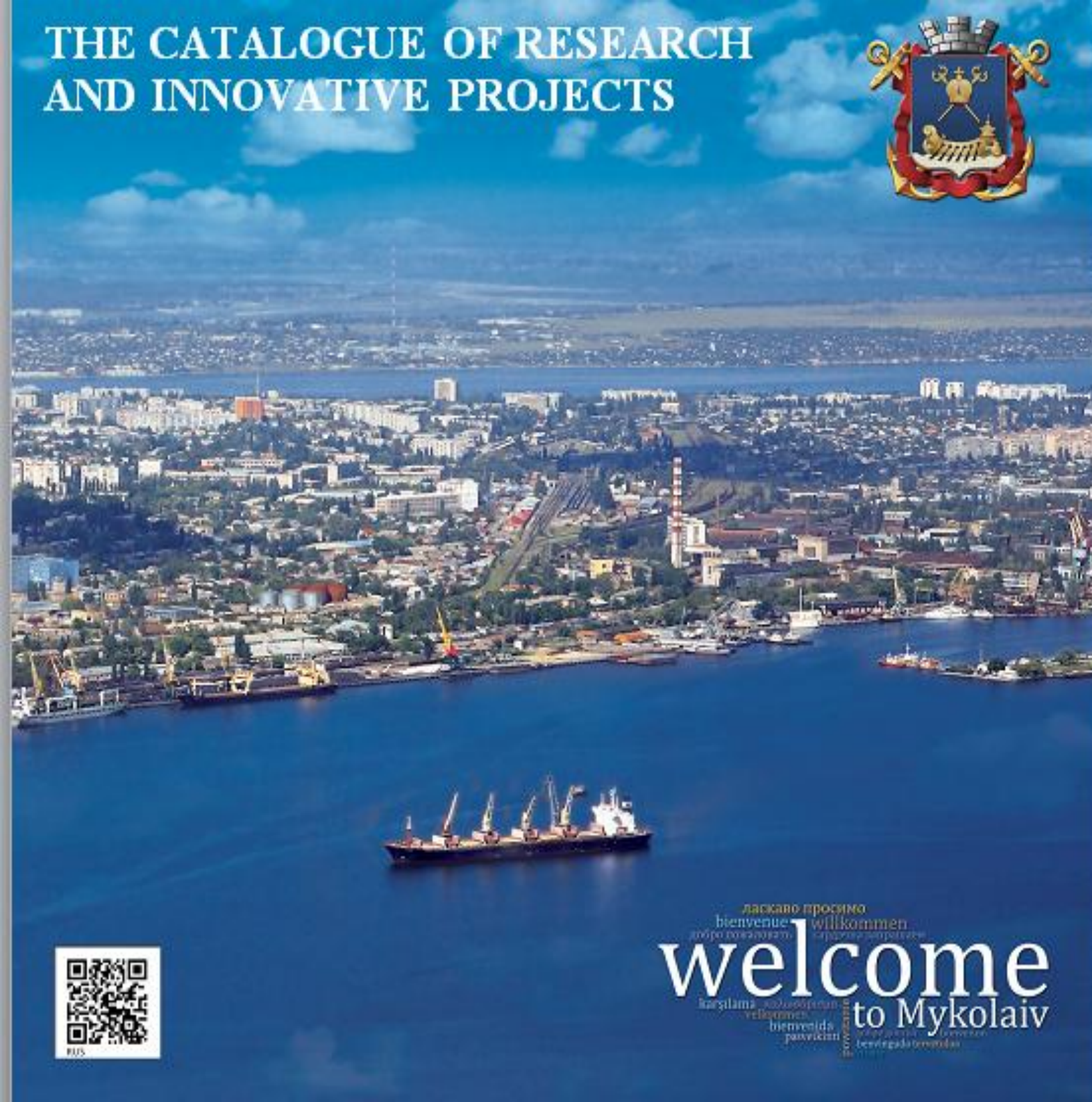


THE CATALOGUE OF RESEARCH AND INNOVATIVE PROJECTS



ласкаво просимо
bienvenue
добро пожелати
willkommen
la ruzhko zapryatayete
karşılama
welkommen
bienvenida
paivikiem
welcome
to Mykolaiv
benvenuto
bienvenido



“Economics online”



Making web portal with investment platform placed on it creates a unique opportunity to promote the city, spreading information about its economic, social and cultural life, and that is especially true, advertise its tourism, business and investment opportunities. Also, it is planned to create 3 more web platforms making the work of economic and investments department more effective: web platform of programmes of the city for using by the perspective planning and economic development unit; electronic database of city enterprises of Mykolayiv to be used by industry and the investments unit; Information - analytical system "Automation and control of public procurement", to be used by economic analysis and efficient use of public funds unit.



Brief rationale for the project: Today, one of the important problems of the local government is high time costs for task implementation due to outdated methods. Using modern technology is the way to modernizing the work of the executive committee of Mykolayiv City Council and its units including the department of the economy and investment of Mykolayiv City Council and make it more progressive and will enhance the image of the municipality of the city of Mykolayiv to citizens and foreign investors.

Proper use of investment funds: Creation of web platform of programs of Mykolayiv City; support of informative - analytical systems "Automation and control of public procurement"; electronic databases of city enterprises of Mykolayiv; purchase of computer equipment; creating investment web portal; create a web platform investments.

The need for investment capital – 22,1 thousands euro

“Robotic technology studing of the continental shelf of Ukraine using non-autonomous underwater technical means”



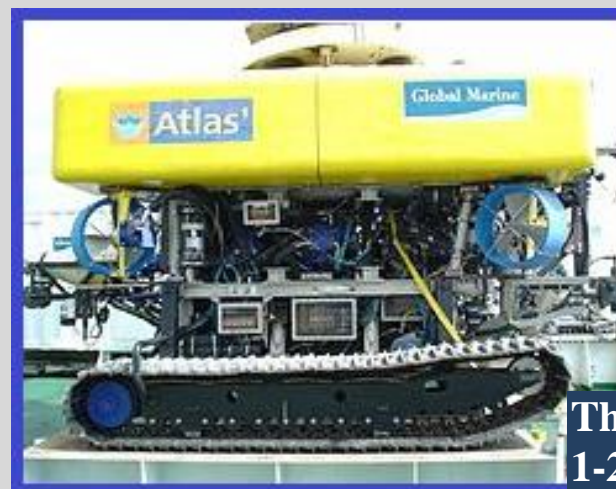
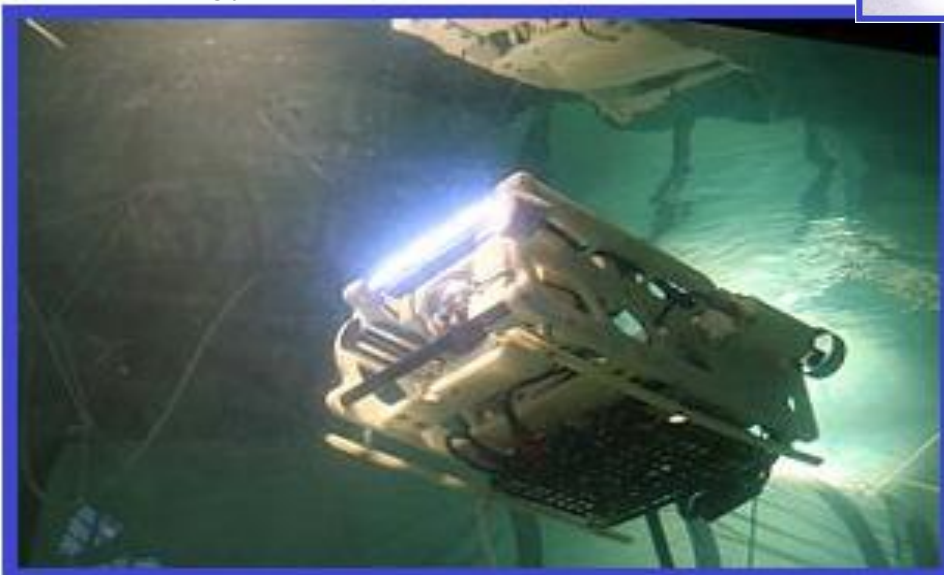
Technology studing of the continental shelf of Ukraine using non-autonomous underwater hardware (vehicles, robots).

Social impact of the project: Reducing the risk to human life while performing underwater operations; release staff from replacing manual labor in robotic technology.



Expected return on 20 - 30%.

Payback period - 5 -10 years.



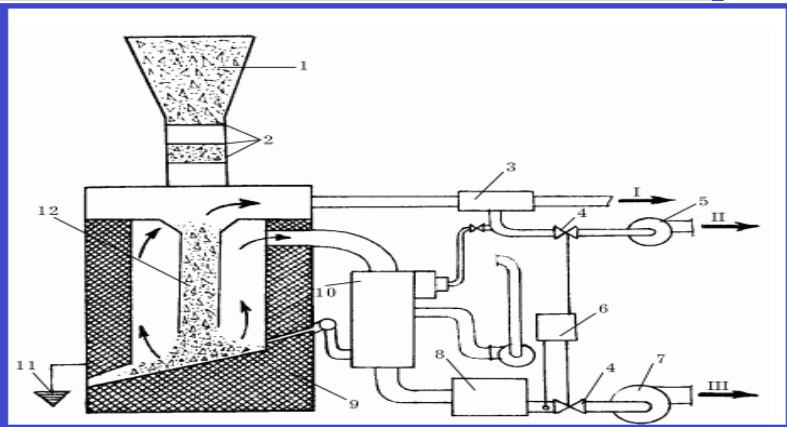
The need for investment capital - 1-2 mln. USD

“The development of modern technologies of processing of organic waste by pyrolysis multiplanimetric obtaining alternative fuels”



Principles disposal by deep thermal degradation of macromolecular organic waste.

Brief rationale for the project: Utilization of environmentally safe method BTSP solid waste; introduction of facilities for disposal of medical waste and obtain alternative fuels.



Proper use of investment funds: Establish operating equipment samples.

Payback period - 4 years.



The need for investment capital – 14000,0 thousand USD.



“Development of basic theory and project management modernization of energy cities in Ukraine”



Improving the efficiency of project management and modernization of the power of cities and large industrial complexes Ukraine.

Social impact of the project: Reducing tariffs.



Expected return on 20 - 30%.

Payback period - 5 -10 years.



The need for investment capital - 1-2 mln.USD



“Theory and methods of synthesis - automated online management systems safety-guaranteed movement of vessels in restricted waters”



Increasing integrated maritime safety through the creation of reliable and efficient ship management systems, taking into account the human factor.

Social impact of the project: Receiving of new jobs for the duration of the project for young engineers and scientists (including graduates).



Expected return on 20 - 30%.

Payback period - 5 -10 years.



The need for investment capital - 1-2 mln.USD



“Development of scientific fundamentals of designing and creating marine power technology units”



Development of a scientific basis for the design and creation of power plants specialized vessels and technology platforms for the production and processing of hydrocarbons.

Social impact of the project: jobs and scientific foundation design and creation of power plants.

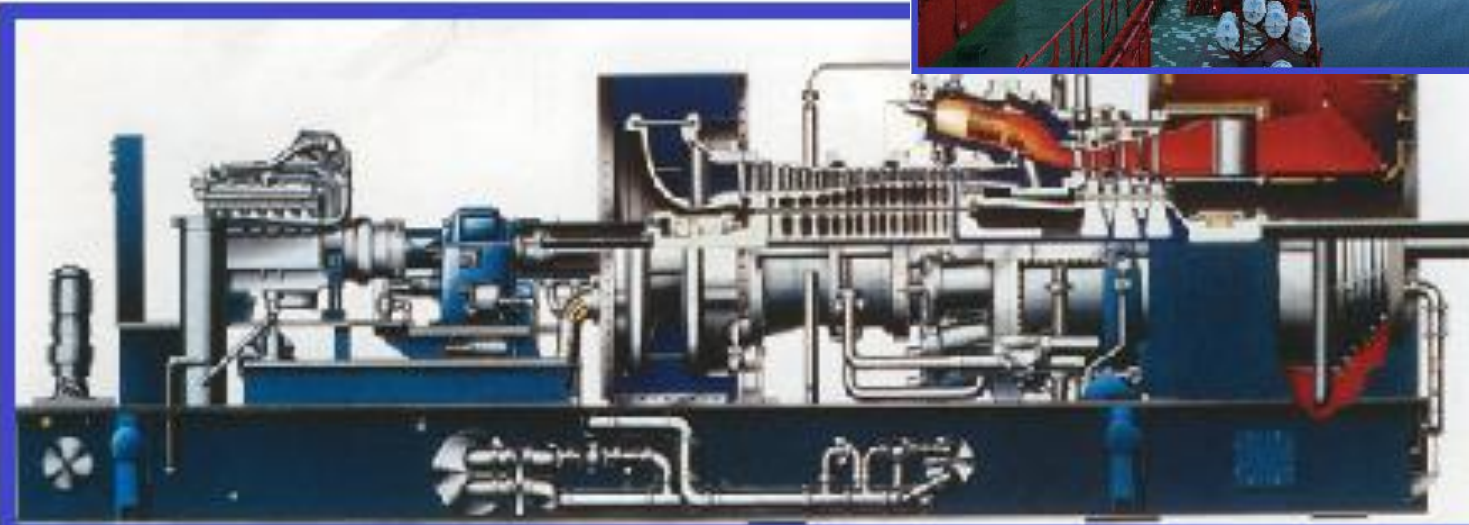


Expected return on 20 - 30%

Payback period - 5 -10 years.



The need for investment capital - 150 thousand USD.





“Theoretical Foundations of creation of high flow parts gasturbodetander networks for the supply of natural gas”



Based on the developed methods of gas-dynamic calculations and geometric modeling to offer flow of hazoturbodetanderiv for different gas pressure surges in the pipeline network.

Social impact of the project: The use of turbo technology in networks of natural gas will provide more electricity that will improve pricing on it, against rising prices of electricity for households.



Expected return on 20 - 30%.

Payback period - 5 -10 years.



The need for investment capital - 1-2 mln.USD

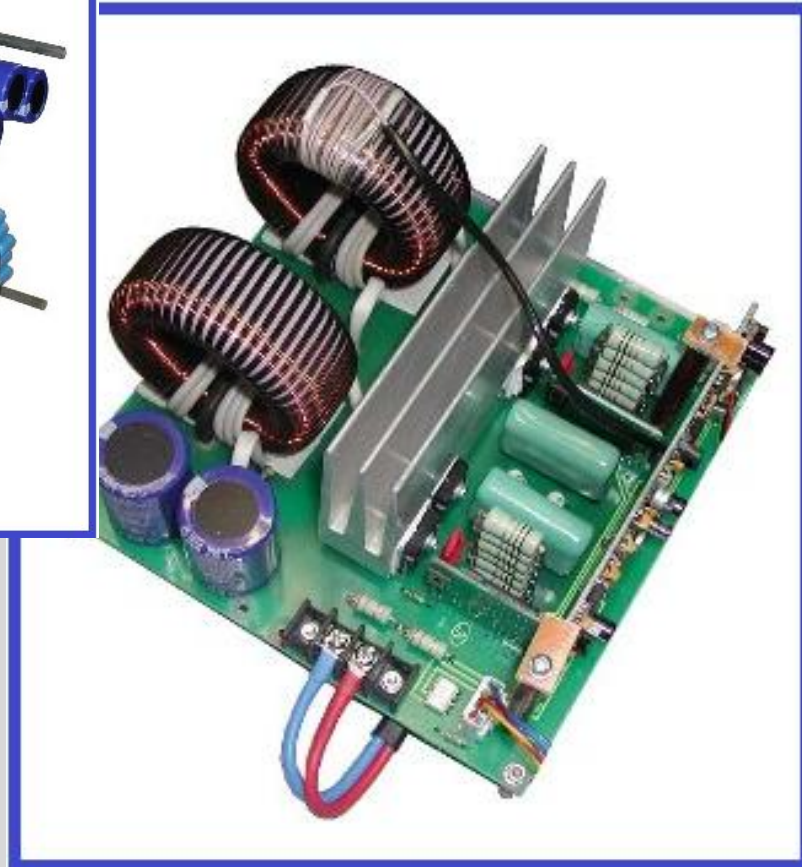
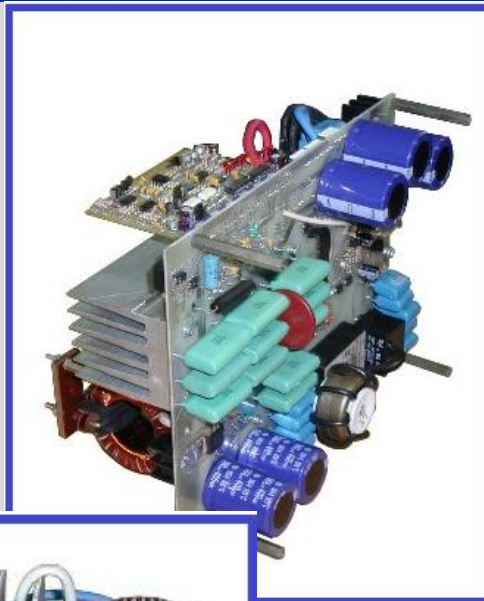
“Ship resonant converters and kvaziresonant of phase and pulse-frequency regulation”

Development of prototypes and theoretical positions of construction and calculation of high economic Constant voltage based on resonant inverter for powering marine automation systems and special systems.

Social impact of the project: High-performance control system transformers.

Expected return on 20 - 30%.

Payback period - 5 -10 years.



The need for investment capital -
1-2 mln.USD



“Theoretical and technological fundamentals of creating complex materials and protective coatings for mass storage and transport of dangerous substances”



Development of theoretical and technological foundations of new competitive composite materials and coatings to protect vehicles and equipment for storage and transportation of hazardous substances, as well as facilities for energy and chemical production.

Social impact of the project: Improving environmental protection dangerous objects of means for storing and transporting chemical, toxic and radioactive substances.



Expected return on 20 - 30%.

Payback period - 5 -10 years.



The need for investment capital - 1-2 mln.USD



“Development of a decision support system in the assessment and optimization technologies of building the hull”



Creating complex instrumental mathematical, algorithmic and software decision support to optimize the choice of technology-based methods of scenario approach.

Social impact of the project: Improving environmental protection dangerous objects of means for storing and transporting chemical, toxic and radioactive substances.



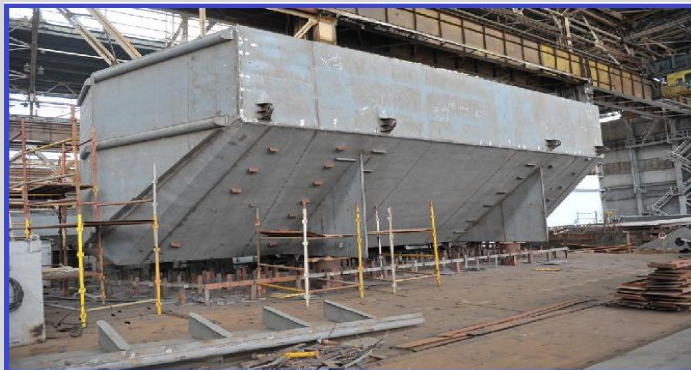
Expected return on 20 - 30%.



Payback period - 5 -10 years.



The need for investment capital - 1-2 mln.USD



“Computer autonomous power control system of gas diesels generator sets”



Development of control systems by technical means battery electric power installations, where the power plant gas diesels used generator sets.

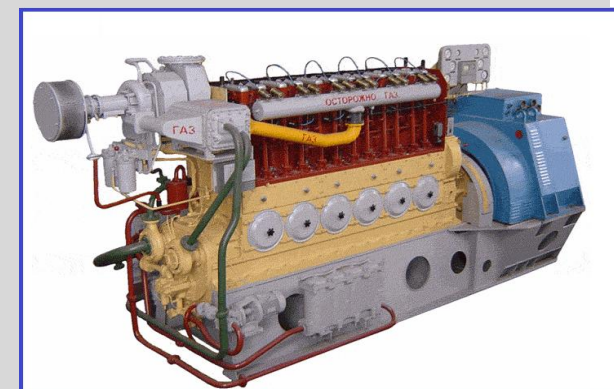
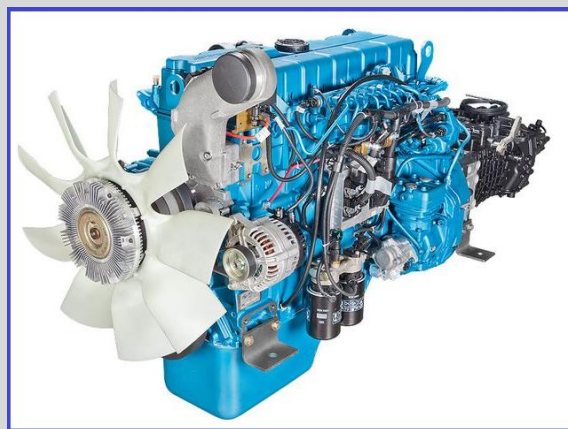
Social impact of the project: Reducing the number of staff in improving the quality of power.



Expected return on 20 - 30%.



Payback period - 5 -10 years.



The need for investment capital -
1-2 mln.USD

“System research and development of models of the target development of heat - and water-based advanced power management technology”



Creation of information decision support system for project management modernization and reconstruction of municipal heat and water.

Brief rationale for the project: one of the issues of further development of towns and villages of Ukraine is the problem of modernization and reconstruction of heat - and water, which vary according to their physical depreciation, high energy, lack of resources for their modernization and reconstruction. At present, the existing models for further development of these systems concern only the specific issues of the problem, are unsystematic nature, do not provide scientifically based management to propose equipment systems, building hierarchies of work, taking into account global and domestic experience in energy management, and more. The problem of creating evidence-based trust model for further development of heat - and water based on the latest technologies energy management is relevant, and its solution is of national importance and significant social and economic effects.



Proper use of investment funds: Purchase of factory equipment, software development, remuneration.

Payback period - 1 year.

Number of jobs created - 50.



**Own funds – 50,0 thousand USD.
The need for investment capital – 70,0 thousand USD.**



“Energy-based intensification jet recycling and purification of gas emission power plants”



Energy savings from recycling and intensification jet cleaning exhaust gases of power plants.

Brief rationale for the project: Addressing greening and energy efficiency.

Project readiness - 50%.



Proper use of investment funds:
Establish operating equipment samples.

Payback period - 5-10 years.



The need for investment capital – 1200,0 thousand USD.



“Models, methods and information technology program management of high-tech industries”



Development of methodological bases, models, methods and knowledge-based information technology reform Ukrainian enterprises in transforming the economic situation.

Brief rationale for the project: Raising living standards through increased productivity and contributions to social funds. Improving the environment by reducing the production capacity resources.



Proper use of investment funds: Purchase of computers (server and client components) and system software; development of technological developments received the schemes based on industry specifics; wages.

Payback period - 3 years.

The need for investment capital – 50,0 thousand USD.





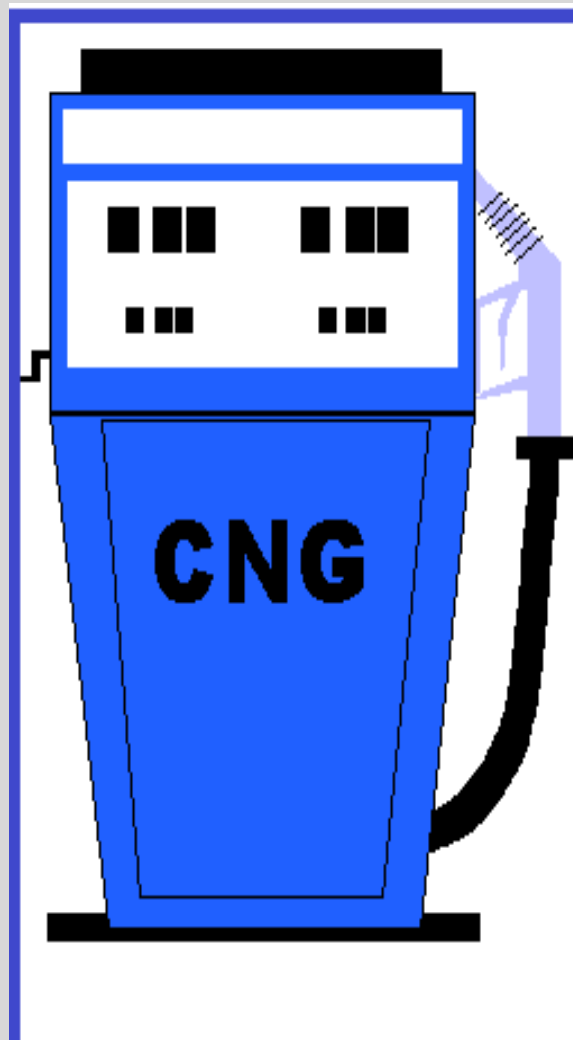
“Improving the efficiency of maritime transportation of compressed natural gas (CNG)-based modular structures”



The process of delivery of compressed natural gas terminals in ports or directly from offshore gas fields States exporter of natural gas by sea transportation system, which will include container vessels with special modules.

Brief rationale for the project:

Transporting natural gas supplies to Ukraine.



Proper use of investment funds:
Purchase of equipment, technology development, pay and so on.



Payback period - 5-10 years.

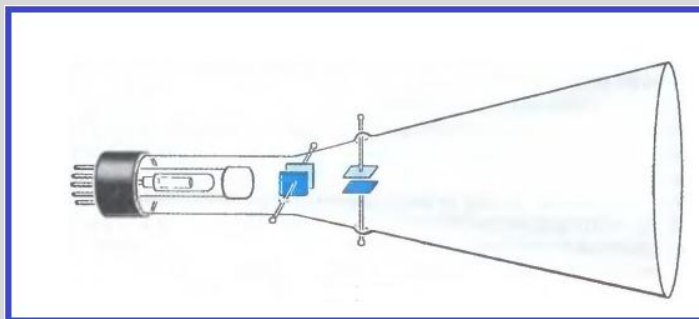
The need for investment capital - 1-2 mln.USD

“Effects of surface modification and doping material concentrated plasma flows and electron beams and their use in modern technology”



Establishing patterns and mechanisms of formation of nano-structures and submicrocrystal and alloy surfaces in the processing of concentrated surface homo-kami energy.

Brief rationale for the project: New technology of surface treatment with the possibility of the formation of high quality.



Proper use of investment funds: Purchase of equipment for surface modification and alloying materials concentrated plasma flows and electron beams; technology development; wages.

Payback period - 5 years.



The need for investment capital – 470,0 thousand USD.

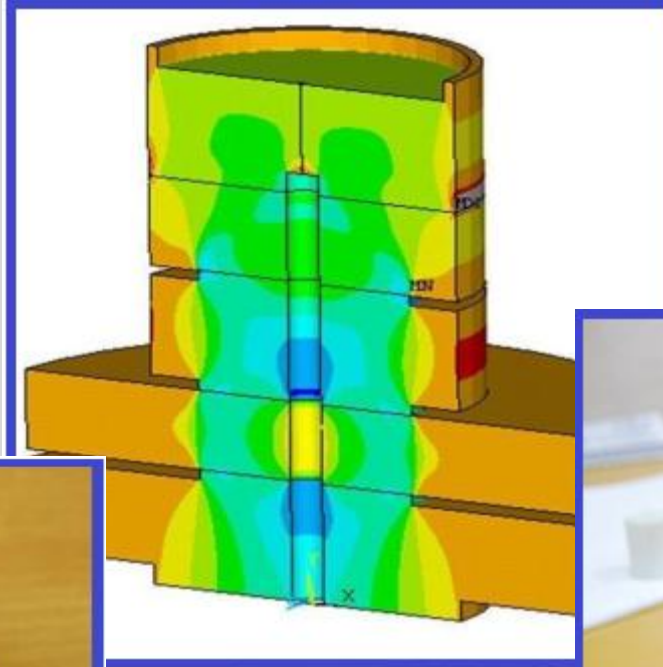


“Research termodeformation diffusion processes in welding, brazing and surfacing of similar and dissimilar materials electronically”



Creation of new energy technologies connection, brazing and surfacing pressure homogeneous and heterogeneous materials.

Brief rationale for project: New highly economical technology.



Proper use of investment funds: Evolution of physical and mechanical properties of metals and alloys; technology development; wages.



Payback period - 3 years.

The need for investment capital – 120,0 thousand USD.



“Teaching and Research Laboratory of Marine Robotics “Delta”



The educational and scientific laboratories marine robotics "Delta": a vessel carrier robot submersibles "Delta"; two tethered remote-controlled underwater vehicle propelled robot; dimension-type series of hinged equipment and tools to perform the search, inspection and technical work using submersibles robots; specialized software for automation control underwater vehicles, robots and automation of processing of received information. The laboratory performs: teaching and research work in the framework of the preparation of bachelors, masters and PhD students studying in the field: "Ships and Ocean", "Ship Power Plants", "Electrical systems and complexes of transport", "Systems and control Processes "; underwater search, researching, inspections and technical work on wrecks and hydraulic structures.



Project readiness - 60%.

Number of jobs created - 15.



Brief rationale for the project: Sea underwater robotic technology search, inspection and production of works belonging to high-tech work performed under difficult weather conditions.

Proper use of investment funds: Purchase of computer tools and factory equipment sonar. Development and testing of technology use submersibles robots in education, research and industrial purposes.

Payback period - 1 year.

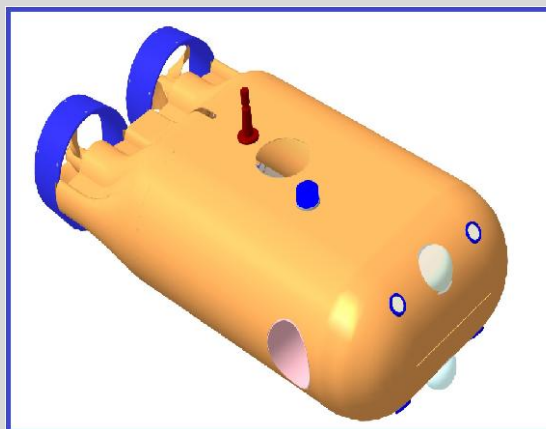
**Own funds – 300,0 thousand UAH.
The need for investment capital – 200,0 thousand UAH.**

“Universal Maritime distance underwater apparatus”



Universal Maritime distance underwater vehicle (TPA) is designed to perform the search, rsearching, and inspection and manipulation work to a depth of 500 m.

Brief rationale for the project: Sea distance underwater vehicles (TPA) are widely used by leading maritime nations of the world for a wide range of underwater technical works. Ukrainian public and private organizations have little experience with TPA in their daily activities. At the same time, the volume of underwater operations in waters of Black Sea increases annually, so the relevance of the creation and implementation of TPA in the practice of maritime activity Ukrainian enterprises increases. Primary markets are seen domestic consumers TPA: Ministry of Infrastructure of Ukraine; Ministry of Energy of Ukraine; State Service of Ukraine of Emergencies; Defense of Ukraine.



Project readiness– 20%.

Proper use of investment funds: Purchase of computer factory equipment, means of sonar and magnetometry. Development and testing of technology use submersibles robots for production purposes.

Payback period – 2 years.

Number of jobs created - 3-4.

**Own funds – 100,0 thousand UAH.
The need for investment capital – 400,0 thousand UAH.**



“Educational Research and Production pig complex Agricultural University”



The project proposes the creation of enterprises and the introduction of technology of production of commodity pork. The product provides commercial receiving and feeding and breeding of young pigs in the number of goals for the year 3900, to the moment the animal live weight of 120 kg and sales - in live weight. The project will be implemented through the use of specialized breeds and synthetic lines pig meat productivity directly (Great White, Landrace, Duroc, Peitrain, "Alba", "Maxter", "Optimus", "cantor") on the background of balanced nutrition animal feed own production.

Proper use of investment funds: Construction and purchase of equipment, process support non-profit in the period to acquire the herd.



Brief rationale for the project: The project - to create a modern company based on the use of the newest domestic and international achievements in the technology of pig for scientific and educational activities, and the population of Mykolayiv region and other regions of high-quality pork and agricultural enterprises and the population - young breeder.

Payback period – 5,5 years.

Number of jobs created - 25.

The need for investment capital – 7684,0 thousand USD.



“Educational research and production laboratory of molecular genetic and biotechnological research”



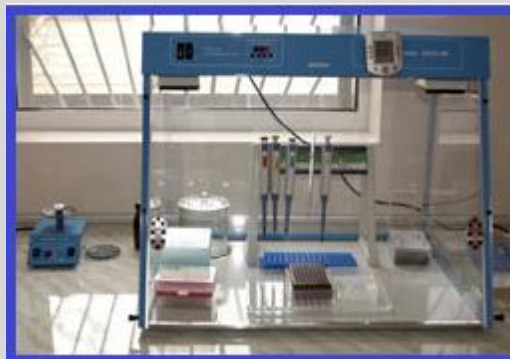
The creation of the laboratory of molecular genetic and biotechnological studies to prepare highly qualified specialists - biotechnologists, engineers - engineers - researchers and experts on standardization, certification and quality as well as the identification and analysis of living objects and their metabolic products for the modern world techniques that provide high accuracy and value of information obtained for its customers, matching graduates Nicholas NAU EU standards of education and business and so on.

Proper use of investment funds: Construction and repair work; purchase of laboratory equipment; purchase of computer equipment; training, professional development; certification laboratory; wages.

Payback period - 20 years.

Number of jobs created - 8.

Project readiness - 10%.



Brief rationale for the project: Research and Educational Production Laboratory involves the study and implementation of a wide range of molecular genetic analyzes of biotechnology on international standards of work performance similar content, namely: identification of genetic abnormalities, the presence of infections (bacteria and pathogenicity group-IV) disease resistance, compatible breeding pairs, determination of paternity; sequencing the genomes of organisms with recombinant DNA technology; ability to determine the safety of biomaterial (living organisms and food products), GMOs, etc.; evaluation of gene pools and their biodiversity, genetic and population processes driving MAS- and genomic selection.

The need for investment capital – 671,0 thousand USD.



“Organization for growing phacelia organic standards”



Economic benefit: Profitability index - 3.5 USD to 1 USD investment.

Social impact: training employees - 55; prevention and treatment of natural medicines (bee products with Phacelia).



Project readiness - 10%.

Number of jobs created - 7.

Payback period - 3 years.

The need for investment capital – 85,0 thousand USD.

“Development and improvement of biotechnical regulation of reproductive function of farm animals”



It is proposed the project focused cultivation and breeding evaluation of young pigs. Knurtsiv evaluate the development of intrinsic capacity, semen quality and reproductive ability. Stimulation and synchronization sexual inclination in pigs using biologically active agents followed by artificial insemination.

Brief rationale for the project: intensification of livestock reproduction technology will increase the output of calves per 100 ewes, cows - 3 goals; pigs - 15 goals; Sheep - 5 goals; blocking sexual inclination to sow it possible to increase by 15-20% efficiency of fattening; stimulation of sexual function in the early postpartum period will reduce the service period in cows 10-15 days in sows - 3-5 days. Implementation of process technology will result in high-quality cleaning of precision castings of complex configuration with many internal semi cavities and channels and equipment from unwanted contaminants and coatings, 3 times lower specific energy consumption, reduce the passage of finishing operations, fully mechanize the cleaning process.



Proper use of investment funds: purchase of bioactive products; purchase of tools and equipment; laboratory studies of blood, semen; histological studies of the reproductive organs of animals. Implementation of the developed technology into mass production.



Payback period – 1 year.

The need for investment capital – 5,0 thousand UAH.

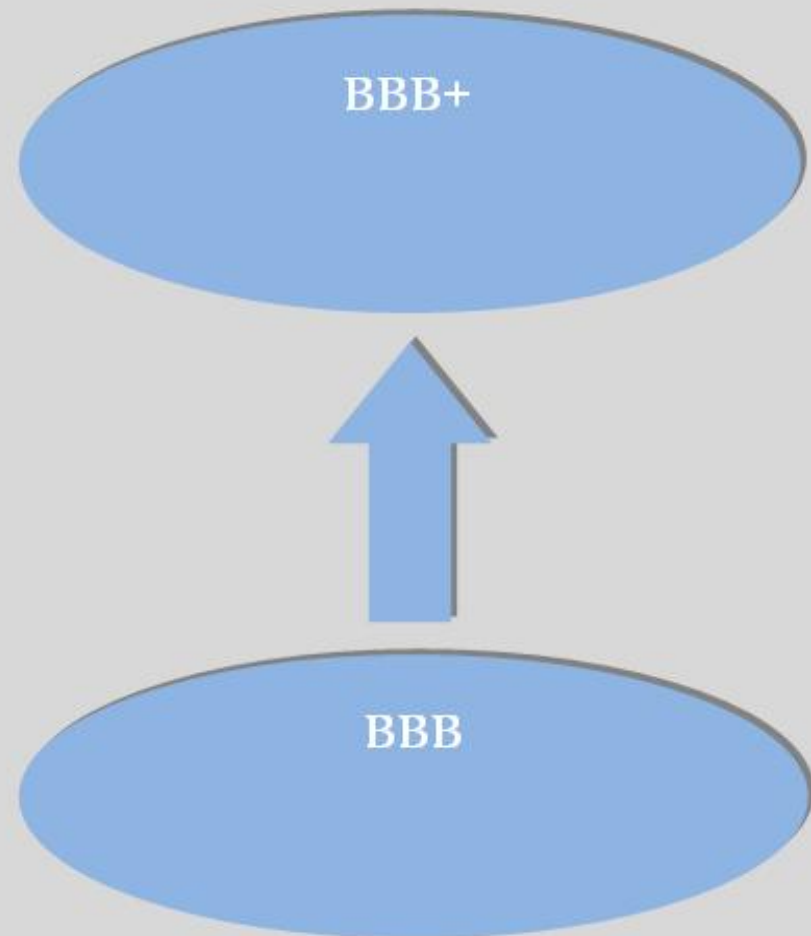
The credit rating of the city of Nikolayev

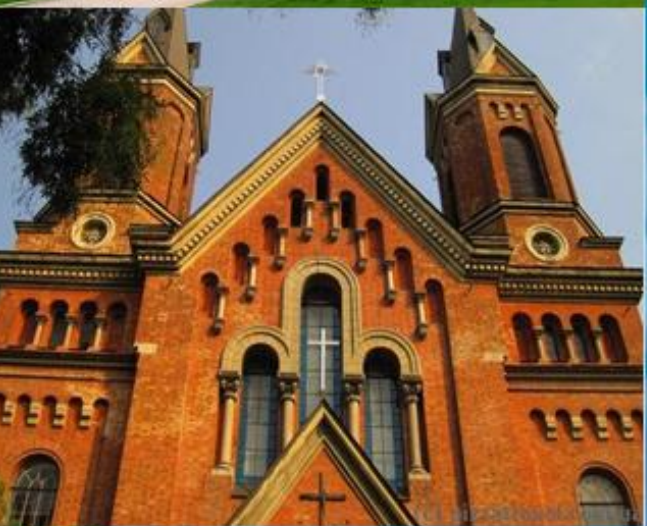


Rating history of Mykolayiv was started in 2006 when the city was first defined long-term credit rating at uaBBB by the National Rating Scale rating outlook is stable.

During 2007-2012 years annually by an independent rating agency "Credit Rating" confirmed credit rating of at uaBBB by the National Rating Scale rating outlook is stable.

In June 2013 the city's credit rating was upgraded to uaBBB + by the National Rating Scale, which was confirmed by 26.06.2014, rating outlook is stable.





**Publication is created by the
economy and investment
department of Mykolayiv City
Council.**

**phone.: +38 0512 37 07 18,
+38 0512 37 43 97.**