



**MINISTRY OF EDUCATION OF THE REPUBLIC OF BELARUS
REPUBLICAN INSTITUTE FOR VOCATIONAL EDUCATION**

**DEVELOPMENT OF THE SYSTEM
OF VOCATIONAL EDUCATION AND TRAINING:
Experience of Belarus**

KEY DIRECTIONS OF COLLABORATION WITH RIPO

- ▶ Introduction, Implementation and Development of World Class Belarusian Vocational Education and Training programmes in the partner country.
- ▶ Projects on the establishment of Leading sectoral VET (Vocational Education and Training) institutions in the partner country – multi-field and multi-functional VET Centers of Excellence.
- ▶ Development of modular educational programmes for the initial, secondary VET and further adult education, based on the NQF of the partner country.
- ▶ Provision of VET for Students: short-term training programmes, internships.
- ▶ Professionalization of VET staff: training, retraining and skills upgrading for VET teachers, trainers and managers of the partner country by the Belarusian experts (different forms of training, including distance learning).



Purpose:

- ▶ effective provision of skills for the demands of rapidly growing and changing economy.
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Objectives:

- ▶ to enable skills acquisition and development by different target groups of population;
- ▶ to ensure economically reasonable allocation of resources;
- ▶ to create conditions for the network concept of education;
- ▶ to increase attractiveness and appeal of VET programmes;
- ▶ to develop new forms of social partnership in VET provision.

THE REPUBLIC OF BELARUS

State system: Presidential Republic
 Official languages: Belarusian, Russian
 Population: **9 mln. 463,8 thous.**
 Capital: Minsk
1 mln. 901,1 thous.
 Area: **207, 597 km²**

ECONOMY

- Export-oriented industries:
- Automobile industry
 - Petrochemistry
 - Optics, lasers
 - Manufacturing automation
 - IT sector
 - Well-developed service sector
 - Agriculture

Belarus produces, % in the world market:



17 % of all harvesters



6 % of tractors



6.4 % of flax-fibre



2.8 % of potatoes



30 % of BelAZ
dumpers



11 % of butter



The **Republican Institute for Vocational Education (RIPO)** is a large educational scientific methodological complex, which provides for Belarusian vocational education system development.



Elaboration of concepts and strategies for VET development in Belarus



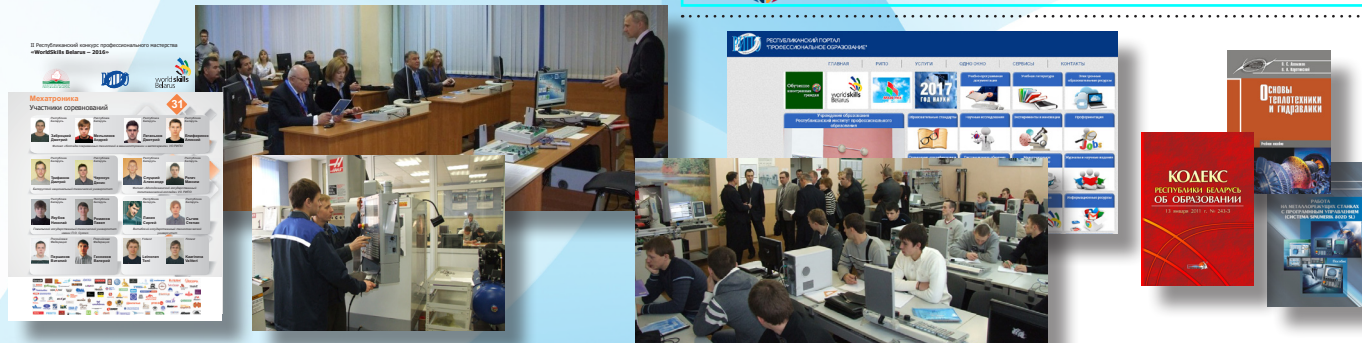
Experimental testing of VET models in Belarus;
Methodological provision for VET



Training, retraining and skills upgrading of VET managers, teachers and trainers



National operator **WORLD SKILLS BELARUS**;
UNESCO – UNEVOC National Center;
Coordination of VET development in the CIS



OUR ADVANTAGES

- ▶ Many years of expertise gained in the export of education and setting up and operation of training centers, as well as the design of learning architectures.
- ▶ Organization of the traineeships in the leading educational institutions and organizations of the Republic of Belarus and the European Union.
- ▶ Successful execution of educational programmes for students from numerous countries.
- ▶ Experience with cultivation of contacts to the relevant foreign decision makers.
- ▶ Balance of fundamentality and competency-based approach when designing the educational programmes.
- ▶ External and internal assessment of the educational programmes efficiency.
- ▶ Close proximity to the industry.
- ▶ Flexible and speedy implementation.



- Certificate of conformity to the quality management system STB ISO 9001-2009 in qualification upgrading and retraining of VET teaching and managerial staff
- German Accreditation Certificate DAKs for compliance with the requirements of DIN EN ISO 9001:2008
- UNESCO – UNEVOC National Center in Belarus
- Partner of the UNESCO IITE for E-learning promotion
- Reference Organisation for the CIS member states in VET staff training, retraining and skills upgrading
- National Operator WorldSkills Belarus
- Focal Point for the ETF projects in Belarus
- Erasmus+ and World Bank projects implementation
- Cooperation with worldwide leading VET reserch institutions and manufacturers of training equipment: Festo Didactic, Lucas Nuelle, Christiani, Famic Technologies, Lincoln Electric etc.



Co-funded by the
Tempus Programme
of the European Union



RIPO PRODUCTS



Normative and legal provision of VET in the Republic of Belarus



Concepts and programmes of VET development



Concepts of VET Centers of Excellence for different economic sectors



Research, analysis, statistics, forecasts



Framework curricula, educational technologies, VET methodology and didactics



Educational and methodological literature, teaching aids
Electronic training aids



Educational portals
Electronic educational resources
Databanks



Concepts and methodology of upbringing work



Teaching-and-methodological complexes



Distant learning, programmes of advanced vocational training



Magazines
Electronic journals



Educational programmes for VET teachers and managers



International cooperation and projects in vocational education

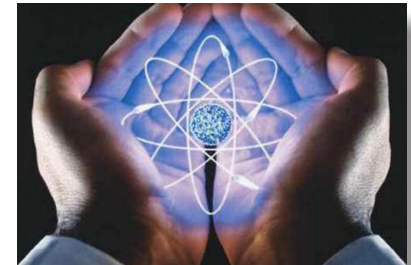
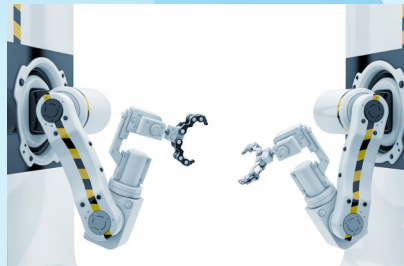
SECTORAL VET CENTERS OF EXCELLENCE / RESOURCE CENTERS

Sectoral VET Centers of Excellence / Resource Centers — as scientific-training-industrial clusters in various types of economic activities.

Mission: providing demand-driven and future-oriented skills for the innovative economy according to the national and international standards.

Objective: establishment of multilevel and multifunctional sectoral platform for VET with continuous, dynamic mechanisms ensuring the match of skills of graduates (ISCED 1-5) to the current and future needs of the economy.

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SECTORAL VET CENTERS OF EXCELLENCE: core functions

Governance,
management, marketing,
moderation

Assessment, certification
of qualifications,
international validity

Upskilling of specialists
and workers of
enterprises

Internships for
pedagogical staff of
other technical schools
and universities

Sectoral R&D, anticipation
of skills needs, participation
in occupational standards
development



Practical work-based
learning in modern
conditions

Educational standards
and framework curricula
development

Curricula development
for new skills and
emerging jobs

Vocational Guidance;
Activities raising
the prestige of VET
programmes

VET and CVT
programme delivery

Introduction of the state-
of-the-art equipment and
innovative technologies
into education

SECTORAL VET CENTERS OF EXCELLENCE: essential features

Focusing on the type of
economic activity



Educational complex

Resources

Different target groups

Resource Center



Different levels of
education



Modern equipment
New technologies
New didactics
Advancing training



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Educational, material
and technical, personnel,
scientific and methodological,
training and simulation
equipment

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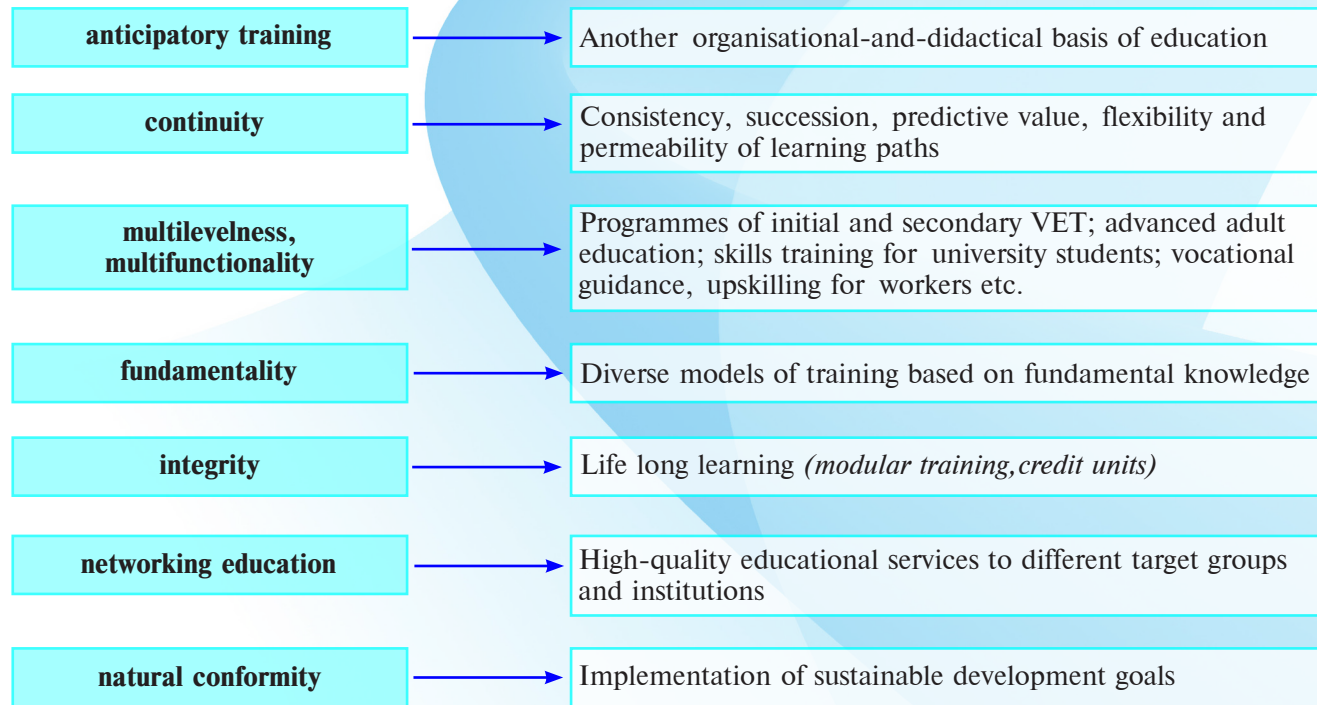
Young people
Adults: workers, VET Teachers

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Education
Retraining
Advanced training
Internship



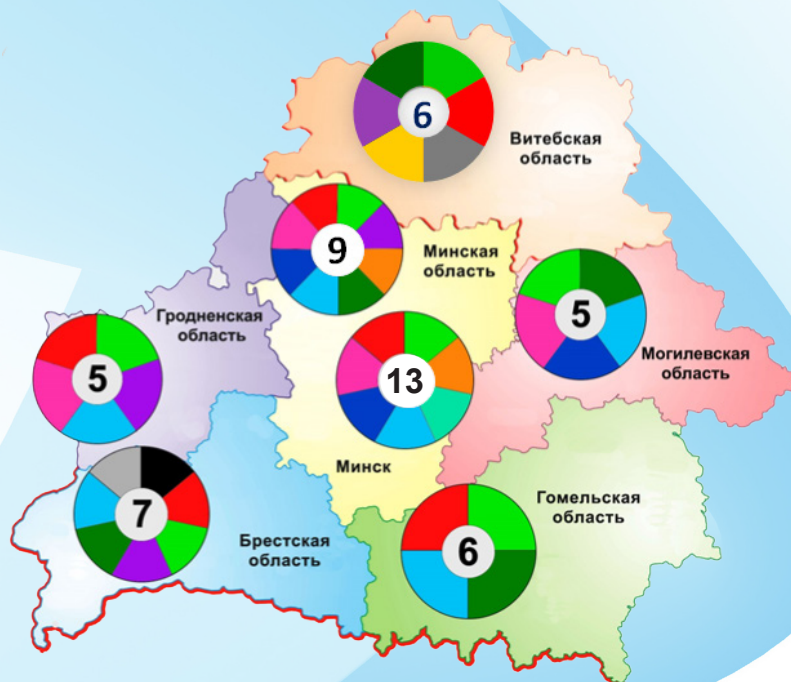
SECTORAL VET CENTERS OF EXCELLENCE: principles



RESOURCE CENTERS IN THE REPUBLIC OF BELARUS

The network of resource centers:

51 specialties



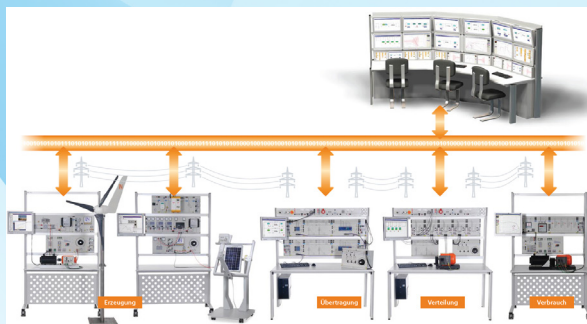
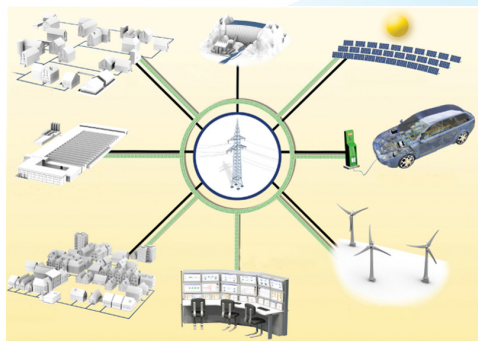
- Public services
- Wood procurement and processing
- Information systems and technologies
- Consumer goods manufacturing
- Engineering equipment
- Catering
- Food production
- Radio-, micro-, nanoelectronic technology
- Agriculture
- Construction industry, communal services
- Transport
- Energetics

VET CENTER OF EXCELLENCE FOR RENEWABLE ENERGIES: ECOTECHNOPARK VOLMA



Profile:

Delivery of multilevel VET programmes in the field of renewable energies, power engineering, smart construction, energy efficiency and resource saving technologies in different sectors



RESOURCE CENTER FOR MACHINERY INDUSTRY: IN PARTNERSHIP WITH FESTO, SIEMENS, SAMSUNG, FANUC, HAAS, BOSCH

Laboratories:

- electrical and electronic engineering, electronic equipment, electric drive and electro automatics
- management systems of equipment
- hydro pneumatic automatics
- programming processing and setting up processing equipment
- automation of production processes in mechanical engineering, flexible manufacturing systems
- training of work on CNC machines



VET CENTER OF EXCELLENCE FOR AUTOMOBILE TECHNOLOGIES: IN PARTNERSHIP WITH VOLKSWAGEN, AUDI, MERCEDES, KIA, TOYOTA, RENAULT

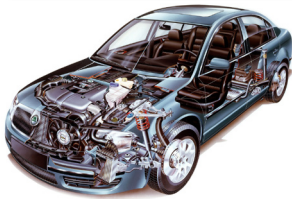
- ▶ Equipment
- ▶ Location
- ▶ Educational programm
- ▶ Educational and methodical complex documentation



Specialty “Maintenance and Repair of Motor Vehicles”

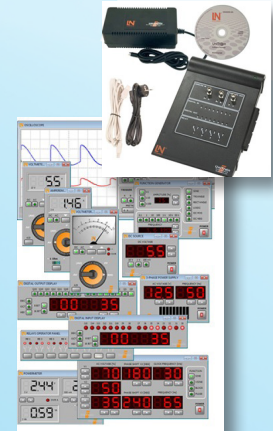
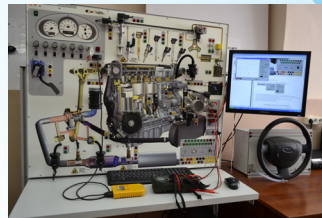
Qualification “Auto Mechanic”

Sphere of professional activity – operation, maintenance and repair of motor vehicles in the organizations of various organizational and legal forms



Laboratories (RC) :

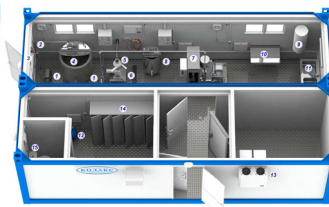
electrical engineering and automotive electronics
structure and technologies of maintenance of motor vehicles
diagnostics and repair of motor vehicles



VET CENTER OF EXCELLENCE FOR AGRICULTURE (BRANCH – THE LIVESTOCK)

Educational dairy farm (project)

Farm buildings of frame type
Insulated roofing covering
Concrete floor
Gate (on a metal frame with filling tree)
insulated, hinged casement
The ventilation system, lighting, water supply,
sewerage
modern equipment
Educational and methodical complex
Training and internships of teachers and
masters in EI profile of the Republic of Belarus
and the EU



Group of specialties «Livestock. Pisciculture. Apiculture»

Specialty	Level of professional education
Zootechnology	Secondary special
Veterinary medicine	Secondary special
Apiculture	Secondary special
Livestock production	Vocational and technical

Qualifications

- ▶ Operator of livestock farms and mechanized farms
- ▶ Milking machine operator
- ▶ Operator of poultry farms and mechanized farms
- ▶ Operator of mechanized farms

VET CENTER OF EXCELLENCE FOR THE FOOD INDUSTRY

Training laboratories:

- for microbiology products of food production
- for techno chemical production control of fermentation and winemaking
- for operation of equipment of mechatronic systems
- technology of beer and soft drinks

Educational baking section

Educational mini brewery

Educational cheesemaking

Educational confectionery shop



VET CENTER OF EXCELLENCE FOR CONSTRUCTION TECHNOLOGIES

- ▶ installation and repair of domestic central heating systems, water supply, gas supply and sewerage;
- ▶ installation of sanitary and heating appliances;
- ▶ repair of steam boilers;
- ▶ testing of parts and units of pipelines at the site of their production

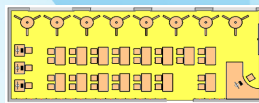
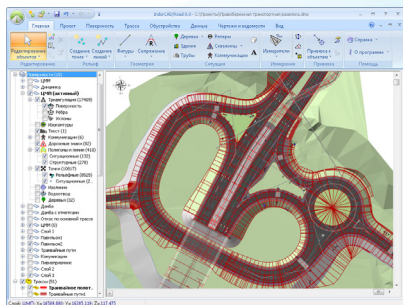
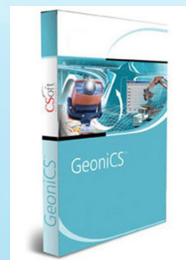


VET CENTER OF EXCELLENCE FOR ROAD CONSTRUCTION INDUSTRY

- Laboratory "Geodesy"
- Laboratory "Road Construction, Maintenance Materials and Products"
- Laboratory "Geology and Ground Knowledge"
- Laboratory "Operation, Maintenance and Repair of Roads"
- Laboratory "Technology of Construction of Highways"
- Laboratory "Construction, Operation, Maintenance and Repair of Road Bridges"
- Laboratory "Occupational Safety"

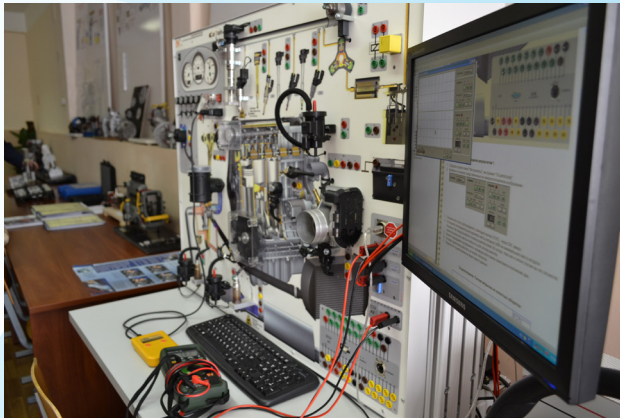
INDOR CAD/
Road Maximal

Complex of software
products
CREDO III



SELECTED AREAS OF RIPO INTERNATIONAL PROJECTS:

1. Establishment of Leading sectoral VET institutions – model of a multi-field and multi-functional VET Center of Excellence.
2. Comprehensive scientific and methodological support of VET delivery based on the NQF:
 - curricula models for initial and secondary VET in different economic sectors, advanced vocational training for adults training and methodological complexes;
 - design project of the training laboratories for a specialty in compliance with the modern education process requirements.
3. Professionalisation of VET managerial and teaching staff: training, retraining and skills upgrading models for VET teachers, trainers and managers.



PROPOSALS FOR FOREIGN CITIZENS TO STUDY TYPES OF ECONOMIC ACTIVITY IN THE REPUBLIC OF BELARUS

ARCHITECTURE AND CONSTRUCTION INDUSTRY

Architecture

Building materials, products and construction

Buildings and structures

Systems of water management, heat and gas supply, ventilation

AGRICULTURAL and FORESTRY INDUSTRY

Livestock

Plant growing

Forestry and landscaping

Technical maintenance of agricultural works

Technical maintenance of irrigation and water management works

Management in the agricultural industry

ENERGY INDUSTRY

Electric power engineering

Car repair services

TRANSPORT

Automobile production Car repair services

Railway, water and air transport

MECHANICAL ENGINEERING

Mechanical engineering technology

Cutting machines and tools

Welding equipment and technology

Technological equipment of engineering production

Technological preparation and adjustment of machines
and manipulators with programmed control

Mechatronics

SERVICE INDUSTRY

Social protection

Food services

Domestic services

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