consists.

2.3. Innovation in shaping identity

Modeling identity is a challenge for every human being, and it has a defined level and expectations. It is difficult to change the existing principles, which we always - more or less consciously - follow. Today one may have even a greater awareness of their needs, i.e. the condition of the lack of something necessary for the body, its biological and mental progress. The needs are often revaluated, these that were once regarded as basic, nowadays are not, on the other hand, many new needs arise that are now considered to be basic, and surely in a few years' time will not be such, but will be followed by others, etc. Defining new needs and methods of their satisfaction is based on innovation in thinking and creating, which, in turn, lies within a directly proportional relation with shaping identity of a person, a social or professional group, nations and the whole mankind.

One should clearly state that we have been made to come up with, realize and implement innovations. This is the foundation of the progress of the human thought, and liability that we have inherited after the prior generations and will pass on to our successors. Such an interpretation of innovation as responsibility in shaping human identity and society entitles the creator (innovator) to fully expect creation of special instruments supporting implementation of his or her ideas, especially those with a large amount of social utility. If this goes with the creator's creative passion and interest in the subject, we then pursue the dogma of human existence, i.e. self-realization of a human, through implementation of things that are useful in various ways (Malczyk T., 1/2009).

2.4. Society based on knowledge

Personal identity of an entity builds social identity, identifying in this way a given social group, which also develops on the basis of place identity, e.g. a place of one's residence, work, etc. Self-definition and a definition of social groups, and therefore of society, gives the basis for a discussion about the needs that are important from the point of view of a given group of people constituting a community having own identity.

Identity identifies society, giving it the right of self-determination in order to sustain and develop its uniqueness and autonomy; it indicates various needs, and therefore motivates to pursue them. It authorizes decisions made on oneself and a social group inhabiting a given region and best knows what should be done, improves or corrected in order to develop. Therefore, the definition of identity of a society related with its region or province is the key to form a list of strengths and weaknesses of the region.

Entity with one's own identity, defined and determined to act, fully equipped with the internal instrument, which in a natural way prompts him or her into innovative activities. *Society* with a defined social identity, conscious of its role, place, needs, strengths and weaknesses of the inhabited region. *Knowledge,* set of information treated as goods, special intangible asset of value comparable to or greater than the value of material goods. The indicated definitions in a fundamental manner shape society based on knowledge, conscious of its needs, rights and possibilities. This is a society that uses knowledge in everyday life, including professional and private life, education and experience, work and rest. Society based on knowledge is subject to ongoing modifications, adaptation to changing realities, it learns throughout the whole life. This is an active community, involved in own and common matters, i.e. the problems of its own environment, and therefore – the region.

Construction of a knowledge-based society is an expression of respect towards past accomplishments, ensuring rational present, and modelling a harmonic and balanced future. This is an extremely righteous way which has a bearing on, among others:

- raising staff qualifications, which is favourable for increasing competitiveness of the region through, among others, actions oriented towards the transfer of high technologies to companies in the region (Solarczyk-Ambrozik E., 2006),
- harmonic education system adopted to the needs of the labour market, embracing each level of education,
- effective counteracting unemployment in the region,
- increasing scientific, innovative and implementation potential in the region,
- supporting initiatives of people and institutions aiming at their development,
- promotion of the region via the language of facts and good examples,
- motivating society to be active and modern,

- constructing a sense of social safety and predictability of the subsequent actions, which facilitates taking many financial and investment decisions,
- constructing unity and collaboration in shaping the future in the region,
- creation of identity of an entity, society and a place, as well as building interpersonal bonds and responsibility for jointly developed goods.

The expression "based on knowledge" must be identified with the amount of contributed work and finances, activities, as well as the results obtained (Fazlagić J., 2008). It becomes the added value, deriving from knowledge, i.e. proper interpretation of information. Capabilities for assimilation and interpretation of information are shaped from the earliest years. They include: the level of possessed knowledge (information), its connection with different areas of life and science, combination of interpretation in a logical whole, introduction of the possessed knowledge into action (checking), observations and drawing conclusions. Such enclosed cycle is embedded in the knowledge possessed up to that point. Interdisciplinary value of the process facilitates broad application of information, effective memorization and generation of questions, as well as encouragement for further activities (science). This system is used when developing streams of knowledge flowing in the course of realization of science festivals and a number of other related activities propagating knowledge.

3. Networks of economic and non-economic organizations in the region of Nysa and Opole Provinces

Large and important tasks, from the point of view of interest of a given organizational unit, require a number of implementation tools. Their possession significantly facilitates development of an enterprise, a specific or an interesting idea. However, the initial dynamic growth can be hampered, destroying previous achievements. This is often related to the lack of possibility of effective dissemination of a specific concept, product or idea. One should then develop the area of influences, using the already existing internal structure of a given entity. Acting in such way leads to expansion of organizational units and integration of subsequent cells that act in the name of a specific purpose and systematically develop

impact areas necessary to complete a given task. As time goes by, an organizational network subject to implementation of the assumed goal is being created within a given unit. Such network acts in relation to a given moment, which is indicated by the subsequent obtained areas of impact and the created new ideas for development. After they are reached, the rate of economic progression slows down, which is a completely natural process. A unit therefore acts well, but does not develop, and its impact on the external environment is not as large as it should be. In such moment, there are two solutions. First is to continue the development of the internal structure (internal network), the second one is to begin cooperation with the existing external unit or units, built-in in other well-operating networks. The first solution does not seem reasonable as the specific unit would have to have in its internal structure cells that would implement tasks already performed by specialized external units. On the contrary, the second path is almost natural since it leaves action to specialized external units, which enables focusing on competent management and own development. Such behaviour complies with the idea of organization dispersion and formation of network structures, which are the basic channels of communication for people oriented towards implementation of tasks, and not towards power. The power of network, with which we want to initiate cooperation, is also an important element. The range of its impact is linked with other networks, and our network renders something more than simply a sum of networks (Mazgal A., 2010). It actually creates a new network, which is combined into a whole by a specific task, product, idea, etc. Likewise, there are no concerns as to the loss of identity and autonomy of a given network, since the networks are connected by a different purpose, a different topic. At the same time network organizations using employees of knowledge are characterized by modesty, lack of superior attitude, and equality of the performed tasks (Prerechuda K., 2008 book). Our network combined with different networks inputs only as much from its autonomy as needed in order to realized the assigned tasks. In addition the networks that act in a kind of a coalition, pursue their separate major goals that link them (Sankowska A., Wańtuchowicz M., 2007).

Science festival has developed a number of relations between many organizations belonging to various networks. It has become *a manager of thematic network* created for the time of implementation of the task (a specific subject) from parts of other cooperating networks. Here one should include networks of economic and non-economic organizations. Such connection renders possibility of extended impact and knowledge diffusion in different environment clustered in these networks. At the

same time these networks stimulate people to expand the festival, as they are becoming a valuable and a requested source of information generated by the network participants. The internal network created from the units of universities involved in creation of the science festival cooperates with economic networks (commercial – enterprises), and non-economic (non-commercial – non-governmental organizations, public administration, etc.) (Chodyński A., 2007). This is particularly important, as economic networks are formed most frequently, however, in connection with development of significance of non-economic organizations, including public administration, one should include these networks in implementation of different tasks, especially when knowledge is the product. Many non-commercial units provide public services, including schools, universities, etc., therefore connection with the non-economic network is vital and natural. Entities within this network include science, and therefore knowledge, in their activities. Similar situation occurs in the case of economic networks, as the scope of action of the units within these networks is always based on knowledge, scientific achievements, and their development depends on innovative ideas and implementations. From this point of view, these networks also make use of knowledge. Therefore combining economic and non-economic networks with the internal university network is crucial in order to manage knowledge and organise the science festival. The problem of networking is considered here in the aspect of the province and the region. The region also occupies a position within a given network, and by cooperating with other networks, it actually creates with them the regional knowledge management system that particularly stresses the meaning of knowledge hidden in the processes of learning creation of specific resources of the region. Regional knowledge management system (Fig. 2) consists of knowledge capital and the capital of relations of organizations operating within th network (Fic M., 2008).

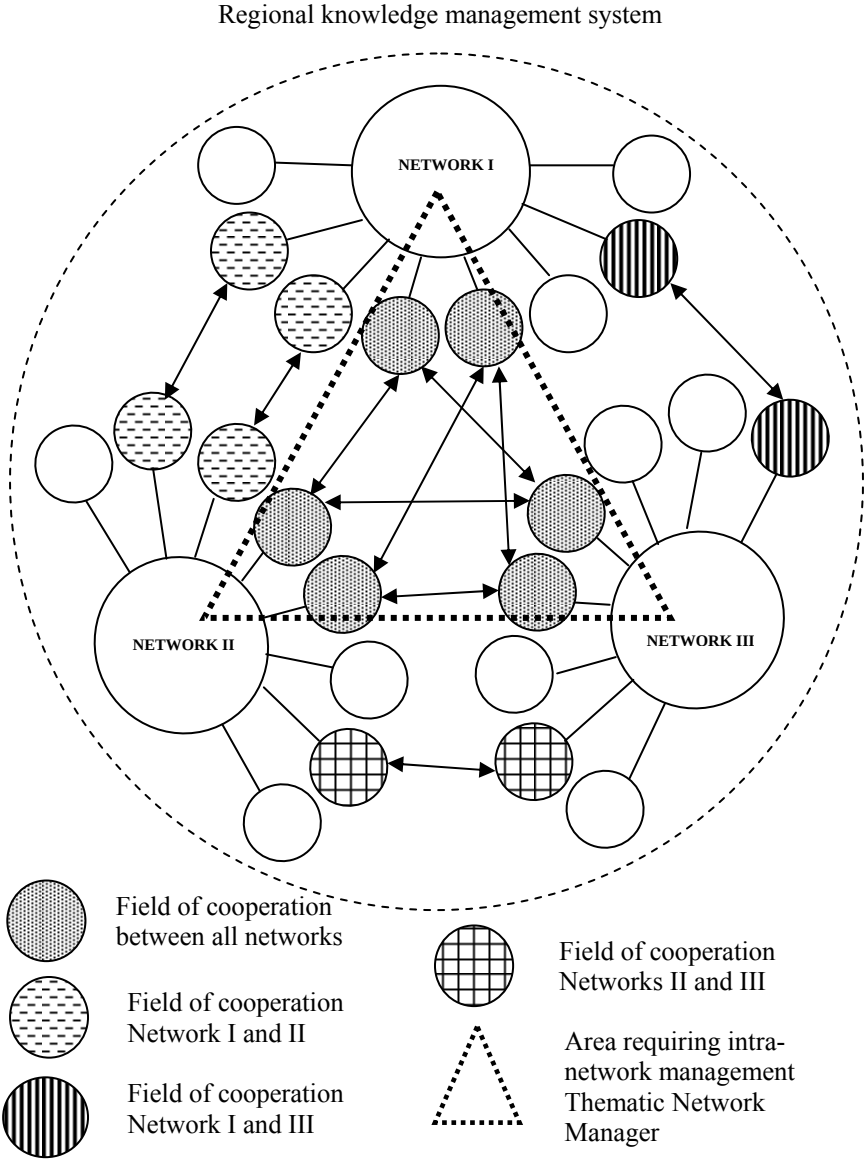


Fig. 2. Connection of several organizational networks originating from different environments into one thematic network (the regional knowledge management system) concentrated in activities aimed at implementing a common goal; a new network is *managed by a thematic network manager*
Source: author's compilation

The network is a collection of selected associations with selected partners, a reslut of searches for complementary resources (Jewtuchowicz A., 2001). Networks are based on: close relations in the local environment (the region), partner relations, mutual cooperation. Such networks connection secures an appropriate level of value added (Chądzyński J, Nowakowska A., Przygodzki Z., 2007). Due to the fact that the networks are connected with each other in order to execute a specific area of action, they form a network organization (Perechuda K., 2007). It combines units participating in execution of particular activities in specific phases of the entire cycle (Świerczek A., 2006). Characteristics of such networks include: mutual coordination of activities, mutual decisions concerning activities in a designated area of cooperation, presence of a longer time horizon and a repetitive nature of cooperation, information exchange within the network (Łobos K., 2005).

Knowledge diffusion via Nysa Science Festival is performed by two groups of organizations concentrated in:

1. **economic organizations networks** – including 13 major units, some of them consisting of a few dozen entities, e.g. the Regional Economic Chamber in Nysa, or the Regional Development, 157 units in total (tab. 1),

2. **non-economic organizations networks** – covering 38 major units, some of them consisting of a dozen or so sub-units, e.g. secondary schools and high schools in the region, 272 in total (tab. 2).

Tab. 1. Cooperation under Nysa Science Festival with the network of economic organizations in the region, province and country
Source: author's compilation

Entity name and type	**Territorial range of an entity**			
Economic	Nysa District (yes/number of entities)	Province (yes/number of entities)	Poland (yes/number of entities)	European Union (yes/number of entities)
Polish Agency for Development of Entrepreneurship in Warsaw			+	
Economic Development Centre in Opole		+		
Agency for Restructurization and Modernization of Agriculture in Opole		+		
The National Bank of Poland/Branch in Opole		+		
Agricultural Extension Service Centre in Łosiów		+		
The Nysa Regional Chamber of Commerce	+ /88			
Bank Ochrony Środowiska Branch in Nysa	+			
Bank Spółdzielczy Branch in Nysa	+			
Bank Gospodarki Żywnościowej Branch in Nysa	+			
Bank Śląski Branch in Nysa	+			
The Regional Development in Nysa /RRR/	+/60			
Nysa Leisure Centre in Nysa	+			
Non-governmental organizations conducting business operations	+/4			
Total (entity/ including cooperating entities)	**8/152**	**4/4**	**1/1**	**0**

Tab. 2. Cooperation under Nysa Science Festival with networks of non-economic organizations at the regional, national and international level
Source: author's compilation

Entity name and type	**Territorial range of an entity**			
Non-economic	Nysa District (yes/number of entities)	Province (yes/number of entities)	Poland (yes/number of entities)	European Union (yes/number of entities)
The Ministry of Science and Higher Education in Warsaw			+	
The Ministry of Agriculture and Rural Development in Warsaw			+	
The Ministry of Transport in Warsaw			+	
The Ministry of Health in Warsaw			+	
The Institute of Food and Nutrition in Warsaw			+	
The National Institute of Public Health – the National Hygiene Institute in Warsaw			+	
EUSCEA – European Science Events Association				+/98
EUSJA – European Union of Science Journalists' Associations				+/16
The Information Office of Opole Province in Brussels				+
Marshal's Office of Opole Province		+		
Provincial Office in Opole		+		
The Superintendent of Education in Opole		+		
The State Provincial Sanitary Inspector in Opole		+		
The National Health Fund, Provincial Branch in Opole		+		
Provincial Labour Office in Opole		+		
Municipality and Distrct Offices	+/9	+/61		
District Labour Office in Nysa	+			
District Sanitary and Epidemiological Station in Nysa	+			

District Starosty Office in Nysa	+			
District Headquarters of the National Fire Department in Nysa	+			
District Police Headquarters in Nysa	+			
Polish Motor Association, the Regional Board of Directors in Opole		+		
Museum in Nysa	+			
Arts Community Centre in Nysa	+			
Cultural Centres (Walce, Nysa)	+	+		
Polish Scientific Journalists' Association – Naukowi.pl in Warsaw			+/55	
The Polish Scouting Association, Regiment in Nysa	+			
Ziemia Nyska Amateur Radio Club in Nysa	+			
The Local Activity Group – The Nysa Duchy of Lakes and Mountains in Nysa	+			
University of the Third Age in Nysa	+			
Association of Siberian Deportees, Ziemia Nyska Branch in Nysa	+			
Association of Alumni and Supporters of the National Higher Vocational School in Nysa	+			
Secondary schools in Nysa district	+/14			
Secondary schools (Nysa District, Lower Silesian Province, Łódź Province)	+/13	+/2		
Higher education institutions (University of Environmental and Life Sciences in Wrocław, Wrocław University of Technology, Opole University, Opole University of Technology)		+/4		
Total (entity/ including cooperating entities)	**17/36**	**11/67**	**7/55**	**3/114**

This group also includes media, including web portals. This particular cooperation gives the possibility of transmission of a stream of information to a broad group of people. It enables information on the current basis, as well as education and encouragement for participation, etc. (tab. 3).

Tab. 3. Cooperation with mass media within Nysa Festival of Science at the regional, national, and international level
Source: author's compilation

Entity name and type	**Territorial range of an entity**			
Media	**Nysa District** (yes/number of entities)	**Province** (yes/number of entities)	**Poland** (yes/number of entities)	**The European Union** (yes/number of entities)
Radio Opole S.A.		+		
Gazeta Wyborcza		+		
Branch in Opole, Polish Television in Opole		+		
Academic Forum Lublin		+		
Nowiny Nyskie	+			
Euroregio Glacensis Kłodzko		+		
NTO in Opole		+		
PAP service – Nauka w Polsce			+	
Polish Scientific Journalists' Association - Naukowi.pl in Warsaw			+	
EUSJA – European Union of Science Journalists' Associations				+
Total	**1**	**6**	**2**	**1**
Web portals				
Student's portal			+	
Education.net			+	
Forum.Nysa.PL		+		
NaszaNysa24		+		
Supernova			+	
Total	**0**	**2**	**3**	**0**

In total Nysa Science Festival ensured cooperation with 66 major units, embracing 444 units of key importance for the development of the Festival idea. The units are of regional (189 entities), provincial (79), national (61), and international (115) scope, which is shown in table 4. This condition changes each year, as the number of units from both organizational networks that join active cooperation is increasing. The Festival proved that cooperation with each unit is possible, and networks not only can be connected, but a new thematic network may be also formed, which gathers a few hundred of units pursuing one goal. Such network shows characteristics of a virtual enterprise and becomes a platform of cooperation for scattered organizations focused on consolidation and links between the processes of knowledge creation, enrichment and transfer (Perechuda K., 2008).

Tab. 4. Statement of the scope of cooperation of Nysa Science Festival with organizational networks at the regional, national, and international level
Source: author's compilation

Cooperation with organizational networks	Territorial range of entities and units								Total	
	Regional		Provincial		National		International			
	Entity	Units	Entity	Units	Entity	Units	Entity	Units	Entity	Units
Economic	8	**152**	4	**4**	1	**1**			**13**	**157**
Non-economic	17	**36**	11	**67**	7	**55**	3	**114**	**38**	**272**
Media	1	**1**	6	**6**	2	**2**	1	**1**	**10**	**10**
Web portals			2	**2**	3	**3**			**5**	**5**
Total (entity/cooperating unit)	26	**189**	23	**79**	13	**61**	4	**115**	**66**	**444**

Part II

Development and implementation of the idea of festivals in the world

4. History of development of the Science Festival

4.1. Establishment of the idea

Together with changing expectations, development of communities, new demands, etc., popularization of science requires development of tools for its implementation. These tools must change and adjust their effectiveness to new circumstances. There are different methods of science popularization, they include among others, press, radio, television, Internet popular science conferences, book studies and information brochures, specialist press, posters and billboards, lectures and presentations, thematic popular science events. One of the recognized tools for popularization of science is a science festival (Malczyk T., 1/2009).

The history of establishment of science festivals that we are dealing with now is very long and goes back two centuries. We are now speaking in terms of a specific and focused action promoting science, and not of any activities that transfer the results of research and tests that have been achieved by the human kind in general, because they date back to the beginnings of the recorded presence of the first people belonging to *(Homo)*, and *(Homo sapiens) species.* Practically every activity of our predecessors had characteristics of promotion of their accomplishments and achievements of their ancestors. It is therefore difficult to clearly indicate which actions promoted science. For this reason one can make an attempt of spotting the moment when human knowingly separated activities promoting science, and began executing them in compliance with the present understanding (Malczyk T., 1/2009).

4.2. The British Association for the Advancement of Science

Considering the basis for formation of the idea of science popularization, one should mention a certain story, which took place in the 19th century in the UK (Can T., 1989). Precisely on 27th September 1831 the British Association for the Advancement of Science was created. The first mover of establishment of the association was David Brewster, a scholar and at the same time the editor-in-chief of "Edinburgh Journal of Science". The founding meeting took place in York on 26th September 1831. Establishment of a new association was then proposed, that formulated its goal being the development of a strong impulse and further systematic activities to draw attention to the mission which science was to fulfill, removal of problems related to its development, and promotion of

establishing contacts linking scientific units with other units, including the ones from abroad. This was the first of the annual meetings of the association members that have been regularly repeated for 150 years (with a break in the war period). These meetings were the main scientific forum, where for the first time scientific achievements in different domains were presented (Chloe J., 1990). Many of them were of breakthrough importance for science.

The association started the development of scientific literature. It was also observed that there existed a need for activities concerning a review of scientific development that experts from different areas would systematically monitor and describe. The need to inform each other about the achievements in different fields of science, and therefore provide students with knowledge on what to invest in and where to start work, was also recognised. At the same time the association encouraged other British towns to join the scientific meetings, and inspired establishment of similar associations supporting science in other countries (Chloe J., 1990).

4.3. The British Science Association

On 15th January 2009, the association changed its name into The British Science Association. The association's activities have been also gradually modified. Scientists work out the new ways of transferring knowledge and results of their work. Now the primary aim of the BSA is, among others, development of communication between specialist sciences, scientists from different fields, technologies, and people of various age who are not scientists, so that scientific developments are comprehensible, possible to be used in a commercial context, and analyzed by society. At the same time, the BSA promotes social openness to science, strengthens the belief that science is the main way of encouragement and direct inspiration of older and younger people to become interested in science and technologies (Chloe J., 1990). Finally, this led to establishment of an additional program developing regional activity and information under the name *Young People's Programme* (YPP). This gave the basis for connecting young people aged 5-12, and 11-19, and promoting them as the next generation of scientists. Two additional programs for these age groups have been formed, called accordingly *CREativity in Science and Technology* (CREST) and *CREST Star Investigators*. Today, The British Science Association includes the annual British Science Festival, The National Week of Science and Engineering, and many local programs and events, as well as a comprehensive program intended for young people, students of schools and colleges.

Science festival is another step in the development of the 19th century idea of exchange of ideas among scientists, typical of The British Association for the Advancement of Science, and now The British Science Association. It constructs a specific dialogue between scientific centres and society, between science and economy, mature scientists and children and young people. Science festival is a social event characterized by various scientific activities in the form of organized lectures, exhibitions, workshops, laboratories and experiments presented in the course of the festival, as well as study tours, discussion panels, conferences. The festival is also a cultural and a sport event. All listed forms of activity have one common purpose: commitment of the whole community, and in particular the teenagers, to uncover science diversity. Each year in many festivals take place in numerous countries, and they last from a few to a dozen or so days.

4.4. Edinburgh International Science Festival – the first science festival

The first science festival under the name Edinburgh International Science Festival was organized in 1989 in Edinburgh, in the capital of Scotland (the GB). This way a new era in exchange of scientific thought and promotion of scientific accomplishments of scientists and scientific centres begun. The festival took place in April and lasted 12 days, during which the city hosted hundreds of discussions, thematic journeys, exhibitions for children, adults and the whole families. On 6th May 1989, journalists John and Ben Gribbin wrote in "NewScientist": *(...) science may finally have an impact on the British society. Today, the great city of Edinburgh saw the light, and the last month launched a science festival as an equivalent of art festivals that are already taking place (...) the festival will return in a year, and it is almost certain that it will become a constant feature of the cultural heritage of Scotland. What is most brilliant is that nobody before had thought about doing such thing* (Can T., 1989).

Along with the development of science, and the increased access to a number of discoveries and tests, as well as numerous opinion-forming comments related to science in the media, and finally due to an increased availability of information of all sorts on the Internet, the science festival has been dynamically developing and offering more and more new topics. Therefore it brings closer the most recent scientific achievements and notions to the wider public, e.g. molecular bases of food preparation, cosmetics biotechnology, neurobiology of love and beauty, etc. Practical

classes are also very popular; the participants of the festival can make experiments of different degree of difficulty that are always interesting and revealing. Such form of activity is executed by the world's science centres organized by science museums. They prepare interactive exhibitions encouraging visitors to make experiments and conduct searches. The first science centre was created as early as in 1888 in Berlin. An extremely interesting thematic trend is an interaction between science and development of culture, as well as organization of thematic conferences dedicated to the current issues and essential for the local or global community.

Owing to the direction of their development, science festivals perform an informal role in implementation of the educational program at the level preceding higher education (Fig. 3).

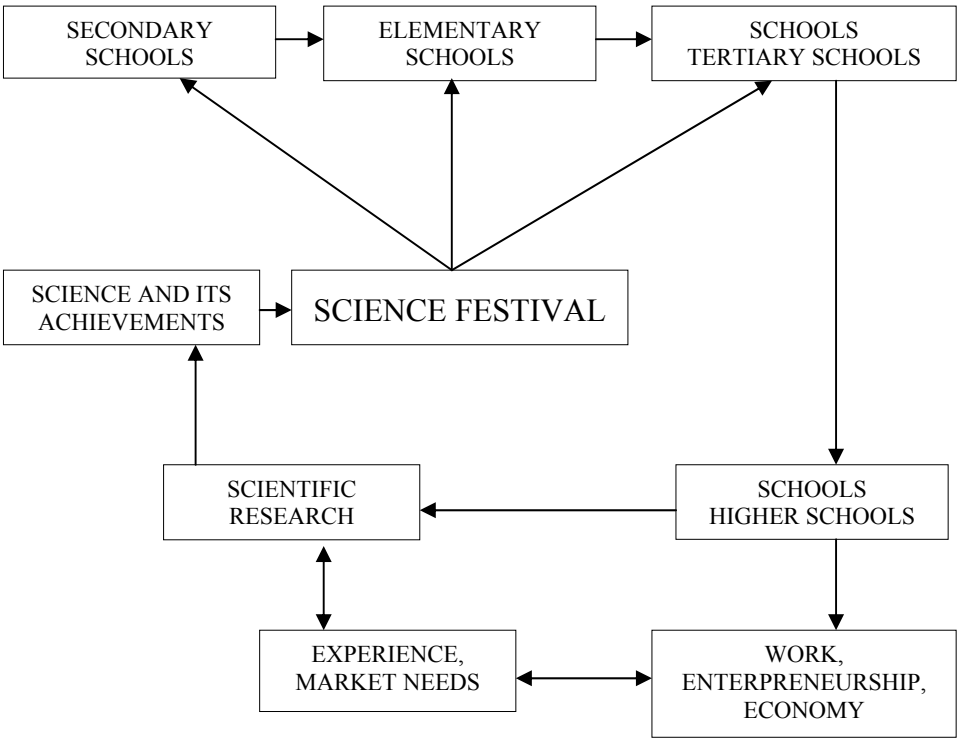


Fig. 3. Science festival and its role in integration in the process of education
Source: author's compilation

Many festival events refer to the high schools curriculum through the topics analyzed on lectures, in laboratories and workshops. These topics can be also reported to organizational committees with intention of their presentation during the subsequent science festival.

5. Science festivals in the world

The idea of science festivals is quickly spreading around the world, and embraces many countries located on various continents. Festivals are dynamically transferred not only among countries, but also continents, constructing in this way a network having one educational dimension. This "positive value" that a science festival constitutes, has no limits, recognizes no political and economic, national and religious differences, the level of development and advancement in scientific research. It therefore proves that we are one species, having the same needs, our children have the same will to live, similar expectations, possibilities to take in science, inborn curiosity and hope for a better life (Malczyk T., 1/2009).

Festivals are developing very dynamically around the world. Special attention should be paid to festivals organized on the continents mentioned below.

5.1. Africa

In 1997, the SciFest Africa was established – the first science festival in the South African Republic, that up to this moment has been organized at the turn of March and April in order to promote the culture of science in the form of a festival. It particularly concentrates on implementation of various programs related to science, technology, engineering and mathematics. The festival takes place in Grahamstown, in Eastern Cape province, and attracts thousands of participants.

5.2. America

On the continent hosting the United States and Canada science festivals have developed considerably, especially after 2000. If the need for promotion of science derives from economic development of a country, then the level of the festival is obviously very high. This is what happens in the USA and Canada, where the high level of the festival projects is guaranteed by popular scientists, people of culture and art

(Mahan T. L., 1996). Such complete understanding and support for the festival guarantee high attendance, and particular lectures and presentations are recorded and posted on the Internet. The most important festivals include, above all:

- Cambridge Science Festival (2007),
- Chicago Science in the City (2008),
- Eureka! Festival, Montréal, Québec (2007),
- World Science Festival, New York City (2008),
- SciTech Spectacular (Pittsburgh, 2009, which is based on Fairs Scientific organized since 1940),
- Sally Ride Science Festivals (2001),
- San Diego Science Festival (2009),
- Wonderfest, San Francisco Bay Area Festival of Science (1998),
- Science Rendezvous, Canada, in Greater Toronto Area (2008),
- Mastering the Mysteries of the Universe, Atlanta (1999),
- Quantum to Cosmos Science Festival, Waterloo, Ontario (1999).

5.3. Asia

The Asiatic region is characterized by a great development of science festivals. A number of science festivals have been established, whose central idea is the promotion of scientific accomplishments in the local and international scale. Thanks to such festivals, in particular countries there exists a possibility of showing the progress of science, and presenting scientific achievements that may be applied in a given country. This includes encouraging professionally active community, entrepreneurs and authorities of regions and countries to establish multi-level contacts with the international community. Science festivals perform the function of fairs, where the displayed "products" are science and its achievements. Precisely in the course of the fairs an excellent opportunity arose to get familiar with the global trends in social and economic development, establish new contacts, and – last but not least – show one's achievements. All these actions take place on the safe plane of education and science. The world of science also gains from the festival idea because in this way – by showing and encouraging participation through common play – may acquire future employees. This multi-aspect benefit is especially important for the countries aspiring to obtain economic success on the international scale.

In Asia the following festivals are organized:

- KURUKSHETRA, The International Techno-management fest of CEG, India (the UNESCO patronage, 2007),
- Pragyan, The International Techno-management fest of NIT Tiruchirappalli, Tamil Nadu, India (2008),
- Techfest, IIT Bombay, India (2009),
- Kshitij Techno-Management Fest of IIT Kharagpur, India (2004),
- Cognizance, Technology Fest of IIT Roorkee, India (2009),
- AXIS, Visvesvaraya National Institute of Technology, Nagpur, India (2001),
- Korea Foundation for the Advancement of Science and Creativity (2008),
- Science Festival for Young Generations, Iwaki, Japan (2002),
- Tsukuba Science Festival (2006),
- Tokyo International Science Festival (2009).

5.4. Australia and Oceania

A considerable geographical distance in relation to Europe, the nest of science festivals, did not make it harder for science festivals to be established in Australia and New Zealand. They thrive and are exemplary for the newly founded festivals, especially that they enjoy immense popularity among teenagers. The most important is the fact of continuation of program assumptions of the festival events and implementation of the global goals.

In this southern area the following initiatives are implemented:

- Australian Science Festival (1993) (Royce R., 1998),
- New Zealand International Science Festival (1998).

The aforementioned festivals cover a substantial part of the world, and are guided by the same purpose, namely popularization of science among teenagers, the local community, entrepreneurs, etc. Therefore one can venture a statement that the existing science festivals movement constitutes a unique value on the global scale and should be focused in a special structure associating particular festivals. Then a possibility would arise of creating a network of mutual cooperation, informing each other about different events, presenting lectures and displays with the use of Internet connection, asking questions of global character, getting to know each other, and exchanging ideas.

6. European science festivals

Festivals organized in a few dozen of European countries are perfect example of an international festival cooperation within a continent. These festivals most often fall under one organization, which gives a sense of mutual bonds, motivates to exchange experiences and opinions.

6.1. European Science Events Association

The festival movement in Europe has a long-lasting tradition which has to be respected by everyone who organizes or intends to organize science festivals. Science festival in Edinburgh originating from The British Association for the Advancement of Science particularly contributed to the beginnings of science festivals and the basic organizational assumptions. In 1997, by virtue of an agreement of six organizers of science festivals a new structure was established, associating science festivals organized in Europe (Fikus M., 2006). This is EUSCEA (*European Science Events Association*), having its registered office in Austria. The Association is based on the concept of the European scientific communication movement. Its motto is: "We give science to people" (Rebernik P., 2009).

The festival events take place in different places, e.g. in the city centre, on a railway station, in shopping centres, churches, museums, tents or in the open air in parks. Festivals are most often organized by academic units, and their program is executed by university staff, students and other entities interested in participating in the festival movement. The knowledge is transferred on lectures, theater workshops, museum exhibitions, in academic cafes, through discussions, festival conferences, workshops, trips, etc. These festivals are addressed to different groups of recipients, in particular to teenagers, the local community, the elderly, to all people interested in the issues concerning different fields of science, such as medicine, art, law, sports, economics, etc.

6.2. EUSCEA members

Currently the Association has 89 members from 36 countries. These are: Austria, Belgium, Bulgaria, Cyprus, Denmark, Estonia, Finland, France, Greece, Spain, the Netherlands, Ireland, Iceland, Israel, Lithuania, Luxembourg, Latvia, Malta, Germany, Norway, **Poland**, Portugal, Czech Republic, Russia, Romania, Serbia, Slovenia, Switzerland, Sweden, Ukraine, Hungary, UK and Italy. Among the numerous EUSCEA

members, Polish science festivals that are in the association should be particularly distinguished. This are only five entities, including, among others, the School of Higher Vocational Education in Nysa, which has been a member of EUSCEA since 2005, namely from the very beginning of Nysa Science Festival, and it still represents – as the only one – Polish vocational education (Rebernik P., 2009).

6.3. EUSCEA purpose and projects

EUSCEA has determined several goals, which first of all include: meetings between organizers of festivals and building a network of festivals, replacement of experiences and information, dissemination of the best practices models, searching for new ways of communication and new goals, participation and assistance in improving quality, assessment of the dimension of the festival, creation of new forms of activity, e.g. through programs (Rebernik P., 2009):

– EU project EUSCE X/ – analyzing European science festivals, the results are posted in *WHITE BOOK on science festivals*,
– EU project WONDERS

and participation in various festivals and conferences:

Communicating European Research in Brussels, ESOF Stockholm, Munich and Barcelona, EU presidency (e.g. Grand Palais, Paris), PCST in FOR – now in Göteborg/Copenhagen, Science Festival in Beijing, AAAS in the US, etc. (EU, 2008).

7. Science festivals in Poland

7.1. The first science festival

The idea of science festival from Edinborough was positively accepted in Warsaw. The initiators of the first science festival in Poland were the professors of the Warsaw University. Therefore in September 1997 the first event of this type took place. Nobody had organized a similar enterprise so far, and thus this project pioneering in the scale of our country set forth a new quality in popularization of science in Poland. One should also mention the fact that the organizers of the science festival of the Warsaw University in Poland were also in the establishing group of EUSCEA organization, which was founded in the same year (Fikus M., 2007).

Since then new science festivals have been systematically organized in Poland. This has been particularly evident in large academic centers,

such as: Wrocław, Kraków, Toruń, Gdańsk Katowice, Rzeszów, Lublin, Łódź, Szczecin, Koszalin, Siedlce. Gradually, new academic centres have been added, to which particular attention has to be paid since they represented state higher vocational education. This moment has been expected with impatience, as these universities are very young, they teach students on the first level of education, i.e. engineering and bachelor's degrees. The most important thing, however, is that these are didactic, and not scientific and didactic centres. Here science is defined in a slightly different manner than in scientific units. It has a special message, as in these centers science and scientific achievements are fundamental. The mission of higher vocational schools is training with a very substantial offer of practical training, they are adjusted to the needs of the local labour market, perfectly cooperate with the social and economic environment and the local authorities, quickly react to changes in the demand for different directions of education, operate in the foreground of academic universities (Malczyk T., 1/2009).

7.2. Polish science festivals

Today in Poland there are many science festivals. Some of them are organized by single units, and others by university and institution associations established specifically for this purpose. Several teams have also allowed participation of higher schools. The science festival then gains a different dimension, it becomes a "value" of a given region or province. It acknowledges no economic or political divisions, it is a neutral platform the only aim of which is promotion of science among recipients who need it most for their proper growth, namely teenagers.

However, as time goes by, the festival is turning into a multi-dimensional event, it enters the social and economic life, asks for appropriate treatment of science through writing about it, as well as for greater financial support, arouses ambitions and introduces healthy competition to academic centres. They are striving to equip their workrooms at a high level, host interesting and unique displays and experiments, and all of it is favourable for what is the most important – mental development of society, and particularly of teenagers. At the same time, it reinforces the knowledge and skills of entrepreneurs, and provides a possibility of presenting the accomplishments of enterprises, especially at the level of implementation (Fikus M., Firmhofer R., 2006).

The statement presented on the opposite page has been prepared this year and presents the number and the range of science festivals organized in Poland in 2009 (tab. 5).

Tab. 5. Specification of festival events in Poland organized by different units
Source: author's compilation

No.	Name	Festival Date	Organizers
1.	I Chorzów Science Festival	4-7 March	Universities in Chorzów
2.	1st Science Day	7 March	The State Higher Vocational School of John Paul II in Biała Podlaska
3.	3rd Science Festival	20–24 March	The State Higher Vocational School in Piła
4.	5th Science Festival	23-29 March	Higher School of Business in Dąbrowa Górnicza and Municipal Office in Dąbrowa Górnicza
5.	1st Science Festival	23rd March – 3rd April	The State Higher Vocational School in Skierniewice
6.	1st Gniezno Science Festival	3rd April	The State Higher Vocational School in Gniezno
7.	3rd Science Festival "Time Machine" Piła	20-24 April	The State Higher Vocational School in Piła
8.	7th Podlasie Festival of Science and Art	21-28 April	The Fryderyk Chopin University of Music in Warsaw, Department of Instrument and Educational Studies in Białystok The State Higher Vocational School in Suwałki, The State College of Computer Sciences and Business Administration in Łomża (since 2008)
9.	9th Festival in Toruń	23-26 April	Nicolas Copernicus University
10.	9th Science Festival in Kraków	13-16 May	The Jagiellonian University, The University of Science and Technology, the Academy of Music, the Academy of Fine Arts

11.	7th Science Festival in Opole	23-24 May	Opole University, University of Technology in Opole, Higher School of Banking, School of Management and Administration, the State Higher Medical Vocational School in Opole (since 2009), and others
12.	12th Poznań Science Festival	25-29 May	Polish Academy of Sciences, Higher School of Safety, Higher School of Trade and Commerce, Higher School of Business, and others, and institutions such as libraries, associations
13.	7th Baltic Science Festival	28-31 May	The Polish Naval Academy in Gdańsk, Gdańsk University of Technology, Gdańsk University, and other
14.	10th Festival of Science and Art in Beskidy	29-30 May	University of Bielsko-Biała, The Higher School of Banking and Finance in Bielsko-Biała, the Academy of Fine Arts in Katowice, the University of Silesia in Katowice, and others
15.	13th Scientific Picnic of the Polish Radio and Copernicus Science Centre	30th May	Participation of ca. 250 institutions from Poland and abroad (e.g. Austria, Belgium, Bulgaria, China, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Greece, Ireland, Lithuania, Morocco, Portugal, the Federal Republic of Germany, Russia, Slovakia, Slovenia, USA, Sweden, Hungary, UK, Italy)
16.	6th Science Festival in Zielona Góra	7-8 June	University in Zielona Góra and web education portals, cultural institutions in Zielona Góra, companies, associations and industrial firms and plants, and this year also the Polish Army
17.	**5th Science Festival in Nysa**	**15-17 September**	**The School of Higher Vocational Education in Nysa (PWSZ)**
18.	10th Science Festival in Kielce	15-30 September	Jan Kochanowski University of Humanities and Sciences in Kielce, Higher School of Skills, Higher School of Economics and Administration, Higher School of Information Technology and Management in Rzeszów, and other universities, as well as primary and high schools

19.	12th Lower Silesian Science Festival	Wrocław 18-23 September Wałbrzych 8-9 October Ząbkowice Śląskie 8-9 October Jelenia Góra 15-16 October Bystrzyca Kłodzka 15-16 October Legnica 24-25 September	University of Wrocław, Wrocław University of Technology, University of Economics, Wrocław Medical University, Wrocław University of Environmental and Life Sciences, university of Physical Education, the Academy of Fine Arts, L. Solski National Theatre University in Kraków, satelitte campus in Wrocław, K. Lipiński Academy of Music, Pope's theology Department, Land Forces Military Academy, The Institute of Immunology and Experimental Therapy of PAN, the Institute of Low Temperatures and Structural Research PAN in Legnica, and The State Higher Vocational School in Legnica
20.	6th Festival in Lublin	19-27 September	Lublin universities, among others: Polish Academy of Sciences, the Catholic University of Lublin, Lublin University of Technology, and the National Archives and Museum in Lublin
21.	13th Science Festival Warsaw	15-16 October	Universities, among others: Warsaw University, Warsaw Agricultural University, the Academy of Fine Arts, Polish Academy of Sciences
22.	8th Festival of Science, Technology and Art in Łódź	15-16 October	Łódź Science Society
23.	1st Science Festival in Sandomierz	19-27 September	The Higher School of Humanities and Life Sciences and the State Higher Vocational School in Sandomierz
25.	1st Olsztyn Days of Science and Art	21-25 September	University of Varmia and Mazury
26.	9th Western Pomeranian Science Festival in Szczecin and Koszalin	24-25 September	Szczecin University, Pomeranian Medical University, Sea Academy, Szczecin University of Technology and Agricultural University, and non-public schools and other scientific institutions
27.	3rd Festival of Science and Art in Olecko	25-27 September	Mazury University in Olecko

28.	11th Festival of Science and Art in Siedlce	15-18 October	Podlasie Academy
29.	1st Festival of Word	20th October	The State Higher Vocational School in Włocławek and Włodzimierz Gniazdowski Impresaryjny Theatre in Włocławek

Polish science festivals may be organized by various entities, however, always with a particular contribution from the part of universities. Depending on the size of a festival, its structure may be presented in breakdown into the status of a given academic unit, and share of people and external organizations (Fig. 4). It discloses the tremendous opportunities of development of science festivals, as well as lack of limitations as to participation of any entity that wants to contribute to the implementation of the festival movement mission.

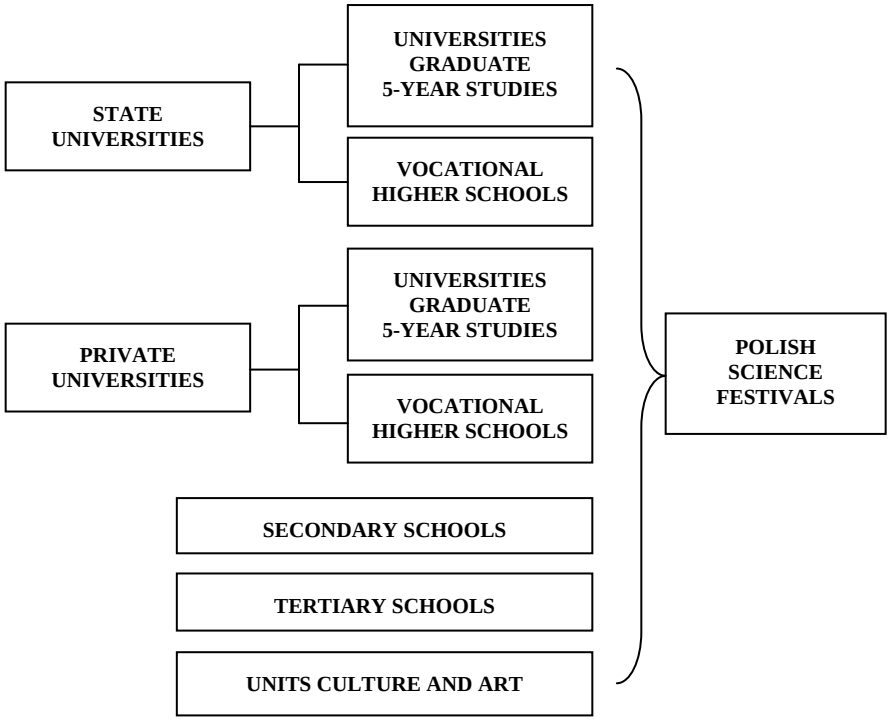


Fig. 4. Structure of science festivals organized in Poland
Source: author's compilation

Part III

Nysa Science Festival as an instrument of knowledge diffusion in the region

8. Nysa Science Festival (NFN)

8.1. Science festival – definition, scope of impact

According to the definition, festival (lat. *festivus - gay, festive*) is a number of artistic events, usually of one type (e.g. film, music, theatre), which give a review of accomplishments in a given domain, organized at one time and under common name, often in the form of a competition. This is at the same time an event intended to present in an accessible and interesting manner scientific achievements, however, in the aspect of their practical application. Only the knowledge that is fully attainable for everyone and may be easily verified can encourage people to further explore, search and raise doubts as to the things that had been deemed obvious so far. Additionally, the word "science" refers to the autonomous part of culture used for explanation of functioning of the world in which human lives. Science is knowledge and the way of its collection, thus it perfectly fits in the idea, intention and definition of a high school (Malczyk T., 2005-09).

In Great Britain, science festival is defined as a diversified scientific event that includes lectures, exhibitions, workshops, demonstrations and experiments, discussion panels, cultural events, etc., which involve the audience in uncovering various sides of science (Gareth E, 2007; Griggs J., 2009). The first part of a festival often involves conversations on multiple topics and debates on a given issue conducted by excellent figures, while the second part is a series of events promoting science, addressed predominantly to families (Hannan M., 2009). Science festivals promote contemporary science and at the same time recall key achievements of great scientists whose discoveries expressly contributed to history of human development. One example may be The British Science Festival, that in 2009 drew attention to the 200th anniversary of Carol Darwin's birthday. Darwin became a patron of the festival, especially that during his life he was not only a great scientist, but he also participated in the works of the present British Science Association, that started promotion of science which later became science festival (Ellis A., 2009). Science festival teaches creativity, openness, which leads to a number of changes or updates of the earlier adopted definitions and conducts in knowledge management. This applies particularly to the sciences that are dynamically changing along the development of advanced methods of research, computer technologies, instruments, software, etc. (Reiss M., 2008). Science festivals also promote achievements of students who implement the program of knowledge diffusion directed

to children and teenagers (Sanders H., 2008). Such activities attract teenagers' interest and build up their knowledge, but at the same time consolidate students' skills. It is a tremendous challenge − didactic and educational (Roller W., 2009). Many festival programs are focused on encouraging participation of defined target groups − specific recipients. Examples of such activities are programs addressed to girls, who, according to some researchers, should play a more significant role in science (Lee N., 2001; Felix K, 2008; Scott R., 2005).

In the U.S.science festivals are regarded as a multicultural, multi-generation, and multi-disciplinary festival of science organized by more than 500 scientific and engineering organizations from across the USA (Bock L., 2010; Chamberes H., 2010). This event is treated as a good opportunity to present one's skills in practical classes and scientific activity, with a touch of fun, in order to inspire next generation of scientists and engineers (Sullivan K, McClinton R., 2010). Well-known guests are invited to participate in festivals, who join presentations and discussions (McClatchy and Tribune, 4/10/2010; Feder T., 2009). A very interesting form is attributed to science festivals limited to given issues, e.g. Santa Monica Mountains Science Festival (USA), which has just been launched this year. The purpose of the festival is to provide a close-up of the world of nature characteristic for Santa Monica Mountains National Recreation Area. Festival is organized by: National Park Service and Natural History Museum (Repanshek K., 2010; McClatchy − Tribune, 4/14/2010).

Due to great mobility of information and ideas, many forms of festival events are similar in different countries, covering distant continents. It proves an equal level of science popularization that evolves independently on different continents, and suggests similar needs related to the knowledge diffusion. Ideas are also reviewed and adopted to the needs of the recipients (Enserink M., 2004). The idea of festival organization similarly transferred from Genua in Italy to New York in the US with its ambitions of creating the capital city of science there. The Science Festival Foundation was appointed, and it has gathered the amount of $ 5.2 m from a number of donors including, among others, the Sloan Foundation and the Rockefeller Foundation (Souccar M. K., 2008; Musser G., 2008).

The science festival in Australia is organized in order to bring science closer to society, therefore it involves many companies, scientists, educational organizations, who together participate in preparation and implementation of the festival (Brown P., McLean M., 2009).

Festival movement is constantly spreading, gradually covering more and more countries, including United Arab Emirates. Sharjah University in Dubai organizes a festival entitled *Basic Sciences and their Role in building our society*, which has become the definition of this project (Sharjah Education Council, 2010).

Science achievements provided by knowledge streams formulated by science festivals are also used in a broader context. They have contributed to combining traditional knowledge from Asia with modern science and technology, in order to create a better world where human kind and nature can coexist in harmony. Such a project was started in 2005 during EXPO in Japan. The program was sponsored by Japan Science Foundation, which gathered together students, scientific employees and businessmen for the purpose of "fun science" presentation and promotion of wonderful scientific and technological innovations. The festival covered China, Korea and the USA, and was perceived as an opportunity to understand science and develop international scientific education (Blades D., 2003).

Regardless of who organizes science festival and in which country, it has the same message and a very similar definition. It is a spontaneous idea, lasting as a result of the belief that science should reach everyone (Gillis C., 2009). In particular, it is directed to young people who are perceived as potential candidates for scientists, as well as to people using most recent scientific achievements to perform tasks significant from the point of view of the society, state, region. This great initiative coming from the human need to develop is becoming a key instrument of knowledge management at the world level, and is a natural way of knowledge diffusion to people and organizational networks (VanderVeen D., 1995). A lot of attention is paid by science festivals to the development of sciences which are difficult but necessary for the development of human thought and technical progress. An example is the festival's care for the development of mathematics; it especially encourages teenagers, showing its most practical side (Gordon E., Cynthia F. M., 2008).

Talking about science festival, one should emphasize the role of having knowledge being the basis of the society, playing a key part in shaping the learning process (Peterson F. J., 2009), and separation of knowledge among various organizations (Huysman M., Wenger E. and Wulf V., 2003). This is particularly important when analyzing the level of education of the professionally active society (Barab S. A., Kling R. and Gray J. H., 2004; Garrick J., Usher R., 2000), which should catch up with changing labour market needs and interests of the region, state or

community of states. A thesis formulated in such a way significantly expands the importance of science festival, the festival is perceived as one of the basic instruments of knowledge diffusion, which is compatible with global and network understanding, and thus with the implementation of assumptions of the current education system. One should mention here the model of knowledge strategy network, which may be applied in education, business, scientific organizations. This strategy is based on the following principles (Peterson F. J., 2009):

1. educational programme – pupils, students, teachers, entrepreneurs are the actors of a global network,
2. creativity – interdisciplinary theoretical and practical knowledge, interdisciplinary problem solving,
3. science – scholar, multidisciplinary teams, creation of scientific environment,
4. practice – science, shaping the practice based on regional and international entrepreneurship,
5. communication and cooperation – direct dialogue and online conversation, meetings, designs, presentations, conferences,
6. strategic role of university – manager in the educational network and mutual relations, or division of this role between several academic centres,
7. state structure and administration – academic needs, management of common project,
8. division of strategic intentions and results – creation of new knowledge and practice, innovations, scientific advancement as a leader in many fields, especially in entrepreneurship,
9. measurable goals – for the network and each project,
10. achievement of strategic goals and impact – creation and dissemination of new knowledge and practice, innovation and scientific advancement in the form of leaders in many fields, including the economic ones.

Science festivals are fully consistent with the model of knowledge strategy network. They execute different principles on a diverse level of scientific progress, becoming an instrument that, influencing already the youngest generation, very rapidly contributes to creation of knowledge-based society. It disseminates principles, familiarizes with and indicates sensibility of the model of strategic network of knowledge management. Network must constantly develop, follow scientific achievements, otherwise it ceases to play its role of an effective instrument of knowledge diffusion (McDermott R., 2001).

8.2. Nysa Science Festival – yesterday, today and tomorow

Our university aspires to attain such definition – the School of Higher Vocational Education in Nysa (PWSZ in Nysa). Schools of such status should bring closer in a clear manner scientific achievements, encourage unassisted exploration of its secrets, endorse self-education, facilitate making decisions as to what to do in one's life, what occupation to choose, etc. Vocational schools which provide education on the first level (engineering and bachelor's studies) thus perform a special and responsible function, and are another – on a higher level – step of professional and scientific career (Malczyk T., 1/2009).

Our university possessing highly qualified and experienced teaching staff, who in the majority of cases come from a well-known and reputable scientific and didactic centres, guarantees high level of education. Our teaching standards correspond to the Polish and European ones, which is confirmed by the National Accreditation Boards visiting our Institutes. However, the best recommendation are our graduates, who continue their studies at Polish and European universities and polytechnics and are doing very well.

Disposing of such basis, we decided to organize a science festival in 2005 at our university. Nysa Science Festival is a popular science venture (Malczyk T., ed. 2008). It is an event organized during the Polish Day of Science announced by the Minister of Science and Higher Education. The purpose of the festival is to promote science – in the broad understanding of such term – which in particular concerns students of the final high school grades. We cooperate with all district schools of tertiary education with regard to creation of a program of deliberate choice of future educational and professional career by students of the last high school grade. This is particularly important in the light of the new matura exam. The purpose of the festival is thus making students familiar with the academic atmosphere, inspiring their interests, and bringing assistance in their choice of direction of further studies.

According to the idea of festival movement, the task of the festival in Nysa is a broadly understood promotion of science and its accomplishments, and indicating utilities and benefits that come from the fruit of science in everyday life in a micro-and macro-scale of application. At the same time the School of Higher Vocational Education School in Nysa puts emphasis on promoting the attitudes that are to spark young people's willingness to discover – learning. These attitudes are to make young people question things that are considered to be obvious, and seek new interpretations, new solutions and themes that can shape a young

person, and at the same time become the sense of his or her whole life. Such idea is pursued by the School of Higher Vocational Education in Nysa (PWSZ), and Nysa Science Festival is exactly a tool for its implementation (Malczyk T., 15.09.2009). This event does not only cover the three days of the festival duration, but is an all-year cooperation with secondary and tertiary schools, and the city and district environment, including entrepreneurs. Days of the festival are the summary of an all-year cooperation. We turned to high schools with a suggestion of initiating close cooperation in the field of promotion of science. One outcome of this action is participation in the festival and presentation of school accomplishments of high schools' groups of interest and student self-governments. Schools responded very enthusiastically to our appeal, and appointed their representatives. Scientific and cognitive achievements of teenagers should have its continuation in the student life. A further stage of this cooperation is enabling the interested students to participate in the works of student scientific circles operating at the School of Higher Vocational Education in Nysa (PWSZ in Nysa). We already maintain such cooperation (Malczyk T., 1/2009).

The united Europe and our close vicinity to the Czech Republic make us think about expansion of the festival idea at the border region, and getting the youth from Czech Republic's high school interested in participation in the science festival.

8.3. University of Thrid Age

In our activities, we also try to integrate the persons who are not directly interested in studies, and who are already fulfilled in terms of professional life. We are in constant cooperation with the community in Nysa concentrated at University of the Third Age, at the same time subscribing to the international movement of learning throughout the whole life. We believe that such cooperation shall produce an appropriate example to follow for young people, according to the principle of Isocrates, who said that: "wisdom is the only worth which does not lose its value".

8.4. Entrepreneurs

The next group of people to whom we address the idea of the festival movement are local entrepreneurs. In this way we are trying to point to utility of science and its accomplishments. This action complies with the national action promoting innovation, research, development and translation of science into the actual needs of the labour market (Fig. 5).

We derive great satisfaction from the beginning of our cooperation with entrepreneurs attracted to Nysa Science Festival, who in its course became acquainted with the offer of the School of Higher Vocational Education in Nysa (PWSZ), and on this basis determined their own needs (Malczyk T., conference 2008).

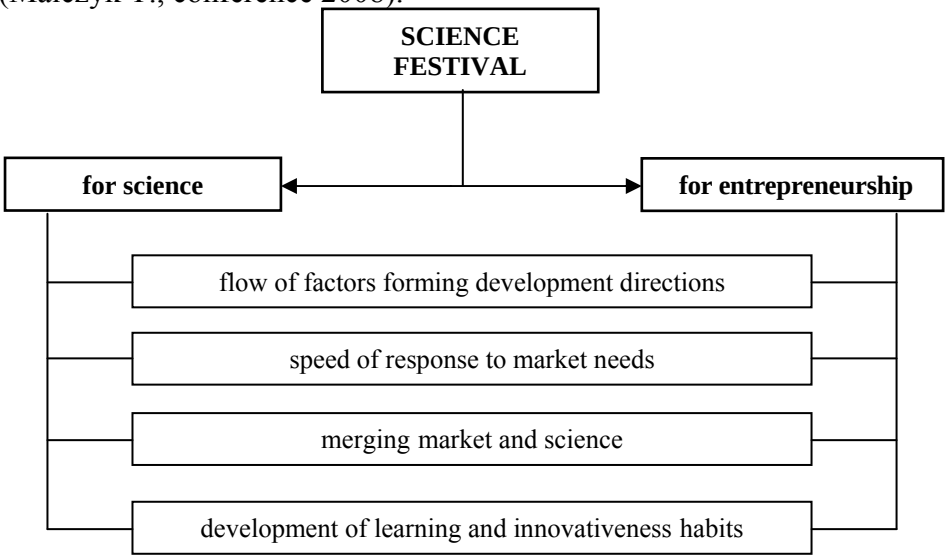


Fig. 5. Importance of the science festival in the aspect of development of science and entrepreneurship
Source: author's compilation

Nysa Science Festival is a "Grand Open Finale" accessible for everyone, in the course of which the listed groups of interest and environments represented by them get to know each other and integrate. The aura developed in this way gets the parties closer to each other and guarantees further cooperation on the plane of science, its creation and effective use. The festival is composed of high school students who – encouraged and convinced about the need to learn and discover – obtain appropriate education, but it is also made of university students who promote their knowledge and skills among entrepreneurs, and can count on attracting their interest, and in the future – on good work.

8.5. Sport

During the Nysa Science Festival we also promote education by participation in numerous sports competitions. We want to develop a program of all-year inter-school sports competitions in different age categories, the finals of which will take place during the championships organized in the course of the science festival (Malczyk T., 2005-09).

8.6. Cooperation with high schools

Our activities are based on constant cooperation with the Education Commission of Nysa District and with high schools directors. A representative of Opole Education Superintendent or a visitor for higher schools in our district have been visiting us already for two years; both of them are very interested in our festival offer, they visit in person different institutes where classes and festival displays have been held. We gladly accepted their positive opinion about the science festival and their promises of cooperation in preparations of its subsequent editions. We find the sense of our actions confirmed also by numerous positive comments from Nysa environment that we hold in high regard. The festival was also favourably described by the press, radio and television, e.g. Kurier TVP 3 (Malczyk T., conference 2008).

Nysa Science Festival is a neutral and at the same time academic educational and communication platform connecting many environments which form and shape socio-economic reality of our region (Fig. 6). It gives us the possibility to coordinate works over solution of many problems of educational, or even social nature (Malczyk T., 1/2009).

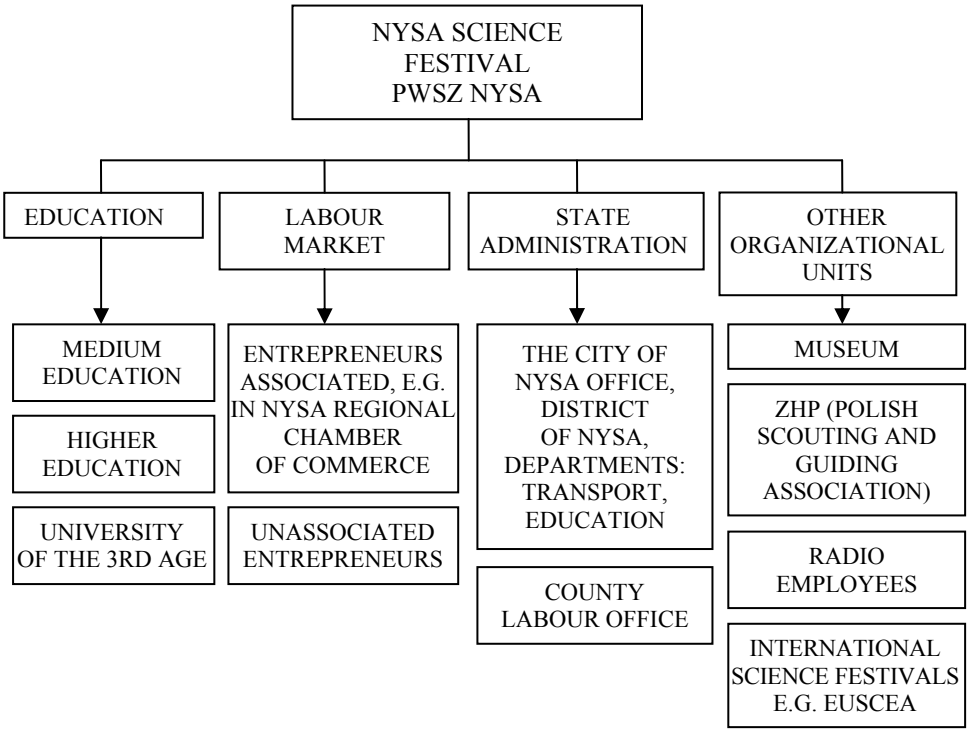


Fig. 6. Connections between the environments participating in Nysa Science Festival
Source: author's compilation

8.7. EUSCEA and Nysa Science Festival (NFN)

Nysa Science Festival from the beginning of its existence has been compatible with the idea of the Science Day announced by the Minister of Science and Higher Education. The School of Higher Vocational Education in Nysa (PWSZ in Nysa) is the first university of this type in Poland, which initiated and has been developing the idea of festival movement (Malczyk T., 1/2009). We are a member of an elite group of four universities from Poland that form the international festival movement EUSCEA (*European Science Events Association* with the seat in Vienna), associating 89 members from 36 European countries. For as long as 4 years, the logo of our Alma Mater has been present on European posters, promoting not only our university in Nysa, but also Nysa as a town, and the region. Thanks to our membership in EUSCEA, we have had a chance to promote Nysa Science Festival, and at the same time also our town and province in Brussels. In the following year we are planning to take part in a program prepared by EUSCEA, entitled *WONDERS*, which aims at making countries associated in the festival movement familiar with the most interesting festival achievements of a given university from a specific country. One outcome of this program shall be the verdict of the competition commission indicating the best and the most interesting science festival. It is an excellent promotion of accomplishments for any university, and the town along with the region.

8.8. Closer to each other

Nysa Science Festival has occupied a fixed position in the agenda for September in Nysa and in the region. It effectively sustains the tradition of meetings and open exchange of thoughts, definition of needs, whole-hearted involvement in what is sometimes completely unknown and incomprehensible at the beginning. The School of Higher Vocational Education in Nysa determined its objective of fulfillment of academic mission to the whole extent. It directly speaks of openness and transformation of things regarded as difficult into things that are obvious and indispensable for existence today and the future. We have decided that science and its achievements can be presented in a simple and clear manner, we have also depicted knowledge as something so great that it is able to surprise and become useful for everybody regardless of their worldview, experience and age, and at the same time we have not done anything recealing or new. We observed the commitment of our guests, asked what they would like to see, what they liked and what they would

change in the next festival. We finally asked whether they saw any sense in organizing science festival in our town and region. We did not need to wait long for the answer, it appeared along with another group of young people, adults and entrepreneurs visiting academic lecture halls. Some students of high schools grow up under the safe wing of their Alma Mater in Nysa, and they mature together with it, expanding their capital of knowledge and experience (Malczyk T., 2005-09).

Every school, and higher school in particular, is an organism that directly reacts to social needs, the needs of the labour market, economic policy of a country, and even international policy (Marszałek A., 2009). Today we are growing up in a very rapidly changing political and economic conditions, we are involved – more or less knowingly – in shaping a new trend of globalization. It makes us feel closer, but closer to what? The European countries have preserved their autonomy, policy, national characteristics, history, education or identity. Together, but at the same time separate. Everything suggests that we are first of all closer to each other as people. There is no room left for complaining about the language barrier, distances, currency, legislation, or existence of boundaries. "Human closer to another human" – precisely in such spirit we implement the science festival. We unite persons of all spheres of life, with various interests, capabilities of defining themselves and their environment, different political and religious views – festival without boundaries, for everyone. The name itself proves a wide vista on the festival idea, "Nysa" means our, common, created by us and for us. This is time for common play and a scientific Hyde Park in Nysa. Every year we invite everybody, and particularly schools, to present their accomplishments, interests, construct dialogue between schools, businesses, economy, based on a university platform. The festival lasts the whole year in the form of "open door" events, lectures, displays, laboratory and physical exercises, seminars and conferences, and during the three sunny September days only the apogee of the whole event is staged, the grand finale takes place that summarizes the year-long cooperation with all the concerned environments (Malczyk T., 1/2009). The idea of festival movement is so understood also by the unified Europe, and it subscribes to construction of globalization i.e. being closer to and for each other (Fig. 7).

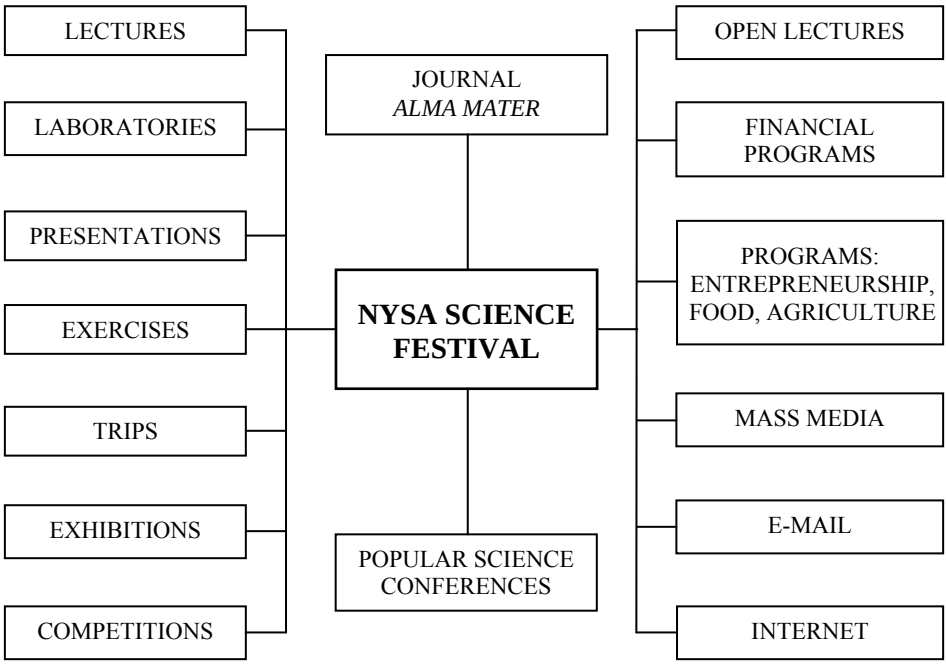


Fig. 7. Forms of implementation of Nysa Science Festival
Source: author's compilation

The place of Nysa Science Festival on the map of the global movement is presented in Figure 8. It presents a network of this movement with breakdown into continents, with particular focus on European countries, including Poland and Nysa festival organized by the School of Higher Vocational Education in Nysa. The idea of festival movement is rapidly transferring onto particular continents, covering more and more countries by its scope. This process is particularly strong in Europe and America, where the greater number of science festivals is organized. In each country a network of festivals is created; festivals are most often organized by universities, but also by associations acting in the name of science popularization. Some festivals are also combined with promotion of art, engineering, energy saving policy, etc. It suggests an unlimited range of the mission of this movement that actively adapts to the global and regional needs. It implements the mission of linking continents, countries, and nations in order to popularize science and education, and construct capital of knowledge and knowledge-based society.

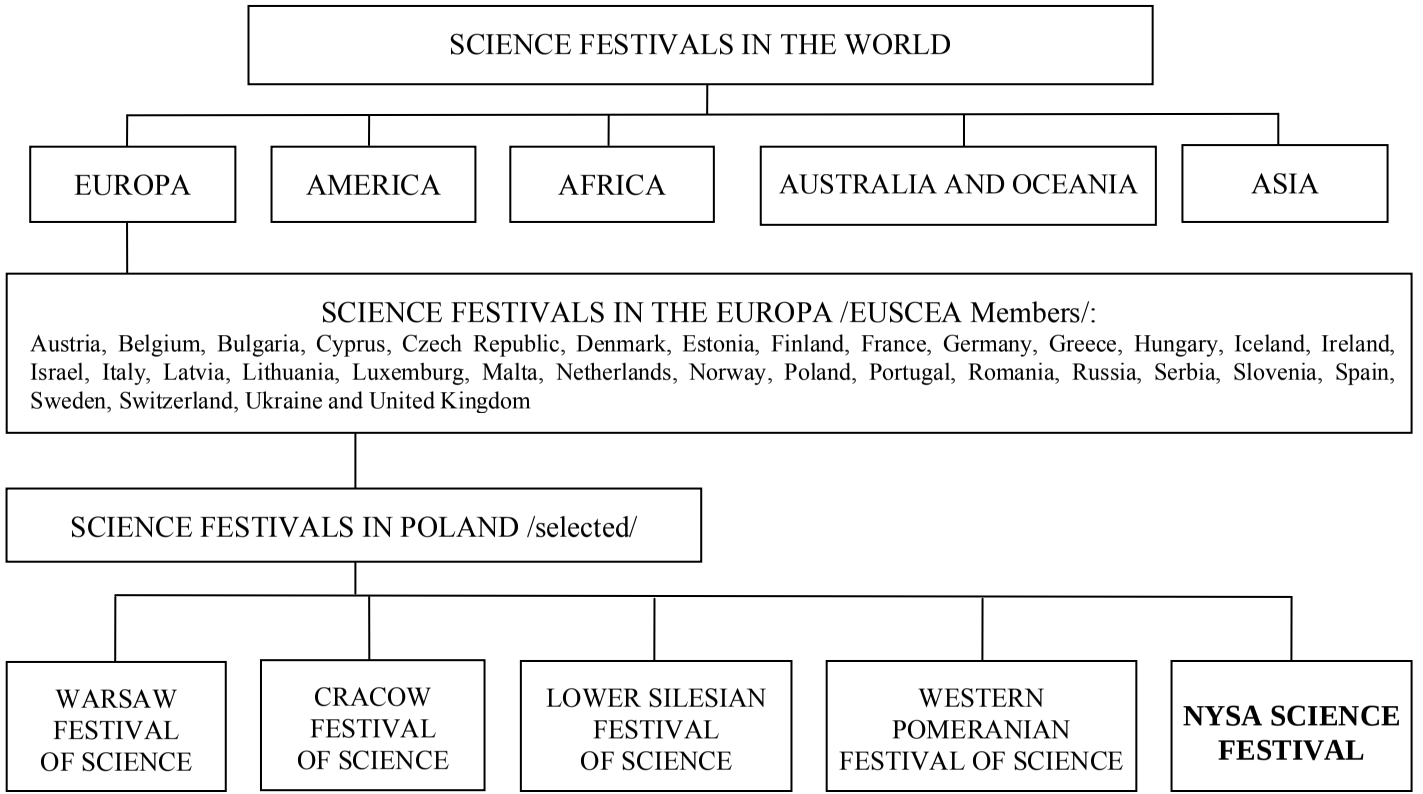


Fig. 8. Global festival movement
Source: author's compilation

8.9. Science festivals in Nysa

8.9.1. I-IV Science Festival (2005-2008)

The idea of organizing science festival by the School of Higher Vocational Education in Nysa (PWSZ in Nysa) arose at the beginning of 2005. In September that year the 1st Nysa Science Festival was organized thanks to the great commitment of the Organizational Committee of Nysa Science Festival (Malczyk T., ed. 2008). The festival took place during the program entitled *Polish National Day of Science*, implemented by the Ministry of Science and Higher Education. Organization of the festival in Nysa was preceded by establishment of contacts with administrative and educational environment of our region, presentation of the festival program assumptions and plan. The idea was welcomed with great interest on the part of all the involved, especially the municipal and district authorities. In our region no event had been organised before that would be directed not only to high school students, but also to the local community. The festival was organized in the city centre, where at all times people were talking about science, its practical side and application. This event attracted many town citizens in all age groups (Malczyk T., 1/2009).

Soon after the end of the first edition, we started preparations for next festival, which was even greater and more interesting. Every year we invite all persons interested in participation in the festival, but at the same time we welcome everyone who wants to co-create it. The festival has the word "Nysa" in its name, which means: our common.

Each year the festival hosts more and more people, including teenagers, and we have noticed to our satisfaction that it has become an important event in our region, as it constructs a new academic identity of high substantive and emotional value. More and more people participate in the following festivals, and their number is growing by 500 persons every year, e.g. in 2008 there were over 3 500 people, and in 2009 – more than 4 000. Non-academic units are also getting involved in organization of the festival, e.g. the Museum in Nysa, the Amateur Radio Association, the Polish Scouting Association.

On the part of the university all organizational units participate in the festival by preparing the program.

Each edition of the festival has a new motto implemented through a number of educational programs or the Festival Popular Science Conferences.

So far the following have been organized:

- 1st Nysa Science Festival, 22-23 September 2005,
- 2nd Nysa Science Festival, 21-23 September 2006,
- 3rd Nysa Science Festival, 20-22 September 2007,
- 4th Nysa Science Festival, 17-20 September 2008,
- 5th Jubilee Nysa Science Festival, 15-17 September 2009,
- 6th Nysa Science Festival, 14-16 September 2010.

8.9.2. 5th Jubilee Nysa Science Festival 2009

5th Jubilee Nysa Science Festival lasted three days, from 15 to 17 September 2009. The festival permanently entered the calendar of events in our region, and the logo of the festival became fixed on the Nysa Market. It proves the university's openness to cooperation with all environments in the town. 5th Festival consisted of many recommendable lectures, displays, laboratory classes, and sports competitions. In total the university in Nysa prepared nearly 100 different forms of activity intended for students of secondary and tertiary schools and the local community.

Almost 4 000 people took part in 5th Festival, these were in particular representatives of schools from the region of Nysa. However, special attention should be paid to the fact that the idea of our festival has also reached beyond Opole Province. This year we hosted students from Radomsko – Silesian Province and Bystrzyca Kłodzka – in Lower Silesia Province. More than one hundred teacher visited the walls of the Alma Mater in Nysa along with the young people. This was a great honour for us to welcome the festival participants, and also exceptional encouragement for preparation of another edition. By participation in interesting classes interest in scientific achievements – of useful science – is born; this interest most often remains active for life, and is a source of strength and motivation for work on one's self.

In this way we define the main idea of the festival, and do our best to prepare a new and even more attractive offer year by year. The whole university took part in the festival events. Employees and students of the following institutes: medical, technical, institute of humanities, arts, as well as employees of other organizational units were involved in preparation and realization of the festival. All in all a few dozen people actively created this special Nysa Science Festival. The festival also welcomed non-academic units – some of them participated in the festival for the first time – the Museum in Nysa, the Amateur Radio Association,

the National Bank of Poland, and scouts from the Polish Scouting Association in Nysa. Through their participation, the festival could participate in the promotion of popular science activities to even a greater extent (Malczyk T., 1/2009).

Traditionally the festival started with another Festival Popular Science Conference, this time devoted to the system of nutritional education. During the conferences, matters concerning healthy nutritional habits essential for every human being were touched upon. The results of the research conducted by the Dietetic Institute of the State Higher Vocational School in Nysa that also embraced schools secondary students and targeted nutritional education of students were presented. Festival conferences always refer to problems of great importance for communities, and build awareness and sense of responsibility for realization of resolutions presented during the sessions and discussions.

The following institutions took patronage over 5th Festival: the Minister of Science and Higher Education, the Director of the Institute of Food and Nutrition, the Director of the National Institute of Public Health, the Province Governor of Opole, the Marshal of Opole Province, the Opole Education Superintendent, the National Health Fund, the Provincial Sanitary Inspector, the Director of the District Sanitary and Epidemiological Station. The festival was also supported by the Mayor of Nysa and the Nysa Distric Foreman. Our festival was covered in newspapers, web portals, radio and television. Detailed information related to each festival and their summary are published in special issues of "ALMA MATER", a periodical issued by the State Higher Vocational School in Nysa.

The festival is an event with two basic pillars: the festival participants, whom we would like to thank very much for their interest, trust and willingness to get to know the secrets of knowledge, and the State Higher Vocational School's employees, whose passion and commitment allow preparation and implementation of the festival.

Each participant of the Festival receives an anonymous questionnaire, thanks to which they may take a stand on a lecture, or an exhibition in which they have taken part. At the same time, participants are asked to provide a summary of their stay, observations and comments. We also ask our guests to use the questionnaire in order to share their proposals concerning the following festival. We consider these proposals as we can, in order to successfully implement them during the following festival (Malczyk T., 1/2009).

8.10. Knowledge management and science festival

Nysa Science Festival within the five years of its existence on the local and provincial market, has worked out a structure of knowledge management based on implementation of the festival idea. This structure indicates strong connections with the levels of knowledge management in the global aspect (Fig. 9).

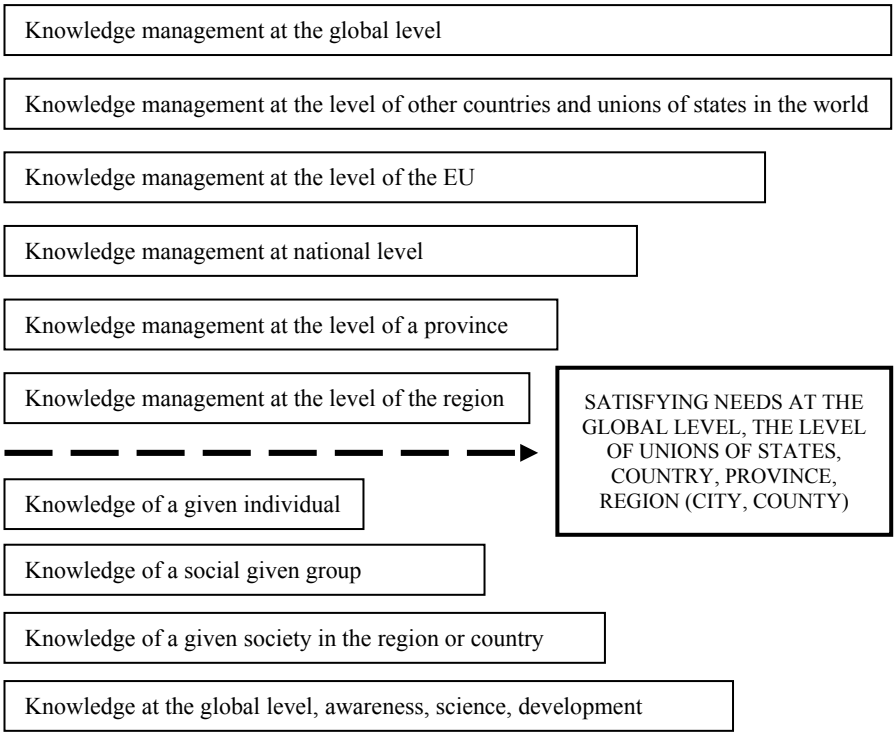


Fig. 9. Knowledge management on particular levels
Source: author's compilation

Development of this scheme provides the sense of existence to human community that forms the conditions for development of different countries. Due to the fact that the needs arise, which on the basic level of existence of human and a given nation do not differ among themselves, a problem of management of knowledge and skills in the global aspect surfaces. This management creates global solutions that may be used by all. The definition of needs and indication of the manner of their fulfillment is always based on knowledge and experience. Skillful coordination and division of tasks between different international

structures, including states with their administrative system, render the possibility of faster and better preparation for satisfying the current and predicting the future needs. Thanks to that, there exist a safe system of forecasting the desired directions of development of science, and experiences that can meet the future demands in appropriate time, form and quality.

Knowledge management on the macro level, which builds knowledge on the micro level so that it can satisfy the needs on the macro level is the sense of creating global solutions coordinating the process of human development. In the entire structure one cannot, however, ignore human with the fundamental right to live and shape own image and skills. This delicate boundary between a real need to influence the global knowledge and skills of the whole mankind, and the right to preserve individuality of every person cannot be trespassed. Therefore, a sensible approach to construction of the methodology of the ways of satisfying global educational needs used for the benefit of scientific and technological progress in the aspect of the whole mankind is required, which will finally serve meeting the demands of an individual. Such approach proves large responsibility in relation to our own selves, because it is us who create this methodology.

Coordination in knowledge management brings a huge temporary advantage over the demands that are continuously being generated (Kisielnicki J., 2005). It focuses knowledge, and knowledge guides research and implementation. It divides tasks in the global perspective, which significantly accelerates their implementation. It combines knowledge and experience in places which are close to finding solution to a problem, and therefore works are not carried out independently and simultaneously by many scientific centres, which in turn facilitates competent appropriation of funds and their proper management.

Nysa Science Festival also builds up the methodology of creating fruitful cooperation on many fields, which is to enable getting to know each other, suggest what to do next, and what decisions to make. In modern, dynamically changing, times, information has become the most important argument in the development and satisfaction of demands. As a result, the festival refers to many entities that it joins on an academic plane, giving them an opportunity to exchange information, which facilitates satisfaction of many needs (Fig. 10).

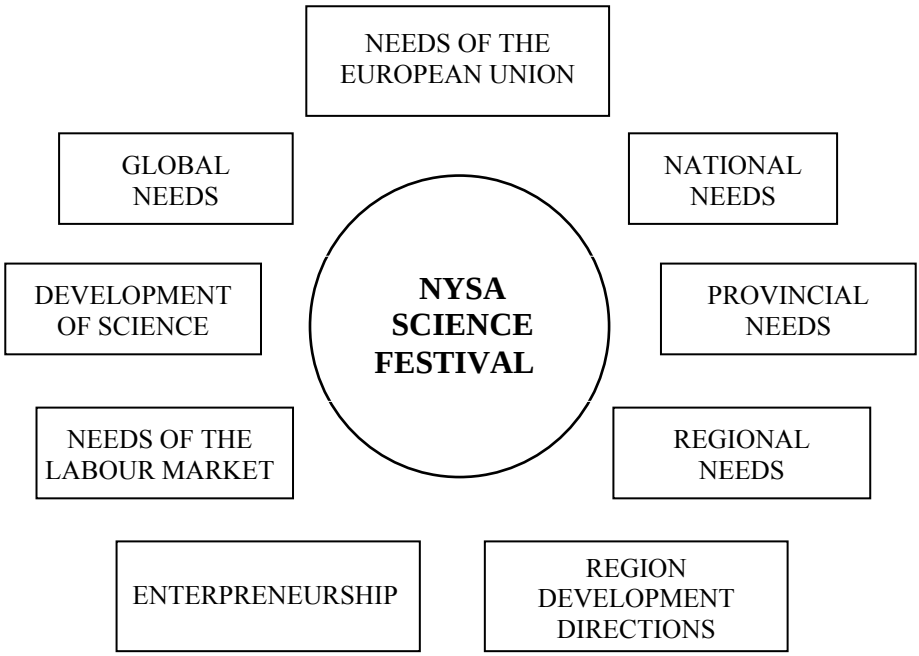


Fig. 10. The role of science festivals in building cooperation with the social and economic environment
Source: author's compilation

9. Festival Popular Science Conferences held under Nysa Science Festival

9.1. Purpose of festival conferences

Festival Popular Science Conference organized during Nysa Science Festival is a special event, because it suggests the need for permanent combination of scientific achievements with a widely understood social and economic environment. The primary mission of the conference is to present the university as a unit which has been founded on the didactic and scientific potential of its employees, and may contribute to defining, analyzing and resolving various issues of non-academic nature, which refer to e.g. education, society, or economic market (Malczyk T., special publication 2007-08).

The conference is a platform gathering entities performing assigned tasks within the national, provincial and regional structure, especially those that form and implement the socio-economic policy of the state. Due to the basic goal of the university, which is creation of science and popularization of its accomplishments, the conference is supposed to point to verifiability and usability of knowledge in everyday life, both from the point of view of the individual and the whole society, including, first of all, the economic environment.

Thanks to the conference, there is constant and creative contact with the extra-university environment and its problems, which on one hand affects the scope of the university's didactic offer (adjusted to the market needs), education quality (exchange of information) and the scope of conducted scientific research (solving the existing problems). On the other hand, it influences the quality of social life and the financial-economic potential of the state (particularly of the nearest region), which uses science achievements in a wide range.

This specific cooperation and dependence is natural way of building the Polish, and hence the European knowledge-based society movement. Through festival conferences, the Nysa university is deemed as the partner in talks usually present at other forums and levels whose conclusions and activities affect the quality of life of the local community. The university as an entity concentrating the educational and scientific potential, as well as having great teaching base, is a substantive partner in many areas and problems. It is thereby a platform for building collaboration between different entities, focused on defining and solving many problems. Festival conferences are a special instrument, since pursuing the above purpose, they concentrate the attention of many people from various entities and groups. Every year, different issues are raised, different people meet, present their achievements and problems, sometimes present contradictory views. However, every time, working in an academic climate, they clearly emphasize the sense of the conference, express satisfaction from the meeting, stress the soundness of the discussed subject and declare desire of further action and cooperation (Malczyk T., spec. ed., 2007-08).

9.2. Popular Science Festival Conferences

So far three festival conferences have been completed. They were related to the development of entrepreneurship among the students/ graduates of the Nysa university, knowledge management in agriculture

and nutritional education, with particular focus on the secondary schools youth (Malczyk T., spec. ed., 2007-08).

The idea of organizing the conference has been accepted very well by the environment, the proof of which is a numerous group of participants, the level of the invited guests, participation of the provincial, municipal and county authorities.

In the cycle of festival conference the School of Higher Vocational Education in Nysa has organized the following (Malczyk T., spec. ed., 2007-08):

- 1st conference entitled *Science and entrepreneurship in the Nysa region*, 17 September 2008,
- 2nd Conference entitled *Knowledge management in agriculture*, (1st conference on this subject), 5th June 2009,
- 3rd Conference entitled *Nutritional education system in Nysa region* 15th September 2009,
- 4th International Conference entitled *Knowledge management in agriculture*, (2nd conference on this subject), 8th April 2010,
- 5th Conference entitled *The role of nurse in modern wound treatment*, 14th September 2010.

9.2.1. 1st Festival conference entitled "Science and entrepreneurship in Nysa region"

Purpose of the conference

The primary purpose of the conference was to analyze possibilities of investment in Nysa region, especially on the part of young people who are or will be soon graduating from universities, professional high schools, postgraduate studies, etc. The Conference indicated, among others: the educational needs in the region from the point of view of satisfaction of demand for specific professions, the immediate and future needs related to the labour market and their satisfaction, the entrepreneurship development policy in the region of Nysa as implemented by the provincial, district and municipal authorities, and the envisaged systems of incentives, reliefs, facilitations, programs, etc., relating to investments in our region, proposed or already implemented e.g. by the provincial, district or municipal authorities, the District Labour Office, the Non-Governmental Organizations Incubator in Nysa, banks and other entities.

Conference summary

The conference was attended by representatives of many units affecting the provincial and regional socio-economic development policies. As a result, it was possible to hear the provincial and regional

authorities and the authorities of the university in Nysa. The provincial authorities were represented by the Director of Opole Economic Development Centre, who acted on behalf of the Marshal of Opole Province, as well as the Director of the Provincial Labour Office, the Vice-Starost of Nysa, Nysa Mayor, the Head of the District Labour Office in Nysa. Entrepreneurs associated in the Nysa Regional Chamber of Commers in were represented by the President of the Chamber. The conference was attended also by directors of high schools from Nysa District, representatives of banks, the NGO Incubator, a representative of the Education Superintendent in Opole, directors of institutes at the School of Higher Vocational Education in Nysa, as well as managers of general academic units of the university.

The Conference started from speeches of designated persons, who in a concise manner presented the positions of the units whom they represented, beginning from the provincial and local authorities, through entrepreneurs and our Alma Mater. Altogether, more than ten speakers have voiced their standpoints. The presented reports have shown great substantive potential of the individuals representing their entity. A lively discussion took place among the conference participants after presentation of the reports. Particularly important were the voices of high school headmasters, who unanimously indicate the need of development of inter-entity dialogue, including the university, the schools that they represent and the local authorities. They pointed to the need for educational continuity among young people, in particular with regard to development of entrepreneurial attitudes. The entrepreneurs of Nysa pointed to the need of dialogue between them and the local authorities in the discussed extent. At the end, it was stated that the conference is a project that is extremely apt and needed on the local market, however, one should combine individual entities and develop a common manner of performing of the tasks indicated during the conference.

At the same time, the conference has revealed a fact that makes regular and creative development towards e.g. setting up their own businesses difficult to many persons. Without a doubt it is the lack of system and simple solutions informing a potential young candidate for an entrepreneur about the program, scholarship, financial, legislative etc. offer, so necessary to find a place for oneself on the labour market. The proposed aid programs are not directly addressed at young people. This fact is proved by language, administrative and legal intricacies of many of them. In spite of the fact that many of these difficulties, after closer analysis, are not a problem for most of the users, synthetic information, written in an approachable way and stated in and encouraging way,

is lacking. And so, many people initially showing interest in business their development, forgo this possibility already at the start. Another barrier difficult to overcome is the future entrepreneur's initial capital, and rather the lack of it. Many domestic and foreign programs require possession of large initial capital and defines it as the basis for participation in the project. Therefore, one should allow a young person to participate in these or similar programs, by providing additional financial support on favourable conditions, so as not to completely block his or her resourcefulness and openness. This surely requires a great work expense from both sides, wide and thorough analysis of possibilities of execution of a particular project by the concerned person, but this effort is worth to be borne even for development of a good example for others. It seems that, apart from the declared good will, there is no platform for preparation of relevant solutions, creation of examples, realistic systems of incentives for the young and the already experienced entrepreneurs. The university may become such a platform, but without charismatic commitment of the environment, its actions will be severely limited, particularly since the university's mission is to educate its students at a high level and its statutory activities end at this. However, the Nysa university, in order to engage its intellectual capital, actively engages in creation of regional economic policy, and by initiating such an action, it becomes an independent communication platform in the scope in question. These efforts have been positively received by the conference participants. It has been stated that shall commence works aiming at, not so much the improvement in the existing condition, but building something new, with a dimension so far non-existent on our economic-educational market.

The next step, which has been unanimously accepted by the conference participants, was supposed to be a cycle of lectures organized in PWSZ in Nysa that would considerably contribute to the started issue relating to entrepreneurship. One has planned also lectures that would be given by outstanding scientists and expert in the issue of business operations and development of entrepreneurship combined with debates, also by conducted them. The representatives of organizations supporting entrepreneurship by law as well as businessmen from our region would also be invited. Their task would be not only to share with their experience, but to indicate with their practice how one should approach entrepreneurship and what to do to become successful. It was expected that these examples will encourage young people to actively act in creation of their own and recognizable image on the difficult labour market.

Today one should emphasize that according to the plan, such lectures/debates have been organized and, among others, the following people took part in them: Prof. Hubert Kołodziej (Wrocław University of Technology), Roman Kluska (Entrepreneur), Prof. Witold Modzelewski (Warsaw University), Prof. Marian Noga (Wrocław University of Economics), Waldemar Zadka (Department of Education and Labour Market of Office of the Marshal of the Opole Province in Opole).

The conference has also indicated the need of preparation of the material in the form of a handbook which can be used by a person entering his or her adult professional life. The guide would be intended to indicate specific answers to the questions on why and how one should act, when standing at the threshold of adult life, between learning and practice. It was supposed to indicate the instruments, the methods and the specific persons to contact who would help in solving many adversities against which a person must stand at the start. As a result of these determinations, a publishing series entitled *Knowledge as a road to success* has been created and two studies (out of five planned) have been issued therein:

1) *Knowledge as a road to success, or how effectively create one's own career path,* ed. T. Malczyk, B. Kozak, Publishing Office PWSZ in Nysa, Nysa 2008,
2) *Knowledge as a road to success – entrepreneurship and innovativeness* ed. T. Malczyk, Z. Kulas, B. Kozak, Publishing Office PWSZ in Nysa, Nysa 2009.

9.2.2. II Festival conference entitled "Knowledge management in agriculture"

Purpose of the conference

The conference was dedicated to discussion of the condition and development perspectives of agriculture and rural areas from the national, provincial and regional point of view, with simultaneous defining of the methods of implementation of educational and scientific policy with the agricultural policy, both from the national and European point of view.

The specific goals included possibilities of integration of groups forming and implementing the broadly understood agricultural and development of rural areas policy, with specification of the role of the teaching and scientific environment in this process, as well as promotion of agricultural education.

Conference summary

The conference was organized by the School of Higher Vocational Education in Nysa along with the Municipal Office in Nysa. Among the invited guests there were, among others: the Deputy Minister of Agriculture and Rural Development, an MP of the Republic of Poland, the Opole Province Governor, Vice-Speaker of the Regional Assembly of the Opole Province, Speaker of the Regional Assembly of the Opole Province, the Mayor of Nysa, the Nysa County Governor, headmasters of agricultural schools, representatives of Agricultural Chambers from Opole and Wrocław, trade companies, agricultural companies, associations and the media. The conference was opened by the Chancellor of PWSZ and the Mayor of Nysa. The Deputy Minister of Agriculture and Rural Development gave his lecture entitled *Perspectives for development of agriculture in Poland* and then he answered the conference participants' questions. Then the Vice-Speaker of the Regional Assembly of the Opole Province and the Opole Province Governor gave their speeches. During the break, one could become familiar with the stalls of the Country Housewives' Association from Kępnica that presented their food products, braiding and baskets, the Set Point Diet Scientific Group of the *nutrition major* students that presented ecological food and the Opole Agricultural Consulting Centre in Łosiów that offered agricultural materials. In the second part of the conference, the County Governor of the Nysa County presented the county's actions for the benefit of villages and agriculture, while a PWSZ professor gave a lecture entitled *Life mission of a contemporary farmer against the current condition of the world*. At the end, a there was press conference, in which the following media took part: Radio Opole, "Nowa Trybuna Opolska", "Nysa 24", "Nowiny Nyskie".

9.2.3. III Festival conference entitled "Nutritional education issues"

Purpose of the conference

The purpose of this conference was analysis of the condition of nutritional education, indication of its condition in the society, forms of implementation, development plans as well as the formal and legislative side of the system.

In particular, the conference was intended to:

a) define – in the face of development of science focused on proper nutrition – the condition and the role of the nutritional education system in Poland, in the Opole province and particularly in the Nysa region,

b) identification of problems related to nutritional education and indication of possibilities of its implementation by the concerned entities, which affect and can affect the quality and the scope of the educational system,
c) indication of the role of education, particularly including higher education, in implementation of the nutritional education system,
d) promotion of science achievements with regard to nutrition, and hence promotion of the Institute of Nutrition of the School of Higher Vocational Education in Nysa,
e) familiarization of the participants with the work of the Institute of Nutrition and, first for all, with the results of the project *Live healthily, eat colourful*, performed by the students of the Set Point Diet Scientific Group operating in this Institute,
f) presentation of scientific potential and organizational capabilities of the students, particularly from the Institute of Nutrition, indicating their skills and good preparation for the profession. This is particularly important in the aspect of development of entrepreneurial attitudes, labor market mobility skills, to present their knowledge to a potential employer etc.

Conference summary

During the conference we visited many specialists from the following domains: nutritional, medical, educational, economic, as well as municipal and district authorities. The discussed issue is not easy nor quick to solve, which on one hand makes the job difficult, but, on the other hand, motivates to make deep reflections and act actively. Especially since it applies to health and development of good dietary habits. Habits form for years and unfortunately can be both good and bad, and fighting the latter is exceptionally difficult.

The issue of healthy nutrition seems to be popular and known to all and even obvious. Unfortunately the research that has been presented during the conference, does not always suggest full understanding of the topic. Therefore, the need for nutritional education conducted from the earliest years has been indicated unambiguously. However, the word "education" contains what is not directly expressed at school, press or a specialist book. It is about nutritional habits of grandparents and parents that most heavily affect children. During the conference, the students of the Set Point Diet Scientific Group, operating in the Institute of Nutrition, presented the results of their research work. It covered taking broad straw polls of the youth from secondary schools and an attempt to draw conclusions on the basis of the received results. An exceptionally lively

and substantive discussion, carried out in the summary of the conference, deserved special attention. The broader information regarding conference have been presented in the post-conference publication.

The result of the conference is determination of the condition and demands connected with nutritional education, as well as development of the field of mutual cooperation between the entities appointed and responsible for implementation of this education and definition of the scope of cooperation with our university and particularly with the Institute of Nutrition.

During the second and the third day of the conference thematic workshops took place in the lecture, exercise and laboratory rooms of the Institute of Nutrition. They included, among others: specialized dietetic counseling, dietetic food, menu for a teenager.

9.2.4. IV Festival conference entitled "Knowledge management in agriculture"

Purpose of the conference

The second of the cycle of the conferences concerning the issue of knowledge management in agriculture, was dedicated to determination of possibilities of implementation of innovative technologies in rural areas from the regional, provincial, national and even international point of view. At the same time the ways of realization of educational, scientific-research and implementation policy with the agricultural policy were defined. For the first time the conference was held with the presence of foreign guests.

In order to meet the complex problems which are being experienced by the rural areas at the moment, the School of Higher Vocational Education in Nysa has prepared the offer of education and cooperation within the actions aiming at analysis of the opportunities for improvement of the existing condition.

The organized conference was particularly supposed to:

- integrate the groups forming and implementing the broadly understood agricultural and development of rural areas policy, with specification of the role of the teaching and scientific environment in this process,
- presentation of proposal of cooperation within the analysis of the existing condition and creation of a system raising the level of knowledge of country inhabitants, and hence the attractiveness rural areas,

- promotion of new major areas of studies, which adopted the possibilities of development of rural areas on the basis of the valid trends and policy of the European Union,
- promotion of agricultural education in the region and the province.

Conference summary

The Conference was devoted to determining the possibility of implementation of innovative technologies in rural areas in the regional, provincial, national, and even international perspective. At the same time, possible ways of pursuing cohesive integration of educational and research and development policy along with agricultural policy were considered.

The conference was attended by: The Marshal of the Opole Province, Vice-Marshal of the Opole Province, Speaker of the Regional Assembly of the Opole Province, the Nysa County Governor, an MP to the Sejm of Czech Republic, as well as the representatives of science. During the conference the sense of science management were expressly underlined, with particular focus on the role of science in knowledge management in agriculture. Then all lecturers, who referred to possibilities to invest and stimulate the rural environment, gave their speeches. After the speech, a heated discussion, confirming the grounds for the chosen subject, took place.

9.2.5. V Festival conference entitled "The role of a nurse in modern treatment of wounds"

Purpose of the conference

The purpose of the next conference was to analyze the condition of education of medical personnel in terms of modern wound treatment methods, with particular focus on nurses, who take care over patients in health care plants and at home.

As a result of positive experiences and effectiveness in following the adopted idea of festival conferences, this conference also addressed an important issue valid for the community in our region.

Conference summary

The organized conference has reached a number of assumed detailed goals, the following among them:

- indication of the condition of knowledge in the field of treatment and nursing of the sick having a chronic wound and the methods and opportunities of development of knowledge and practical skills in this respect among doctors, nurses and other people taking care of the sick with a chronic wound,
- popularization of knowledge among the doctors, nurses, students of the *nursing* major about diagnosis of formation of various wounds and methods of their modern treatment, as well as education of the patients themselves and their families,
- dissemination, of the latest scientific accomplishments in the field of diagnosis, treatment and nursing of the sick having a chronic wound among doctors, nurses and the students of the *nursing* major,
- indication of the benefits arising from application of modern methods of treatment of wounds with different ethiology (improved patient's quality of life, therapeutic and economic benefits),
- indication of the role of higher education in initiating implementation of modern standards of treatment of wounds in the nursing practice,
- promotion of scientific achievements in the medical/nursing field, and hence promotion of the Institute of Nursing of the School of Higher Vocational Education in Nysa,
- indication of the educational role of a nurse with regard to distribution of knowledge and skills with regard to modern treatment of wounds among the patients and their families,
- creation of opportunity to discuss and exchange experiences among doctors and nurses involved in treatment of wounds,
- joining in social responsibility actions to increase the availability of modern treatment of wounds in the Opole Province, as well as the Nysa County.

10. Festival programs carried out during the Nysa Science Festival

During the Nysa Festivals of Science, one conducts thematic programs, thanks to which their participants acquire new skills and knowledge in a very practical manner. These programs suggest the justified character of science, by its daily application. The participants of the festival encouraged by the approachable form of the message take part in numerous elements of particular programs with belief.

So far the following programs of superregional range have been organized:

1. *First aid at road accident*, in 2007,
2. *Science and entrepreneurship in the Nysa region*, in 2008,
3. *Live healthily - eat colourful*, in 2009.

10.1. Program entitled "First aid at road accident"

The program transferred knowledge concerning conduct with regard to giving aid to persons/participants of road accidents. The Student Group of Medical Rescuers COR, operating in PWSZ in Nysa, has prepared a folder with information on how one should proceed in the event of an accident. The folder has received a positive opinion of the employees of the Institute of Public Health of the *medical rescue services* specialization. The publication presents, step by step, which activities should be performed, when one is a witness or participant of a road event.

The folder have been prepared in an accessible manner and the activities described with it appear to be obvious and simple to perform, however, completely necessary and saving someone's life many times. This knowledge should be systematically implemented and checked by skilled medical rescuers and doctors, particularly the rescue medicine specialists. The thematic scope presented in the folder was presented many times by the Scientific Group COR during numerous visits to schools secondary schools, high schools, educational fairs etc. This Group, and hence the Nysa university, tries to teach, train and spread theoretical and practical knowledge regarding the elements of medical rescue in a well thought-out systematic and, first for all, competent manner. It should be emphasized that there is always very high interest in any medical rescue shows – road, aquatic, assistance in getting from under ice, in the case of inundations, choking, both in the case of adults and the youth and children.

A mask for resuscitation with a short operating manual is enclosed with each information folder. Thanks to such set, especially having been supported by training, each may begin to provide pre-medical aid in this respect without worries.

We are planning to prepare a series of information materials about providing pre-medical aid which will be systematically spread among the interested parties.

The campaign *First aid at road accident* is organized together with the Department of Communication and Transport of the Nysa County. Thanks to courtesy of its authorities, each person receiving a driver's licence within the area of our county, receives a folder-instruction and

a mask for resuscitation, along with a document authorizing to operate vehicles. We hope that, in this way the Nysa Alma Mater will contribute to growth of the level of education with regard to first aid.

Our festival campaign has won recognition and support of many institutions, particularly: The Ministry of Science and Higher Education, the Ministry of Transport, the Ministry of Health, Polish Motor Association – Opole Branch, the Opole Provincial Administration of the Polish Red Cross, District Administration in Nysa, the Nysa companies related to the automotive industry, among others, Michel, BP, Renault.

We are particularly happy with the support given us by Mr. Paweł Dytko, the Vice-Champion of Poland in Car Rallies from 2002 and the Champion of Poland in Mountain Races from 2003 and 2006. In warm, but explicit words, he pointed out the absolute need for having the ability to provide first aid by everyone, especially by drivers.

10.2. Program entitled "Modeling of entrepreneurial attitudes among the students of PWSZ in Nysa"

The prepared program is a large and complex instrument that particularly included the conference entitled *Science and entrepreneurship in the Nysa region.* The representatives of provincial, county and municipal authorities, the Nysa Regional Chamber of Commerce, banks and other organizations supporting development of entrepreneurship in our region, as well as guests from the world of science and the employees of PWSZ in Nysa were invited to participate in it. A questionnaire concerning entrepreneurship, conducted among the youth as well as entrepreneurs, as well as meeting with the entrepreneurs associated in the Nysa Regional Chamber of Commerce is also a part of the program.

During the meeting, the entrepreneurs described their own needs and expectations with regard to hiring the graduates of specified majors, while the students have defined their own expectations with regard to their future employment and employers. At the same time, the entrepreneurs shared their experience resulting from conducting their own businesses with the students. The primary purpose of the meeting was to encourage both sides to closer cooperation and more intensive use of the local potential, that is the entrepreneurs to hire educated staff, e.g. the PWSZ graduates, together with using their knowledge during duration of the studies (diploma theses, scientific studies with a possibility of their implementation), while the students to penetrate the local labour market more deeply, with particular focus on the companies from the Nysa county, both associated and not

associated in the Nysa Regional Chamber of Commerce (Malczyk T., 26.03.2009).

Another action was organization of a cycle of educational-economic debates conducted in the period from October to November, in which invited the guests from the world of science (acknowledged economists) and entrepreneurship (people who have achieved success in business) took part. The debates were open for the community, as, above all, the invited school youth, the students of the Nysa university and its employees (particularly from the Finance and Management Institute), the entrepreneurs from the Nysa Regional Chamber of Commerce, the representatives of local government, financial institutions etc. took part in them.

The results of the program are, in particular, identification of development opportunities of entrepreneurial attitudes in the Nysa region, among the indicated group of recipients, which was carried out during the last meeting.

The School of Higher Vocational Education in Nysa (PWSZ in Nysa) educates students in 17 majors and specialties. They include technical, humanistic, medical and art sciences. So far more than 5 400 graduates have left our Alma Mater and currently ca. 4 500 students is learning at the stationary and the non-stationary studies. Immediately after graduation, our students are looking for job offers or take further education on the second master's degree, at universities in Poland and abroad. In connection with the above, we have found preparation of a summary of knowledge in the field of entrepreneurship, investment, self-creation in the process of searching for jobs, looking for a job consistent with one's own interests, learning and simultaneously matching the needs of the labour market for graduates purposeful. For this purpose, in 2006 we established a Career Office in PWSZ in Nysa. Its basic task is to create entrepreneurial attitudes among our students and graduates (Malczyk T., 2008).

Our previous actions create the need to define the actual needs of a difficult labour market and a possibility to invest in the specific region of Poland. On the basis of these assumptions and remembering about the mission that the vocational universities fulfill (educating at a high level to perform a particular profession with simultaneous availability of the educational offer for a wide variety of people), which were established in non-provincial cities and towns, working on the outskirts of academic universities, we have set the analysis of labour of in the Nysa region, the analysis performed with regard to the possibility of development of broadly understood entrepreneurship among the students/graduates, as our

goal. The more so, since, our students come from all provinces of our country. Through the aforementioned analysis, we are planning to investigate the offer of the labour market and the possibilities of investing in our county or the Opole province. At the same time we have completed analysis of the possibilities and systems of incentives for the development of entrepreneurship that are offered by the provincial, district and municipal authorities, the entrepreneurship incubators, banks, financial programs etc.

This project is directed at a very broad group of people, which is associated with its educational role and an unquestionable social and regional need. It is an attempt to reach the people currently interested in finding a job, as well as the high school and university youth, teaching them the basics of entrepreneurship. In this way it fits in the entrepreneurship teaching program being implemented in secondary and high schools.

The indicated group of recipients a coherent whole and systematic work from the earliest years on shaping thrift and entrepreneurship attitudes among young people, including students, should be concluded with presentation of a program, social, financial and political offer to them (in terms of policy of economic development of the country and, as a consequence, the region). One should then expect a creative dependence between science, entrepreneurship and the offer of the labour market and economic policy of the region.

The anticipated result of the whole program is:

1. identification of needs and the expected development directions in the Nysa region, among others, in the aspect of the existing market of graduates (including particularly the graduates of the School of Higher Vocational Education in Nysa), the unemployed people (particularly the ones who want to retrain, adapting their education to the job market), beginner entrepreneurs (indicating the ways of fast and friendly imple-mentation of them in this respect), the existing enterprises (encouraging their representatives for further development on the basis of skills and knowledge of the people entering the job market),
2. indication of weak and strong points of our region and the opportunities and threats in the development of entrepreneurship, as well as the actual system of incentives to invest, addressed to a potential investor,
3. indication of educational needs of the region, needs of the labour market, good practices and the examples of effective investing in our region,
4. identification of needs of the labour market,

5. presentation of good practices and the examples of effective investing in our region.

The effects of the project will be used after its implementation by the mentioned groups of recipients in the following substantive extent:

1. school youth – creation of education in the broadly understood entrepreneurship and thrift, particularly by indicating the justified character of learning and the possibility of future fulfillment of scientific and professional plans associated with our province and particularly with the Nysa region; this is valuable especially in terms of programs associated with entrepreneurship matters carried out in schools,
2. students – indication of the needs of taking interest in and tracking the development of the economy, regional policy and entrepreneurship in terms of selection of issues of the diploma thesis, which may attempt to solve the actual market problems (e.g. based on the needs and materials of a given company); simultaneous preparation of students – prior to submission of the diploma thesis – to entering professional life with well-recognized needs of the labour market and adaptation to these needs,
3. graduates – indication of the actual system supporting the people graduating from a university and planning entry into professional life; particularly promotion of a system of incentives to invest in our region, and hence creation of a region friendly for development of entrepreneurship,
4. entrepreneurs – support for the existing business entities and enabling their further development and at the same time encouraging to introduce, particularly young people, in professional life through mutual benefit resulting from employment or cooperation with educated and creative people, however, lacking the relevant experience yet,
5. unemployed persons – focusing their interests and development on economic planes that are particularly desirable in our region, with a simultaneous developed system of aid and of incentives for long-term investing one's professional development, adjusted to the needs.

The issue brought forward in the project is continued, especially that it is compatible with the nature of the Career Office's activities. The actions taken in the project also result from the mission performed by PWSZ in Nysa. This is reflected by the broadly understood science concentrating both on the teaching work and the popular scientific activities, for instance in the form of the campaign entitled the Nysa

Science Festival, Open Days or open lectures organized, both on the area of the university and beyond its area. Such activities are continued also by Scientific Groups operating at the university, which specialize in many domains, including finance and accounting (Malczyk T., 2008).

The Nysa Regional Chamber of Commerce and other entrepreneurs participating in the project benefit form and will still benefit from the results and conclusions resulting from the project, by penetrating the local market of available and educated staff more actively, cooperating closely with the Career Office of PWSZ in Nysa. In addition, after the end of the implementation of the project, NRIG (Nysa Regional Chamber of Commerce) still organizes conferences and meetings on economic issues with the people of business and finance, with participation of the students and the graduates of PWSZ in Nysa. Within such meetings, one also includes international events with foreign entrepreneurs, mainly from the EU countries, representatives of economic chambers, both local and bilateral (e.g. Polish-Spanish, Polish-British etc.).

There is close, already long-term cooperation with the County Labour Office in Nysa, which is fruitfully continued and extended with new initiatives, e.g. training, creation of entrepreneurship among the students/graduates, common application for funds for various national and foreign programs etc. (Malczyk T., 2008).

10.3. Program entitled "Live healthily-eat colourful"

The program is based on the analysis of the condition of nutritional education, and hence examination of dietary habits of the secondary school youth in the Nysa region. *Live healthily-eat colourful* is also an educational project because in envisages performing a series of trainings, workshops and lectures at secondary schools. The program is co-financed by PWSZ in Nysa and the Municipal Office in Nysa and has been prepared by the Institute of Nutrition of PWSZ in Nysa by the initiative of the students of the Set Point Diet Scientific Group.

The idea of the project is not only research, but also correction of habits and the state of knowledge concerning nutritional education. 16 schools from the Nysa county, together 2 193 persons, took part in the first stage of the study. The subsequent stages of program implementation will include successive age groups particularly including kindergartens, the youth from high schools, students, as well as students of the Universities of the 3rd Age. This program, magnificent in the assumption, defines the state of knowledge and nutritional habits of the society virtually in any age group. As a result, one can draw significant

conclusions with regard to the actual nutrition level of particular age groups. The program is simultaneously: the analysis of the current state, education of the school youth, preparation and implementation of the tests methodology by the students, development of scientific research, promotion of healthy way of nutrition, promotion of knowledge of the employees of the Institute of Nutrition and the students of the *nutrition* major of PWSZ in Nysa, fulfillment of the academic university's mission, indication to the university as a unit actively engaging in the matters of the region.

During implementation of stage 1 of the program, one has prepared and conducted straw polls among students from more than ten secondary schools, conducted lectures at schools, performed a number of studies that were presented during the 3rd Festival Popular Science Conference entitled *Nutritional education system in the region* organized within the 5th Nysa Science Festival in 2009.

The conference was attended by representatives of family clinics, catering establishments as well as secondary and high schools of the Nysa county, including Parent Councils operating at schools. The lecturers were the specialists involved in nutritional issues on an everyday basis, among others, the representative of the Polish Dietetic Association, from the Institute of Food and Nutrition, who presented the algorithms of dietary conduct in treatment of obesity as well as the all-Polish dietary counseling system, the Head of the Health Promotion Section of the County Sanitary-Epidemiological Department in Nysa, who presented The assumptions of the program entitled *Stay in shape* and Head of Nutrition Department of the Health Service Administration in Nysa, referring to the importance of nutrition in preventing diseases.

11. Information management and the Nysa Science Festival

11.1. Information Platform of PWSZ in Nysa

PWSZ in Nysa has created an electronic Information Platform, devoted to the conferences organized during the subsequent Nysa Festivals of Science. The primary purpose of the task is to build a didactic and popular science containing platform information on the topics undertaken during organization of all conferences of the Nysa Science Festival, which successfully fits into the domestic and the European festival movement. This movement consists in holding festivals

of science, that carry a broad and deep scientific and teaching message, and hence promote the university's educational offer in the regional, national and European dimension.

The platform indicates the university's scientific and teaching potential that answers the needs of the local community and the labour market. The platform's task is making an interdisciplinary connection between knowledge and scientific achievements from different areas, particularly is making performed by our university. The platform indicates the practical side of science, whose achievements can be implemented in daily people's, as well as companies', state institutions' life etc.

The issues brought forward on successive conferences and the conclusions arising from them will constitute the basis for dialogue at the level of science, experience and entrepreneurship. The dialogue between the students and the university's teaching employees and the widely understood labor market. As a consequence, these activities will contribute to development of entrepreneurial attitudes among the students. The platform allows all interested visitors to become familiar with many issues, monitor the science development trends, exchange thoughts and experience. Thanks to the Platform, every interested party can propose issues for the subsequent conferences. As a result, the conferences organized within the Nysa Science Festival will have great usability and practicability potential.

In its fundamental assumption, the Nysa Science Festival popularizes the achievements of science, indicates its usability, adjusts to the needs of the local community and the labour market expectations Such approach ensures continuity in implementation of the idea of the festival. This also applies to the conferences organized under the auspices of the festival. The primary goal of the conference is to bring forward the issues current for the region and the province. Attempts at defining the problems and the methods of solving them with obvious emphasis on the teaching potential, educational offer and mobility skills of the students/ graduates of the Nysa PWSZ. The platform facilitates execution of the activities indicated above. Owing to the fact that the festival and the conference take place in cycles once a year, as well as being in accordance with the idea of the Nysa Science Festival, that is execution of festival tasks throughout the whole year with the final and their summary in September, provides continuity of implementation of the action. The mentioned platform is thus a permanent and systematically updated educational-information instrument.

Thanks to creation of the platform, the university may promote its teaching potential, as well as educational offer. It is a place allowing the local community to exchange thoughts, remarks and solve problems. It is therefore the ambassador of broadly understood science, and, above all, points to its usability. It stimulates activities of many entities which affect shaping of the market policy in our region, which the last year conference is a measurable example.

The platform promotes our students and graduates on the labour market. On the other hand, the students themselves can also be adjust their abilities to the needs of the local labour market indicated and defined during the conference and placed on the platform.

11.2. Journals of PWSZ in Nysa

11.2.1. "ALMA MATER Journal of the School of Higher Vocational Education in Nysa"

Since 2006 the School of Higher Vocational Education in Nysa has been issuing the "ALMA MATER Journal of the School of Higher Vocational Education in Nysa", a journal that promotes science by fitting into promotion of the festival activities. The subsequent festivals are precisely described and their programs as well reports from implementation of them presented in the magazine. It facilitates informing the local community about the dimension of the festival (Malczyk T., 2005-09).

So far the following issues have been published:

- 1/2006, entitled *Fifth year of PWSZ in Nysa,*
- 2/2006, entitled *We welcome new students,*
- 3/2007, entitled *Accreditations of the State Accreditation Committee*,
- 4/2007, entitled *What's new in the 2007/2008 Academic Year,*
- 5/2008, entitled *Academic Artistic Stage,*
- 6/2008, entitled *New Rector, new year,*
- 7/2009, entitled *Virtual Artistic Gallery,*
- 8/2009, entitled *Acknowledgment of the University in the region*.

Apart from the cyclic issue, always after the end of the Festival, we prepare and print special issue of the journal, devoted to fully to another, completed festival. In them, we analyze what happened during the festival, we draw conclusions for the future, planning subsequent editions of the festival and conferences, we discuss numerous raised problems and the suggestions of the festival event participants.

So far the following special issues have been published:

- 1/2007, devoted to the road emergency program,
- 2/2008, devoted to the entrepreneurship program,
- 3/2009, devoted to the health education program.

11.2.2. "INGENIUM Popular Science Magazine"

Since the previous year we have been preparing another "instrument" promoting knowledge, namely the "INGENIUM Popular Science Magazine" We treat this magazine as the next step in popularization of science, particularly in the all-season dimension. "INGENIUM" *(lat. creative intelligence)*, is supposed to present scientific achievements in the cognitive and the empirical perspective, indicating the need for systematic enrichment and improvement. This publication is a way to promote science, encourage the readers to learn, and hence indicate its usability and even necessity in everyday life. The knowledge provided in a simple, obvious, undisputed and testable manner may build a unique academic climate with regard to every reader. The magazine consists of popular science articles, describing interesting events and achievements in science, answering frequently asked questions from a given field, informing and training, explaining the notions, indicating the use of scientific achievements in everyday life, bringing forward historical, social and international problems etc. The substantive value is created by the university teachers of the School of Higher Vocational Education in Nysa (Malczyk T., 1/2009).

The idea of a magazine fits into the university's mission, particularly the university's professional profile, which points to the need of gaining useful knowledge. At the same time, this is an excellent form of promotion, carrying a great deal of quality, confirmed by the university. It is form of promotion of science and encouraging the readers to become interested in the widely understood science and learning that is new to our market.

Fulfillment of the assumed goal of the "INGENIUM Popular Science Magazine" makes that it is one of the first academic magazines of this type in Poland. The magazine touches the subject matter of science and entrepreneurship by linking knowledge with business. It also allows to express the views of the local administration authorities, entrepreneurs and other governmental and extra-governmental entities that associated their actions with the university, e.g. through student internships, diploma theses, training organized by institutes, thematic workshops, and other forms of activity of our academy in the social and economic environment.

We are also open to present the implementations, upgrades, expert studies and other forms of research activity, which have been introduced in the companies and which were aided by, our students, graduates or employees in the magazine.

The first issue of the journal entitled *Science in practice* was published in 2009, the second issue, entitled *Popularization of science* in the current year.

12. Websites related to popularization of science

In of PWSZ in Nysa one has created and implemented many websites devoted to the activities promoting science through the festival of science, scientific conferences, journals, programs etc. The following specification presents the name of the website and its address:

1. http://www.studiaibiznes.pwsz.nysa.pl/
   website of the program regarding entrepreneurship (since 2008),
2. http://www.pwsz.nysa.pl/~promocja/gazeta/gazeta.html
   website of the "ALMA MATER" journal (since 2006),
3. http://www.pwsz.nysa.pl/~promocja/nfn2008/index.html
   website of the Nysa Science Festival (2005-2009),
4. http://www.pwsz.nysa.pl/platforma/index.html
   website of the Popular Scientific Festival Conferences 2009 including:
   – http://www.studiaibiznes.pwsz.nysa.pl/
     Conference entitled *Science and entrepreneurship in the Nysa region*, 17 September 2008, PWSZ in Nysa,
   – http://www.pwsz.nysa.pl/~promocja/nfn2009/wwwkonf/index.php
     Conference entitled *Nutritional education in the Nysa region*, 15 September 2009, PWSZ in Nysa,
   – http://www.wiedzairolnictwo.pwsz.nysa.pl/
     Conference entitled *Knowledge management in agriculture*, 05 June 2009, PWSZ in Nysa,
5. http://www.pwsz.nysa.pl/~promocja/platforma/index.php
   website of the Electronic Didactic and Popular Scientific Platform (2009), within the *Small Grants* program of UMWO (Office of the Marshal of the Opole Province) – Opole.

13. Media and the Nysa Science Festival (NFN)

Numerous mass media have informed about the Nysa Science Festival, among others, the all-Polishl edition of "Gazeta Wyborcza" in the "Teraz Opolskie" supplement, "Gazeta Opolska" in the "Polska The Times" supplement, "Gazeta" o/Opole, "Nowa Trybuna Opolska", "Nowiny Nyskie", it has been mentioned in Radio Opole, Polish television – TVP 3. Information about NFN (Nysa Science Festival) have also been published on a few dozen thematic web portals. The Nysa festival is present on the websites of the Ministry of Science and Higher Education, Polish Press Agency, Polish Academy of Sciences in the Popularization Science Council. We are also present on the international EUSCEA website.

Additionally, through editorial affiliation, we identify ourselves with Association of Scientific Journalists – "Naukowi.pl". The mission of the association is to integrate the environment of journalists writing about science, medicine and technology, as well as science popularizers, press spokespeople of scientific institutions and PR specialists dealing with these matters. It is also important that "Naukowi.pl" is supported, among others, by the Ministry of Science and Higher Education as well as the National R&D Centre. The Association also closely cooperates with European organizations, particularly with EUSJA, that is the European Union Science Journalists' Associations. It is an organization associating national of science journalists' associations. EUSJA comprises journalists and scientists from 23 European countries. The organization is independent, and its activities are funded by the European Science Foundation and the European Union. The Polish representative in EUSJA used to be Journalists' Association for Promotion of Science, Technology and Medicine – "Pro Media" Club. In autumn 2006 the "Pro Media" Club was dissolved, and its mission is continued by the Science Journalists' Association "Naukowi.pl".

Membership in this association is particularly important in terms of the "INGENIUM Popular Scientific Magazine" published by the School of Higher Vocational Education in Nysa (PWSZ in Nysa), the purpose of which fits into the mission of "Naukowi.pl", EUSJA and the world and the European movement propagating science, among others, by organization of science festivals.

14. Cooperation with the extra-university environment at the level of promotion and usability of science and its accomplishments

Organization and execution of the Nysa Science Festival, Festival Popular Science Conferences, educational programs and many other activities, has created an and still develops a number of simply priceless contacts with extra-university people and entities. It is nothing else but these contacts that made such a broad development of the festival idea possible. Are Private persons, representatives of administrative, economic and educational entities, unions, banks and hobbyists are invited to co-organize the festival. Such cooperation gives a different dimension to the Nysa Science Festival, it becomes a specific social benefit institution, a good and authority, a neutral platform for negotiations on difficult topics, an educational emergency service.

The examples of such co-operation are, among others, permanent contacts with:

- The Ministry of Science and Higher Education (since 2005),
- Opole Education Superintendent (since 2005),
- with the local administration and the social and economic environment of the Nysa region (Krajewska A., 2008), and including, among others, the Opole Province authorities, the Marshal Office, the Nysa city authorities and the authorities of other towns of the region and the Nysa county (since 2006),
- entrepreneurs of the Nysa region, particularly including the ones associated in the Nysa Regional Chamber of Commerce (since 2006),
- Provincial Labour Office in Opole and the County Labour Office in Nysa (since 2006),
- the local historical and art circles, which manifests itself by creation of the Virtual Artistic Gallery and cooperation with the Museum in Nysa (since 2009),
- first of all with headmasters of secondary and high schools of the city and the Nysa county,
- University of the 3rd Age in Nysa,
- National Bank of Poland, branch in Opole and other banks of the region,
- Polish Scouting and Guiding Association and many other organizations.

15. Realized projects propagating science

Wide impact of the Nysa Science Festival enabled development of many initiatives related to it and realized thanks to participation in various projects. They were:

1. Project additionally funding 1st Nysa Science Festival 2005, (Ministry of Science and Higher Education No. 99/R/DBB/2005),
2. Project funding BKiP in PWSZ in Nysa (Contract No. 1/2006, dated 31.03.2006),
3. Project additionally funding 2nd Nysa Science Festival 2006, (Ministry of Science and Higher Education No. 50/DWB/R/2006),
4. Project additionally funding 3rd Nysa Science Festival 2007, (Ministry of Science and Higher Education No. 42/DWB/R/2007),
5. Project additionally funding within the *Forever young* campaign (Krajewska A., 2008), Municipal Office in Nysa (BP. 0628.1/08 of 08.01.2008),
6. Project additionally funding 4th Nysa Science Festival 2008, (Ministry of Science and Higher Education, No. 39/DWB/R/2008),
7. Financial support from budget of the National Bank of Poland for implementation of the project entitled *Science and entrepreneurship in the Nysa region*, (National Bank of Poland (NBP), Department of Social Communication in Warsaw, No. 362/2008 of 01.10.2008),
8. Project additionally funding the conference entitled *Science and entrepreneurship in the Nysa region* (17.09.2008), County Office in Nysa (No. 56/08),
9. Project additionally funding promotion of entrepreneurship in the Nysa region, County Labour Office in Nysa (No. SP AP-0680-18/08, dated 20.08.2008),
10. Project of the Office of the Marshal of the Opole Province entitled *Small Grants*, additionally funding the *Career Office's training path* program and publication entitled. *Knowledge as a road to success*, No. dated 11 16.06.2008. (R.U.D.E.P.0812-22-11/08),
11. Project of the Office of the Marshal of the Opole Province entitled *Small Grants*, additionally funding NFN (Nysa Science Festival) Social Communication Platform, No. 6 of 18.05.2009,
12. Project additionally funding 5th Nysa Science Festival 2009, (Ministry of Science and Higher Education No. 19/DWB/R/2009),
13. Project of the Office of the Marshal of the Opole Province entitled *Small Grants*, additionally funding the *Career Office's training path* program and publication entitled *Knowledge as a road to success – entrepreneurship and innovativeness*, No. 6 of 18.05.2009,

14. Project additionally funding preparation of a monograph with regard to Science Festival (Ministry of Science and Higher Education No. 19/DWB/R/2009),
15. Project of the Office of the Marshal of the Opole Province entitled *Small Grants*, additionally funding preparation of a monograph in English concerning Nysa Science Festival, No. 5 of 05.05.2010.

16. Support for Nysa Science Festival (NFN)

All actions related to organization of the Nysa Science Festival have wide support and approval among the authorities and the society, as well as non-governmental organizations. NFN is supported, among others, by: the Ministry of Science and Higher Education, the Ministry of Health, the Ministry of Transport, the Ministry of Agriculture and Rural Development, Polish Motor Association, the Marshal of the Opole Province, the Opole Province Governor, the Opole Education Superintendent, the National Provincial Sanitary Inspectorate in Opole, the National Health Fund – the Provincial Branch in Opole, director of the County Sanitary-Epidemiological Department in Nysa, the Mayor of the city of Nysa and, the County Governor of the Nysa region, Provincial Labour Office, National Bank of Poland, National Consultant in the field of pediatrics from the Children's Health Centre, the National Institute of Public Health of the National Institute of Hygiene, the Institute of Food and Nutrition named after professor A. Szczygieł in Warsaw, director of the Health Protection Information Systems Centre, headmasters of secondary schools and high schools, entrepreneurs and local society as well as numerous media.

17. Memberships and awards related to popularization of science and the Nysa Science Festival,

The Nysa Science Festival has been noticed and acknowledged by significant organizational units as well as Polish and foreign associations. Through its organizers, NFN is a part of:

1. since 2006 – to the European Science Events Association (Austria), it is an international organization associating science festivals from around Europe (98 members from 36 countries). Poland is represented by four universities, including PWSZ in Nysa as the only university of this type,

2. since 2009 – to the Polish Science Journalists' Association "Naukowi.pl", a representative of the European Union of Science Journalists' Associations – EUSJA.

The Nysa Science Festival takes place already since 6 years, and the idea of promotion and popularization of science guiding it has been noticed at the regional, provincial and national level. It is an example of the idea arising, being implemented and then acknowledged.

Organization of the Nysa Science Festival and the derivative activities propagating science, have contributed to the author winning the following awards and nominations:

1. Award of the Marshal of the Opole Province for special achievements in the field of popularization and development of education in Opole Silesia in 2009. The award was granted by the Administration of the Opole Province,
2. Diploma for Nomination to the fifth edition of the *Science Popularizer 2009* competition, organized by the PAP (Polish Press Agency) Service – "Science in Poland" with participation of the Ministry of Science and Higher Education. Category: "Scientist or scientific institution". The award was granted by the Chapter House, consisting of the following: Ministry of Science and Higher Education, Polish Press Agency and the representatives of the scientific environment,
3. Nomination and Honourable Mention"Triton of Nysa 2009", for actions promoting and popularizing scientific achievements both in Poland and abroad. The "Triton of Nysa" is an award granted for outstanding inhabitants of Nysa for achievements in the field of local activities. Honourable Mention is granted by the Chapter House of the "Triton of Nysa" appointed by the Regulation of the Mayor of Nysa,
4. Nomination to 6th edition of the competition *Science Popularizer 2010,* in the category "Scientist or scientific institution", in acknowledgment of merits in popularization of science, organized by the PAP (Polish Press Agency) Service – "Science in Poland" with participation of the Ministry of Science and Higher Education.

Part IV

The Regional Centre of Knowledge Transfer and Innovative Technologies at the School of Higher Vocational Education in Nysa

18. Establishment of draft and initial assumptions of the Centre

The natural consequence of further development of the activities performed so far, related to knowledge management and knowledge diffusion in the region, which include, in particular: the Nysa Science Festival, popular science conferences, cycles of open lectures, educational programs, publications propagating knowledge, thematic websites, etc., is to take up actions aiming at establishing the Regional Centre of Knowledge Transfer and Innovative Technologies. The Centre is the next stage of expanding possibilities of wide diffusion of knowledge in the region. Over the last year this topic has been widely discussed and consulted many times with the Marshal of the Opole Province, who pointed out the need for its realization in the near future. I has also been repeatedly presented on the conferences and meetings organized by the university and the Marshal's Office of the Opole Province. It has been assessed highly, particularly for the substantive matters and the raised current issues and the real need of the region and the province.

The primary goal of the Center will be fitting into the European and the domestic movement aimed at development of knowledge-based society. This undisputed need results from social and economic expectations that, in this way, aim at satisfaction of complex needs of the developing regions and states. The complexity of action consists in fulfillment in satisfaction of the existing needs and, at the same time, predicting development of new ones. This vigor, efficiency and effectiveness of action is possible only as a result of prediction and immediate action with regard to: information, education and scientific research. The dynamically changing reality generates new priorities in action, including the following: knowledge, information and management technology as well as research and implementation. This special challenge combined with the mission of an academic entity which is the School Higher Vocational Education in Nysa, results in the fact that we are eager to undertake actions aimed at development of a new educational-scientific entity operating for the needs of the region and the Opole Province.

The Regional Centre of Knowledge Transfer and Innovative Technologies at PWSZ in Nysa will be one of the first entities of this type that operates at a state vocational university. This dimension is special because such universities, which operate on the outskirts of large academic universities, have the best contact with the local environment,

formed Centre, which will be established in the region and the province consisting in the vast majority of agricultural areas, and thereby the areas inhabited by more than a half of the community of the Opole Province. Within this action, one shall perform analysis of possibilities of development of rural areas in the region and in the Opole province. Training guidelines and directions of desired development of these areas will be prepared, on the basis of the obtained data. The centre shall prepare, draw up and implement the methods of stimulation of these persons, possible for execution, using the potential existing in the uninhabited areas. At the same time, it will indicate and will promote rural areas as potential places of employment and running business operations by the persons not related directly with the rural areas. It should be emphasized that PWSZ in Nysa, as the only university in the Opole province has acquired consent for offering the *agriculture* major with the following specialties: *agritourism* and *eco-agriculture*.

Other instruments realizing the purpose of the centre

In this area, one can operate in many different areas by generating tools meeting the needs of many thematic areas. It is associated with the diffusion of knowledge – existing and developed in more than ten institutes of PWSZ in Nysa as well as with entering into the existing regional organizational networks. Here one should also point to great potential of our students (e.g. through practice) and graduates, who in the vast majority, while going through educational and research development, in their theses – particularly the diploma ones – solve the problems taken from the market. These theses become the basis for solving many technical, economic and medical problems etc.

An important aspect is further development of the idea of the festival of science, through such instruments as: *Science Cafe*, *Science Museum*, *Science Day*, *Science News*, *e-festival*, *Science Centre* etc. Thanks to the direction of the Center's activities, it will affect development of the knowledge-based society, to which one should encourage from the earliest years.

The Regional Centre of Knowledge Transfer and Innovative Technologies, operating at the School of Higher Vocational Education in Nysa will be an operationally independent entity, promoting science and its achievements on many thematic fields. It will combine science with practice, implement activities beneficial from the point of view of development of the region and the Opole Province. Constant substantive supervision of the university over operation of the centre will guarantee

its efficiency and the highest level of work The centre will become a training-implementation centre permanently cooperating with the provincial and regional authorities, as well as entrepreneurs and many other institutions whose scope of action permits fulfillment of goals important for socio-economic development of our province (Fig. 11).

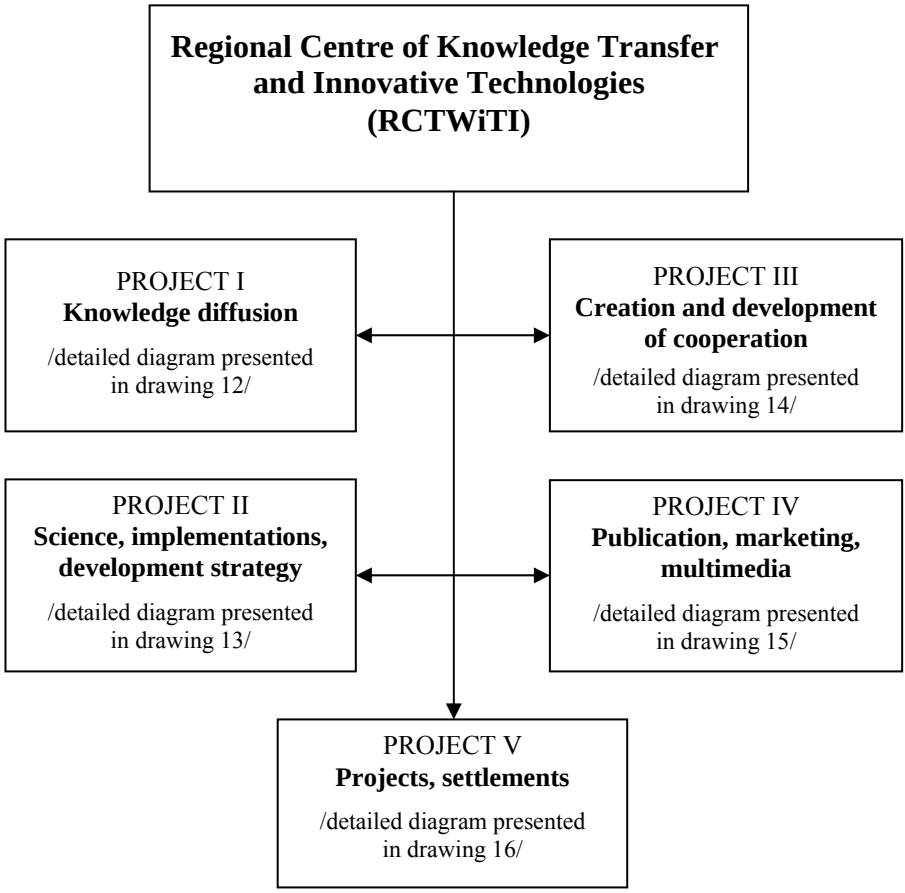


Fig. 11. Structure of activities shaping and implementing strategic goals of the Centre
Source: author's compilation

The Regional activities of the Regional Centre of Knowledge of Transfer and InnovativeTechnologies will go beyond the Nysa region and will cover the whole Opole province. At the same time, it will form a topical network, cooperating with foreign entities, thus promoting the methods and benefits developed outside the borders of Poland.

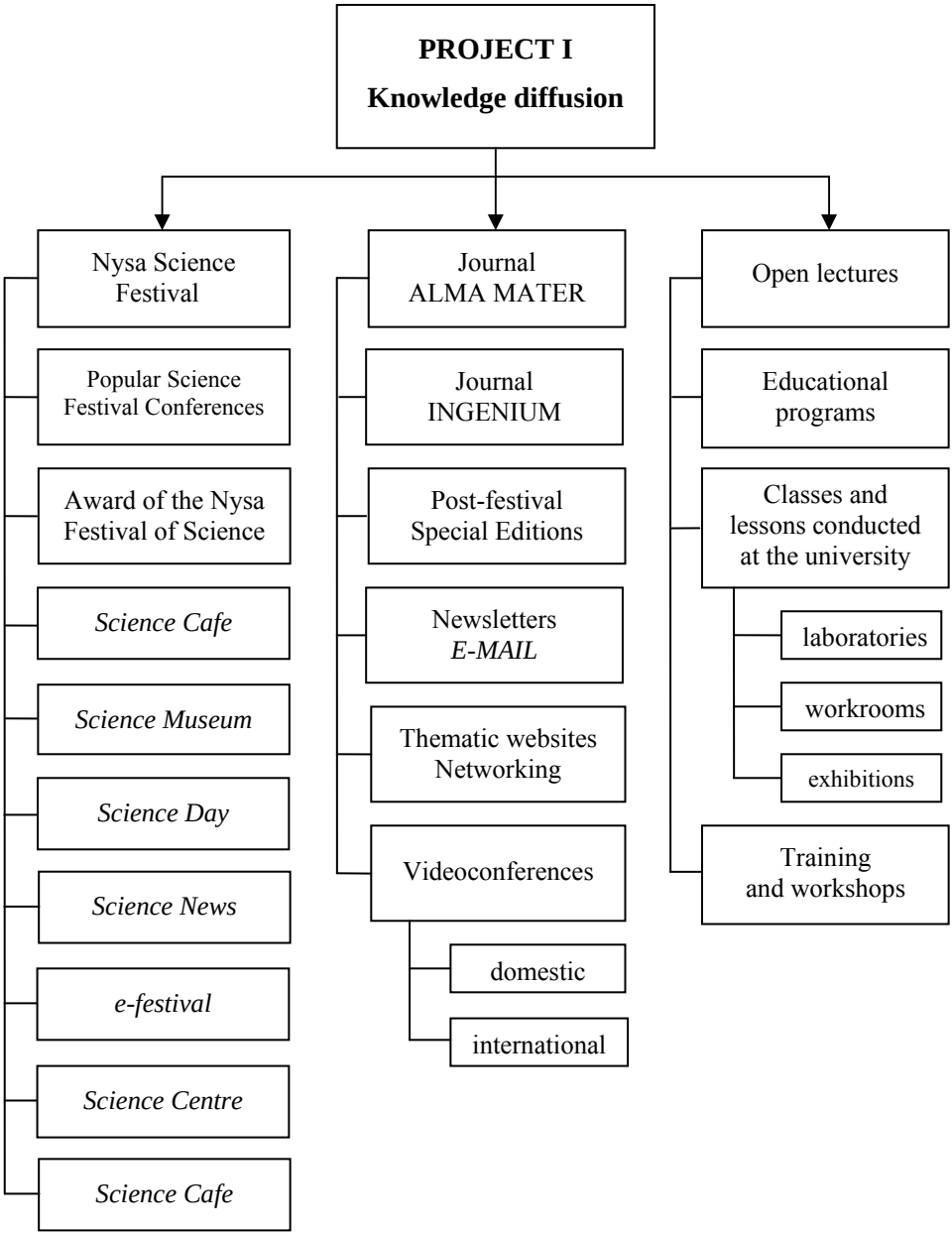


Fig. 12. Structure of Project I, covering, among others, Nysa Science Festival
Source: author's compilation

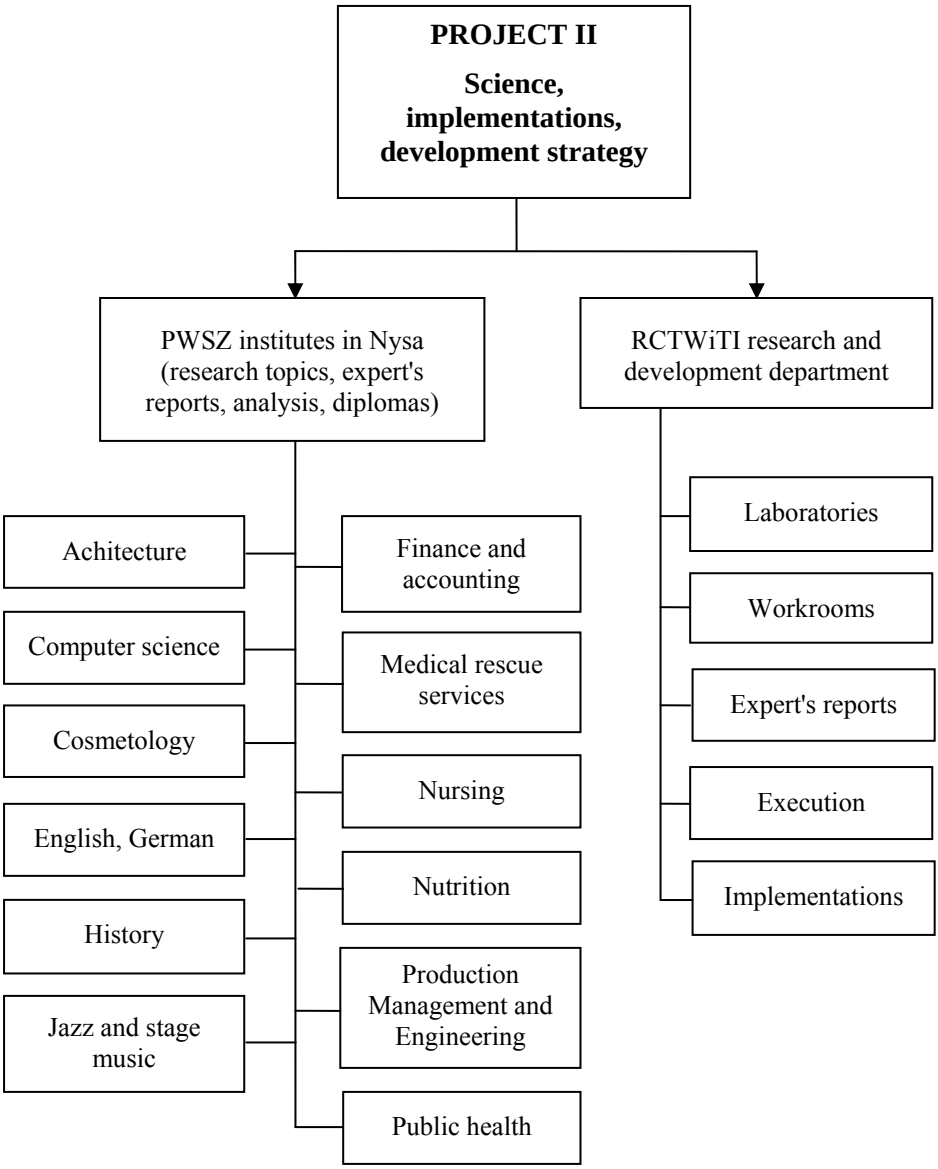


Fig. 13. Structure of Project II, related to research and development
Source: author's compilation

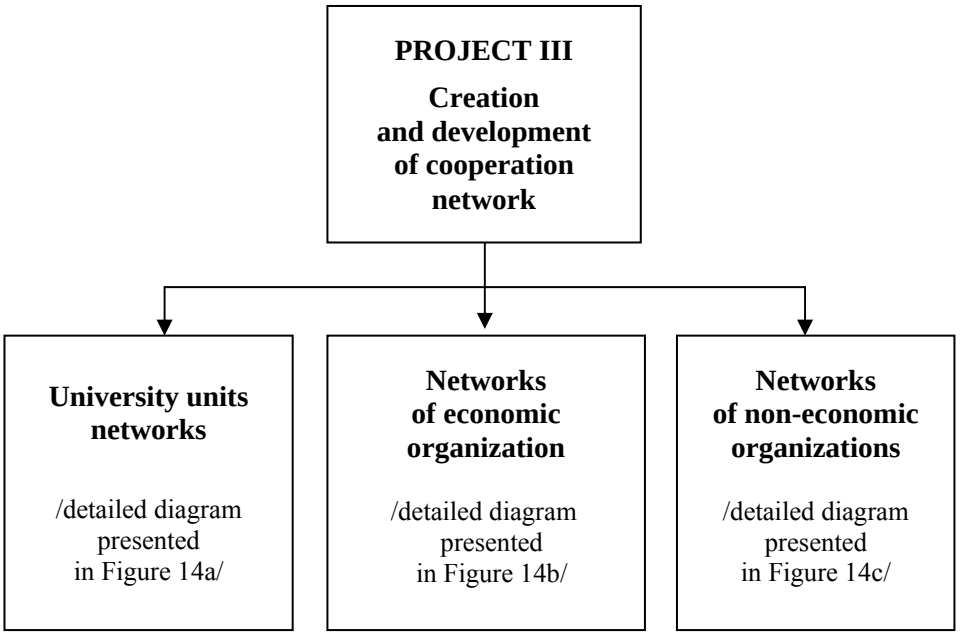


Fig. 14. Structure of Project III, regarding cooperation network
Source: author's compilation

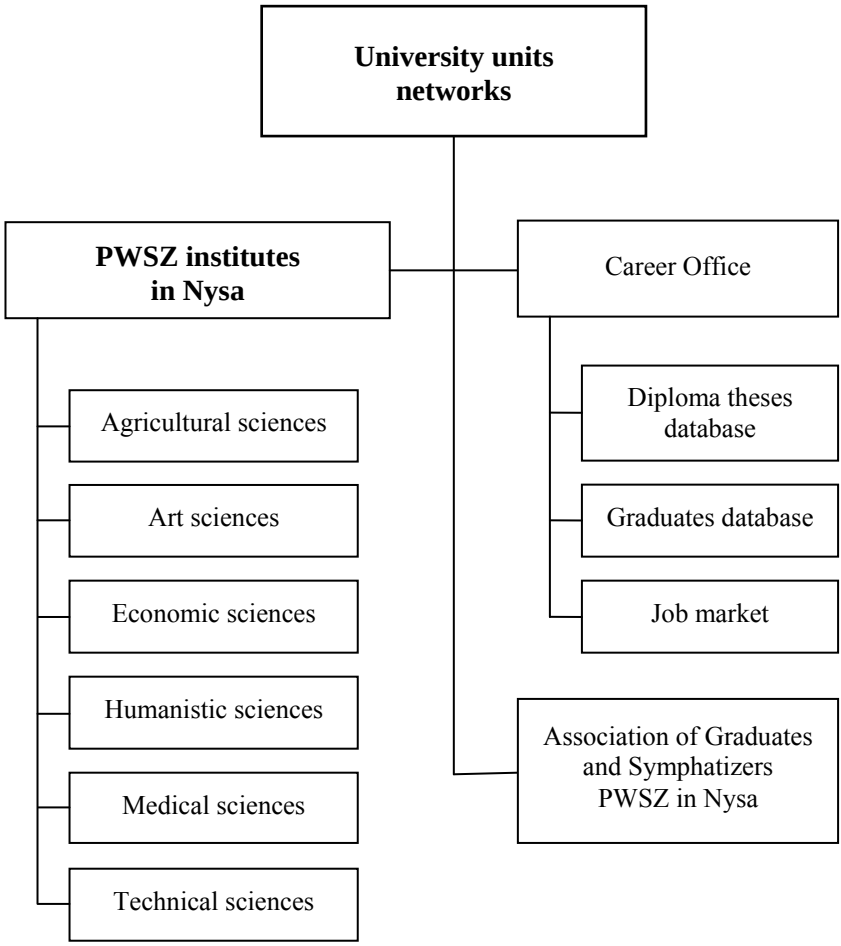


Fig. 14a. Structure of Project III – University entities networks
Source: author's compilation

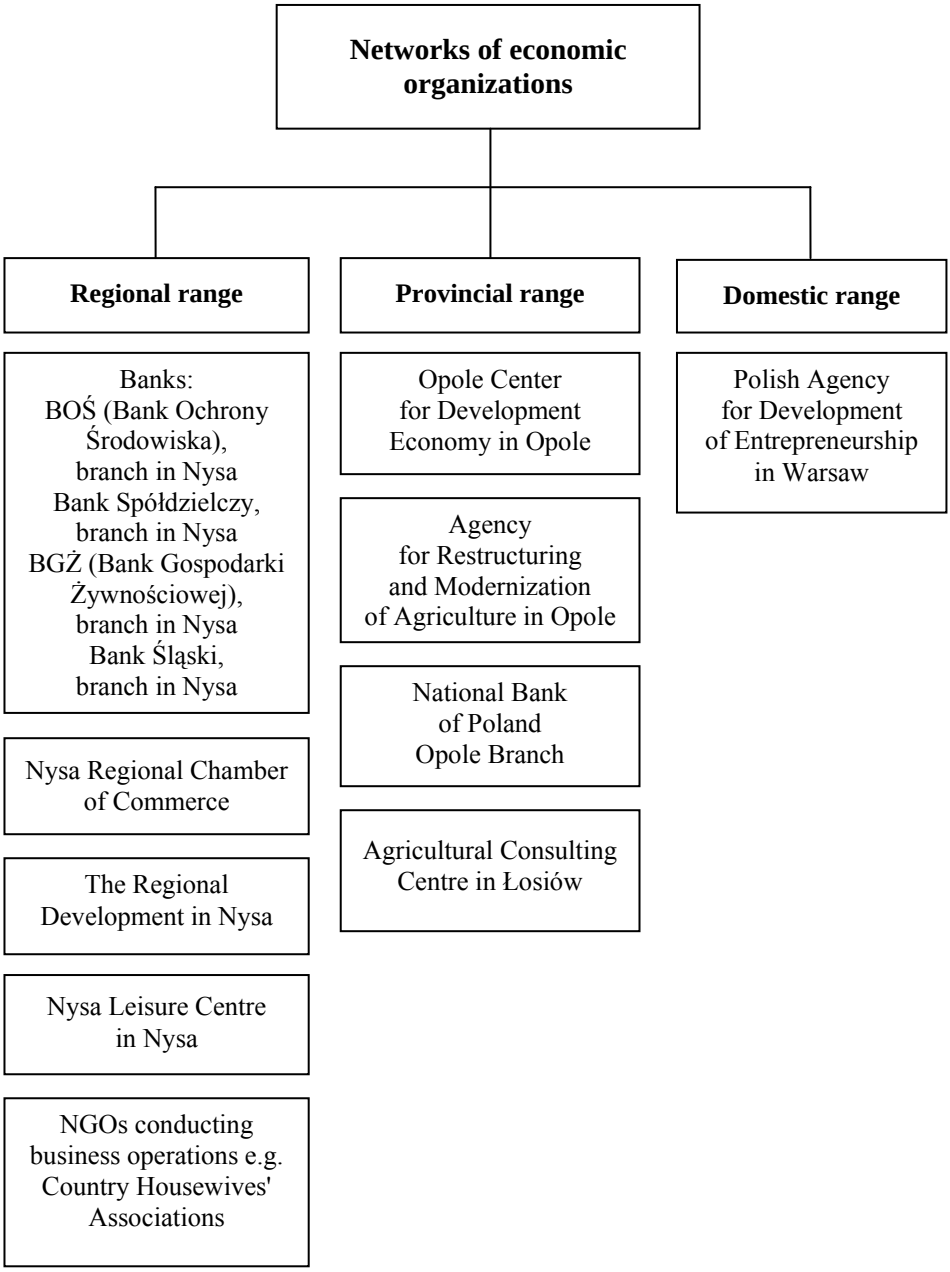
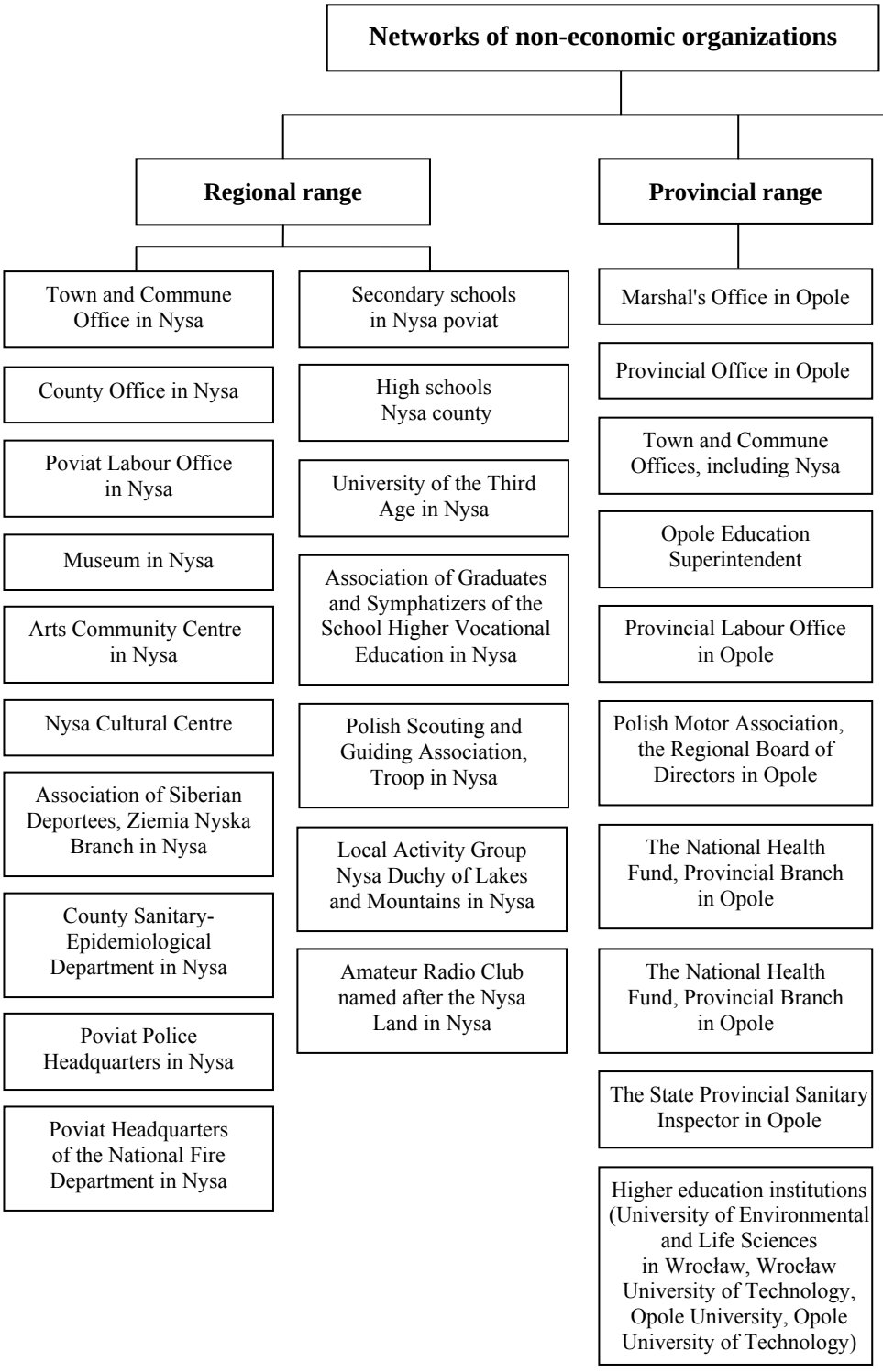


Fig. 14b. Structure of Project III – Networks of economic organizations
Source: author's compilation


Networks of non-economic organizations
Regional range
Provincial range
Town and Commune Office in Nysa
County Office in Nysa
Poviat Labour Office in Nysa
Museum in Nysa
Arts Community Centre in Nysa
Nysa Cultural Centre
Association of Siberian Deportees, Ziemia Nyska Branch in Nysa
County Sanitary-Epidemiological Department in Nysa
Poviat Police Headquarters in Nysa
Poviat Headquarters of the National Fire Department in Nysa
Secondary schools in Nysa poviat
High schools Nysa county
University of the Third Age in Nysa
Association of Graduates and Symphatizers of the School Higher Vocational Education in Nysa
Polish Scouting and Guiding Association, Troop in Nysa
Local Activity Group Nysa Duchy of Lakes and Mountains in Nysa
Amateur Radio Club named after the Nysa Land in Nysa
Marshal's Office in Opole
Provincial Office in Opole
Town and Commune Offices, including Nysa
Opole Education Superintendent
Provincial Labour Office in Opole
Polish Motor Association, the Regional Board of Directors in Opole
The National Health Fund, Provincial Branch in Opole
The National Health Fund, Provincial Branch in Opole
The State Provincial Sanitary Inspector in Opole
Higher education institutions (University of Environmental and Life Sciences in Wrocław, Wrocław University of Technology, Opole University, Opole University of Technology)

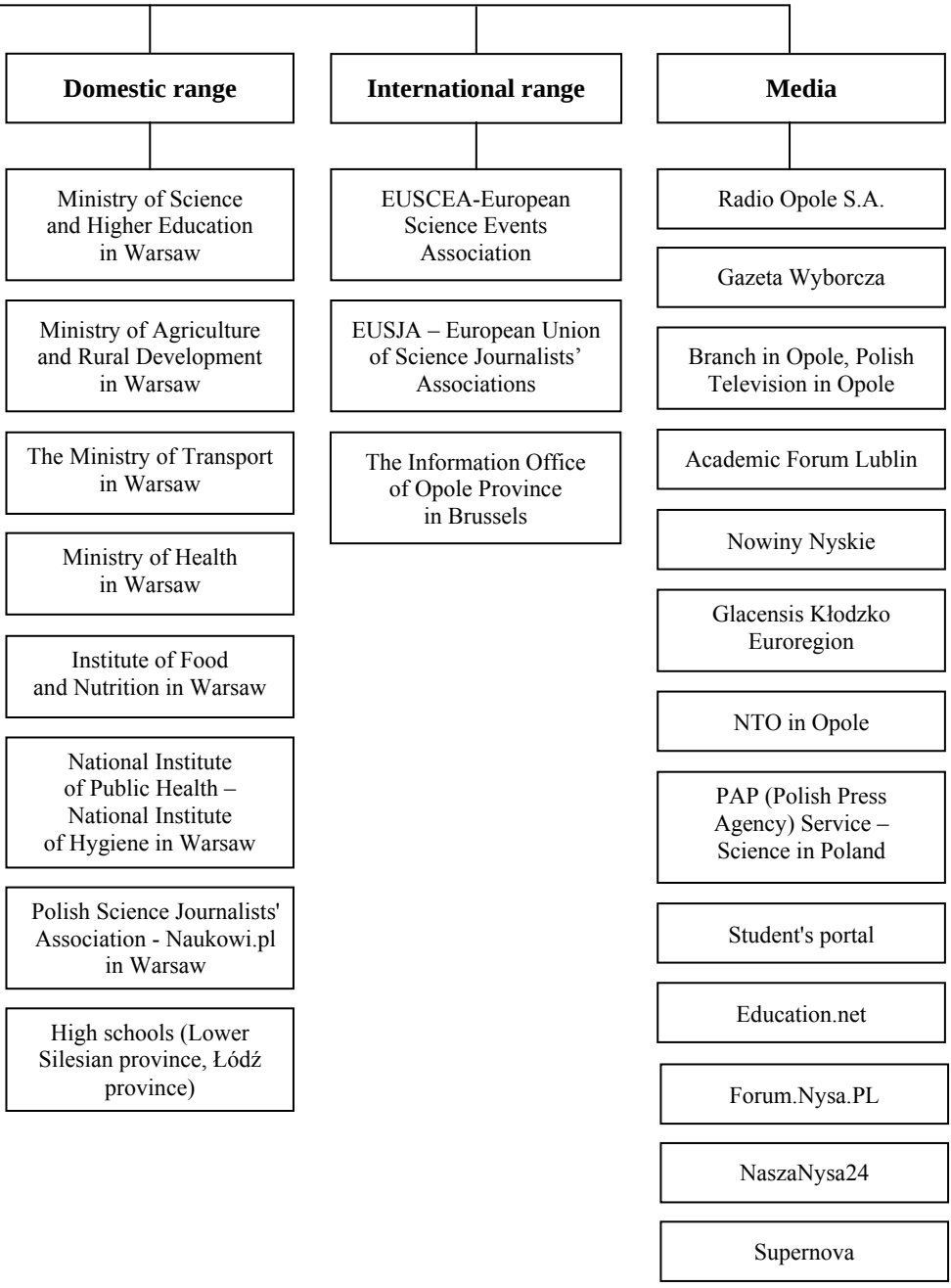


Fig. 14c. Structure of Project III – Networks of non-economic organizations
Source: author's compilation

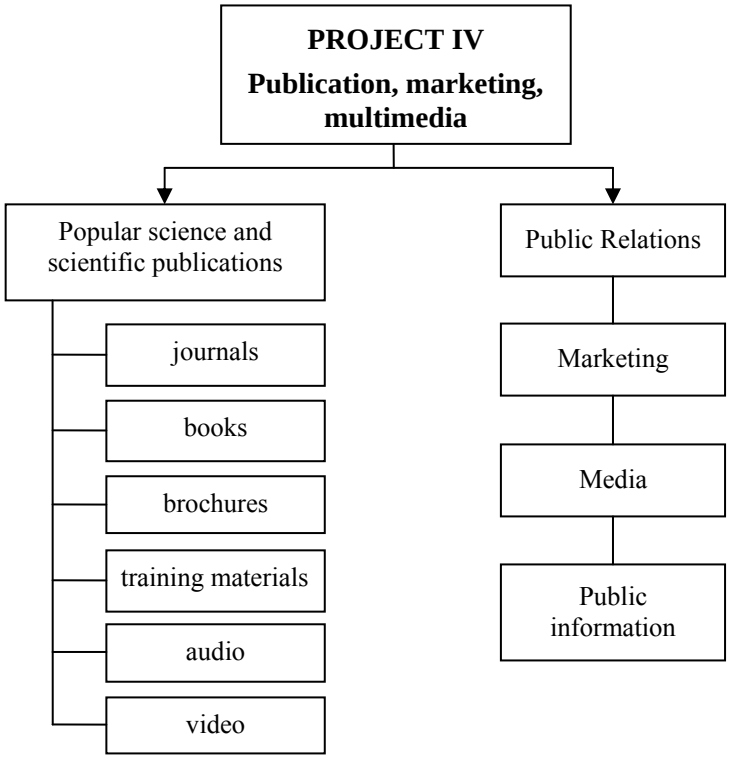


Fig. 15. Structure of Project IV, covering, among others, publications and marketing
Source: author's compilation

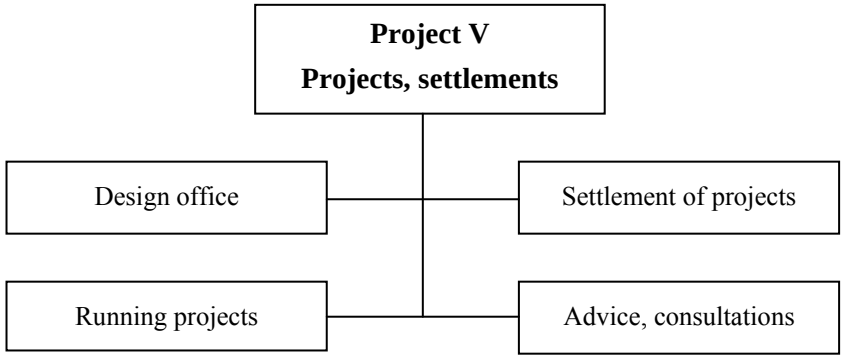


Fig. 16. Structure of Project V, related to development and submission of applications for projects
Source: author's compilation

Summary and conclusions

20. Definition of identity of an academic entity as the future and the sense of existence of the festival of science

"A nation cannot exist without its history" – definition of oneself, "who we are and where we are heading", "humanity" and many other phrases with similar overtone and similar meaning surround us when there comes a time for using the so-called "big words" It happens quite often, particularly during anniversary events, ending calendar year, birthday, important turning points in life etc. These and similar phrases are used when the speaker wants to appeal to history, tradition, a recognized good or finally to the common sense. Therefore, there is a need to create values deemed to be obvious, uncontested, which determine the framework of the nobility of life and conduct. It is nothing else but these frames that parents use when raising children, and hence a nation and the whole humanity. It is not always easy to conform to all these (after all commonly recognized) principles and even remember them. However, in difficult, valuable and special moments, we almost automatically remind about them. It makes the existence easier, constitutes a stable point of reference and at the same time a beacon. Ultimately the way of life runs between such points, sometimes creates new ones, sometimes redefines, changes and even quenches the old ones. Since the principles are mentioned, one should think on which they depend, everything that is an element on their value and to what degree we can create them (Malczyk T., 1/2009).

One of the ways of determination of the principles of conduct and grouping them is to define the identity. This is because it specifies the identity and identification, promoting lifestyles, ethical norms and worldviews, maintenance and consolidation of the sense of social, group and professional unity (identity). Thanks to that, one can feel that they are someone special, and at the same time integrated within the social reference system, in which one plays a specified role. This important definition of identity expands on the following identities: national, of an object, personal, psychological, social, cultural and personal. It is an organism that is a live and subject to creation and permanent evolution. This is how it is in the case of the place and the academic community of the Nysa university. Since 2001 its identity has been determined – each year more deeply and richly. As new values and experiences appear, the university starts to emanate not only on its students, the employees of all

organizational units, but also on the local community. It systematically installs itself in the space of the city, the county and the province, as well as economic and non-business organizational networks. It reaches for international and global models. It becomes a social trust institution and, at the same time, a qualitative good, both in terms of material and intangible things. This particular value, created and developed all the time, is a space-time continuation of efforts of many wise people who have matured to the point when they could decide to build here a timeless good, which is each educational unit, particularly a university, being the highest degree of educational know-how. This huge step towards better quality simultaneously strongly obligates all who actively and passively participate in the process of development and activities of the university. The effort connected with development and prosperity of each university surpasses the abilities of one professionally active generation, requires many generations, great commitment and experience. Only the subsequent note on the staff of time, written with such difficulty, will create a magnificent melody that will be a one-of-the-kind anthem of joy and openness, timelessness and freedom, unevanescence and identity of the place, people and the community that composed and produced it. Already today this good gives fruit, which you can boast of, gives satisfaction to many young people and their parents, serves the needs of the society and the state, defines the town and the region at the level higher, is a neutral and open platform for development of knowledge and experience. This beautiful city, tormented by difficult history, received a new academic identity (Malczyk T., 1/2009).

The sense of popularization of science, diffusion of knowledge or knowledge management, particularly in terms of discussions over identity of the university, gains particular depth and value. It is an instrument that, like the university, evolves, adapting its offer to the changing circumstances and needs. The festival of science must follow the development of not only the unit - the university, but also the expectations with regard to the level of its professionalism and organizational-executive quality. Here one should think on how to enrich and the next Nysa Science Festival and make it attractive, so that it would maintain and still develop its offer. Observing the models and experiences coming from Poland and other countries, it seems obvious, that there is a need to create new instruments that will be of interest to the Festival participants, providing their educational, spiritual and emotional enrichment.

Among many ideas, one should mention several particularly interesting ones:

1. *Science Cafe* – are scientific cafes that facilitate contacts of the youth and the whole society with the scientific employees and their interests and achievements. These contacts are less formal because they are maintained in an extra-academic atmosphere and often outside universities. Regular, open conversation, science at arm's reach and without obligations.
2. *Science Museum* – great form of knowledge transfer, because performed in museum halls, however, different from from the "museum" method of information transfer. Here in the privacy of museum halls, there are exhibits that can be touched, dismantled and assembled again, one can ask how and why they work and why a given discovery became a breakthrough in the history of mankind.
3. *Science Day* – a day scheduled for presentation of a unique thing, made at request. May take place at school, on the market, in the theater etc.
4. Open lectures – trusty and working form of thematic lectures, taking place in a problematic series. Lectures with topics supplementing and extending educational programs in primary and secondary schools, conducted for administration employees, entrepreneurs etc.
5. Night of scientists – magnificent and interesting event, which actually happens at night. The appropriate atmosphere of a night meeting with science guarantees unforgettable emotions that will be remembered for a long time.
6. Thematic programs – suited both to the needs of young people and adults, bring forward difficult and at the same time important issues. The programs most often end with receiving a relevant document certifying participation and acquisition of the relevant skills.
7. Journals – of popular science nature, written for the needs of a specific recipient.
8. Thematic websites – run by scientists and all the concerned themselves in an interesting and encouraging manner. This relatively young medium, fully accepted by the majority of people, is one of the most popular and common information transfer methods.
9. Festival conferences – developed to the importance of the popular scientific ones with maintenance of their primary objective, that is bringing forward the issues essential for the majority of the society and for the region.

10. *Science News* – newsletters, leaflets, websites, e-mails and other methods of transferring reports from the world of science, provided in a legible and encouraging manner.
11. Science Festival Award – prestigious complement of the festival movement that rewards persons, particularly involved in popularization of science. It can be received both by persons preparing the festival events level at the exceptional, e.g. such lectures, presentations, as well as high school students propagating science among their peers.
12. Recorded lectures – which take place during the festival of science and then are made available on the Internet on the website of the festival of science. Then there is a possibility to initiate contact with a lecturer and asking him about various details.
13. e-festival – interesting and a modern instrument operating 24 hours a day. An interactive method of exchange of information, constantly available and giving the possibility of creation of popular science content, e.g. by high school teachers, lecturers, entrepreneurs.
14. University scientific groups – that have a special role to fulfill, because the students, being little older than the participants of the festival recruiting from high schools, are able to break many communication barriers. At the same time, they are a living example that science is interesting and useful.
15. Mini Science Festival – on one hand, it is an event facilitating contact with young people who for different reasons cannot attend the festival of science, but is willing to get to know the intricacies of science, and, on the other hand is a "festival" performed in primary schools and even kindergartens.
16. International Science Festival – particular form of popularization of science through international teams presenting various events with their own interpretation, viewpoint, knowledge acquired in other socio-economic circumstances of a given country.
17. *Science Centre* – permanently active centre, equipped with special instruments facilitating realization of festival missions. There you can sit, ask, touch, work alone or in a team, contribute to the centre on your own.
18. *Science Cinema* – film centre that has wide and thematically selected library of films propagating knowledge. After the completed film show, there is time to discuss the presented material.

Due to wide impact of the festival of science and its simply unlimited development possibilities, and also the magnificent idea, one should expect many interesting science propagating ideas in the future. Development of science requires toughness of character and resolve, its popularization does not require less involvement. In a sense it is becoming a science, consisting in searching for the means aptly and simply presenting the educational content. However, the most important thing, is to stimulate the interest in studying, searching and developing oneself. Only such attitude of the youth, grounded later by the desire to acquire successive degrees of education, guarantees development of science, technical progress, new patents and implementations.

21. Management of knowledge and its diffusion in organizational networks of the region and the province

The developed network of entities, forming the structure of the university, shows great topical diversity, based on didactics and scientific research carried out by particular academic teachers. This process is supported by the fact that the university is equipped with high-class hardware and software, as well as comprehensive library collections and access to several international electronic scientific databases. Such created network performs basic, educational mission of the university with simultaneous development of the academic staff. This potential easily generates surplus of knowledge in relation to the actual teaching needs resulting from the adopted educational programs, which may be involved to solve many problems and needs of the region. Therefore, correct management of this knowledge creates many possibilities of entering into cooperation with the existing networks of economic and non-econimic organizations. At the same time, the university stimulates and positively affects the development of entrepreneurial attitudes of its students and graduates, who expand the said networks. Thus form the return streams of knowledge, which leave in the first phase, building the students' capital of knowledge and skills, and come back in the second phase when the university starts to cooperate with its graduates operating professionally in the region and fitting in various organizational networks. This phenomenon starts to occur more and more often because the university enters the period in which its first and subsequent graduates realize their professional plans, taking up work in the existing companies or establishing and running them on their own.

Development of a *regional knowledge network*, understood as an innovative connection between the science and the networks of economic and non-economic organizations is a crucial element of this system (Krätke S., 2010). The basis for the system is proper knowledge management, knowledge diffusion and popularization of science that develop sophisticated skills among young people and, which will be used to satisfy the needs of science and the region, after these people gain experience.

The regional knowledge network (Fig. 20) is focused on solving the local needs typical for a given area and, among others, taking account of the following:

- learning, including learning profession,
- production (entrepreneurship),
- administration,
- development and promotion of the region,
- building identity and recognizability of the region,
- realization of consistent needs of the region, province and the state,
- innovativeness and implementations based on the regional capital of knowledge, skills and equipment, bottom-up stimulation of the activities important the provincial or national point of view.

The available knowledge and past experiences cause the need of realization of the regional knowledge network, which will facilitate coordination of works at creation and completion of the following: databases of arguments typical for the region, multi-layered development plan based on these arguments, priority and long-term activities, consistent plan of needs of the region covering science and management, regional knowledge management system that as a multi-entity body will represent and fulfill the interests of the region, among others, through common submission of applications for funds, unanimous representation of interests of the region, planning development of the region etc.

The Science Festival organized by the School of Higher Vocational Education in Nysahas built a network of cooperation with many entities placed in the network of economic and non-economic organizations. As a result, the impact area of the festival of science includes the region, the province, the country and a part of the European Community countries.

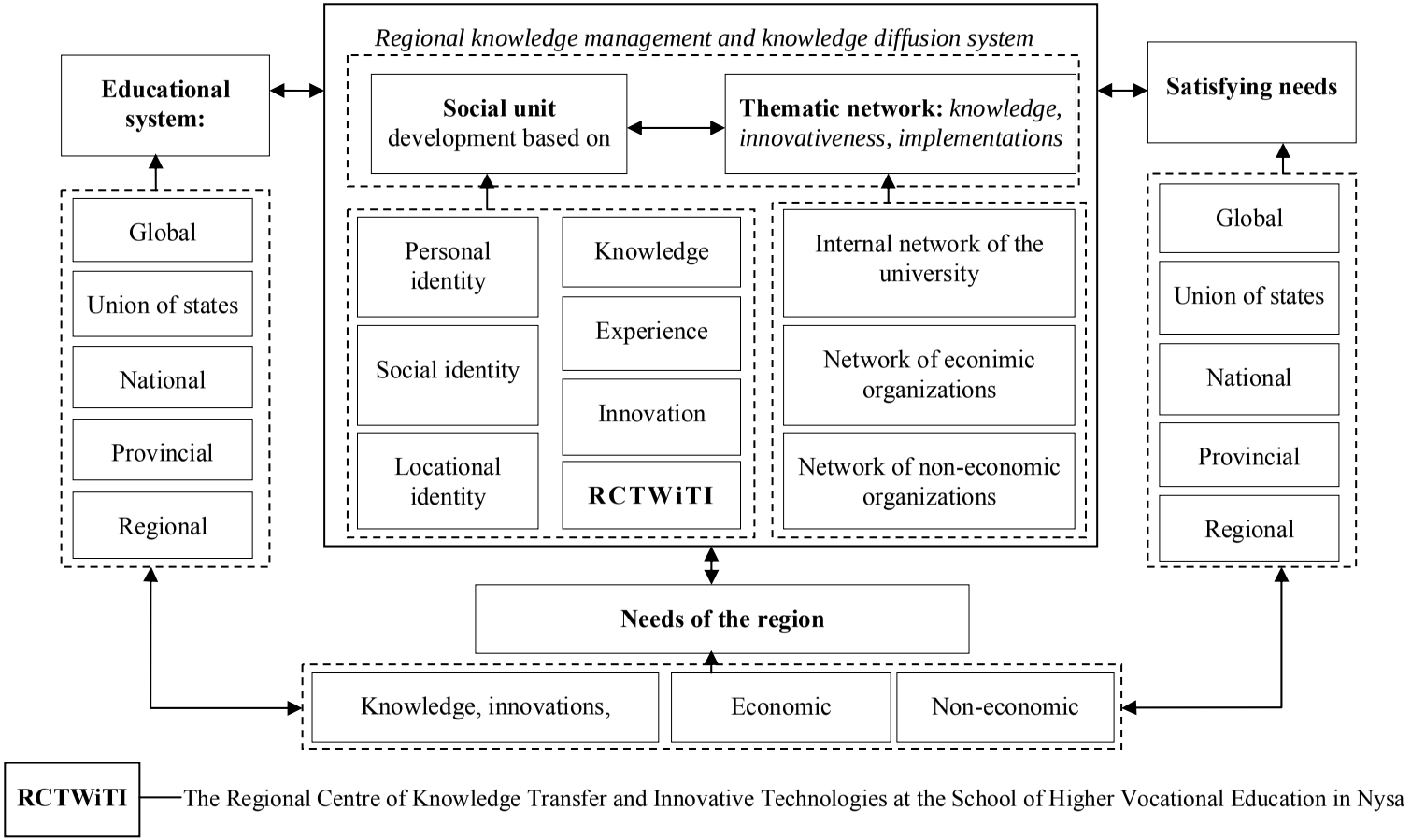


Fig. 20. Operation diagram of Regional Knowledge Network
Source: author's compilation

For six years the festival has been entitled realizing the knowledge diffusion program, with particular focus on the Nysa region. It is an example of development of a regional knowledge management and knowledge diffusion system, it has also a large share in development of the regional knowledge network. Obtained experience, developed and consolidated contacts, cooperation quality, responsibility for actions and full understanding of the common goal, are the uncontested achievements of the festival.

Currently, the Science Festival has been systematically expanding its activities and impact, operating for the whole year. On one hand its educates, promotes knowledge and scienctific achievements, and, on the other hand the parties takes up issues difficult and important for the region. It conducts constructive dialogue with the youth, entrepreneurs, administration, the local society. The Nysa Science Festival has become a permanent part of the calendar of events in the region, it is widely supported at the regional, national and even international level.

There is an actual need for creation of a global festival movement network (Global Network Science Festival), which will include all science festivals organized in the world (Fig. 21). Each continent will centralize the festivals organized in the countries being a part of it.

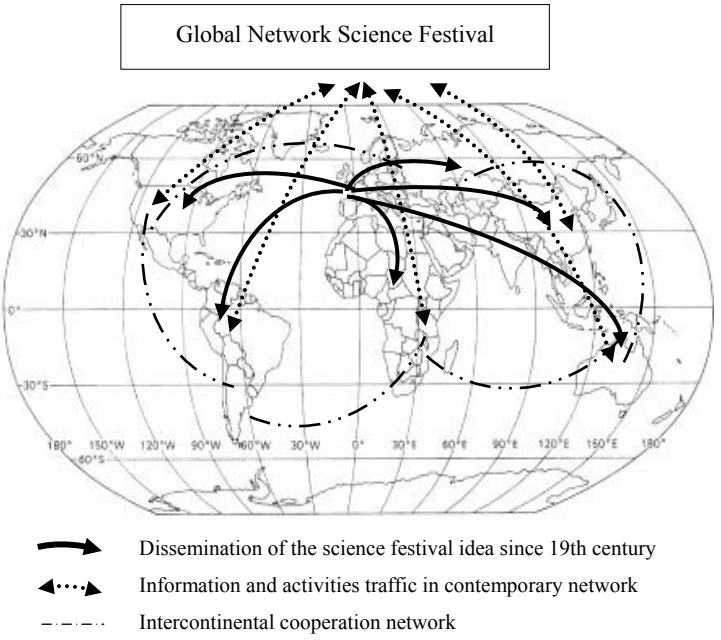


Fig. 21. Global Network Science Festival
Source: author's compilation.

Global festival of science conferences comprised of groups representing different continents will be organized once a year. Discussion on the following issues crucial for the movement will take place during the conference:

- analysis of world expectations and of development trends in science, education and entrepreneurship,
- identification of priorities of development of the festival movement, being a response to the global expectations and the expectations of particular countries,
- defining methodology of development and the methods of implementation (through science festivals) of knowledge management of the knowledge diffusion system of knowledge at the global and state (unions of states) level,
- transferring the presidency of the Global Network Science Festival to another continent for another year.

Coherent treatment of the festival movement, above all, will affect the following:

- constant access to scientific information at the global level,
- determination of the plan of action and the desired direction of development in the future years,
- exchange of information at the global level, e.g. through videoconferences, international lectures, interactive workshops and conferences,
- exchange of experiences between organizers of science festivals,
- mutual assistance in implementation of knowledge diffusion, methods of implementation of the festival etc.
- undertaking many consistent activities and implementation of international, particularly intercontinental projects related to development and popularization of science.

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List of websites related to the Science Festival in Nysa, prepared substantively and implemented by the author:

1. website devoted to the program concerning entrepreneurship (from 2008)
   http://www.studiaibiznes.pwsz.nysa.pl/

2. website of the magazine of PWSZ in Nysa "ALMA MATER" (from 2006)
   http://www.pwsz.nysa.pl/~promocja/gazeta/gazeta.html

3. website of the Science Festival in Nysa (2005-2009)
   http://www.pwsz.nysa.pl/~promocja/nfn2008/index.html

4. website of the Academic Artistic Stage (since 2007)
   http://www.pwsz.nysa.pl/~promocja/asa/index.html

5. website of the Virtual Artistic Gallery (from 2009)
   http://www.wga.pwsz.nysa.pl/index.html

6. website of the Festival Popular Science Conference (2009)
   http://www.pwsz.nysa.pl/platforma/index.html
   including:
   a) conference entitled *Science and entrepreneurship in the region of Nysa*, 17 September 2008, PWSZ in Nysa
      http://www.studiaibiznes.pwsz.nysa.pl/
   b) conference entitled *Nourishment education system in the region of Nysa*, 15 September 2009, PWSZ in Nysa
      http://www.pwsz.nysa.pl/~promocja/nfn2009/wwwkonf/index.php
   c) conference entitled *Knowledge management in agriculture*,
      05 June 2009, PWSZ in Nysa
      http://www.wiedzairolnictwo.pwsz.nysa.pl/

7. Electronic teaching and popular science platform,
   Małe Granty (Small Grants) Marshal Office of the Opole Voivodeship (from 2009)
   http://www.pwsz.nysa.pl/~promocja/platforma/index.php

List of websites related
to the world's science festivals:

1. http://www.britishscienceassociation.org/
2. http://en.wikipedia.org/wiki/Science_festival
3. http://www.scifest.org.for/
4. http://www.cambridgesciencefestival.org/Home.aspx
5. http://www.chicagoscienceinthecity.org/
6. http://www.eurekafestival.ca/en/
7. http://en.wikipedia.org/wiki/World_Science_Festival
8. http://www.scitechfestival.org/
9. http://www.sallyridescience.com/festivals
10. http://www.sdsciencefestival.com/
11. http://www.wonderfest.org/wp/
12. http://www.sciencerendezvous.ca/
13. http://web.gc.cuny.edu/sciart/festival/index.htm
14. http://www.q2cfestival.com/
15. http://kurukshetra.org.in/
16. http://pragyan.org/
17. http://techfest.org/
18. http://www.ktj.in/
19. http://cognizance.org.in/
20. http://www.axisvnit.com/
21. http://sciencefestival.com.au/
22. http://www.scifest.org.nz/
23. http://www.kofac.or.kr/
24. http://www.euscea.org/
25. http://www.wiedzawrolnictwie.pwsz.nysa.pl
26. http://www.studiaibiznes.pwsz.nysa.pl/
27. http://www.pwsz.nysa.pl/~promocja/nfn2009/wwwkonf/index.php
28. http://www.pwsz.nysa.pl/~promocja/platforma/nfn1.html
29. http://www.pwsz.nysa.pl/~promocja/platforma/nfn2.html
30. http://www.pwsz.nysa.pl/~promocja/platforma/nfn3.html
31. http://www.pwsz.nysa.pl/~promocja/platforma/nfn4.html
32. http://www.pwsz.nysa.pl/~promocja/platforma/nfn5.html
33. http://www.pwsz.nysa.pl/~promocja/gazeta/gazeta.html
34. http://www.naukowi.pl
35. http://www.warrington-worldwide.co.uk/articles/6487/1/Fun-at-the-mini-science-festival/Page1.htm

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