



**Strategy
for vocational education
and training in the context
of the energy transformation
of Wielkopolska Wschodnia
until 2040**

Iceland 
Liechtenstein
Norway grants

Strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia until 2040

Konin, Oslo, Radom 2023



CWRKDiZ
Centrum Wsparcia Rzemiosła, Kształcenia
Dualnego i Zawodowego w Koninie



FURIM
INSTITUTE



Łukasiewicz
Instytut Technologii Eksploatacji

Strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia until 2040

Strategia kształcenia i szkolenia zawodowego w kontekście transformacji energetycznej Wielkopolski Wschodniej do roku 2040

Author's team:

- **Andrzej Budny, Arleta Jaśniewicz, Grażyna Judgek** (Craft Support Center for Dual and Vocational Education, Konin, Poland);
- **Edyta Kozieł, Małgorzata Sołtysiak, Joanna Tomczyńska, Mirosław Żurek** (Łukasiewicz Research Network – Institute for Sustainable Technologies, Radom, Poland);
- **Max Mykklagard, Halil Afshar** (FURIM Institutt, Oslo, Norway).

Reviewer:

- **Ph.D. Daniel Kukla, prof. UHP** (Jan Długosz University, Częstochowa, Poland)

The publication was created as part of the project "Innovative vocational education and training in Wielkopolska Wschodnia in the context of energy transformation" (project no. EOG/21/K3/W/0046) financed by the EEA Financial Mechanism and the budget of the Republic of Poland under the Education Program.

The publication only reflects the position of the authors and the financing entities are not responsible for the substantive content contained therein.

The publication presents the Strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia by 2040, developed with the participation of a wide range of experts from the institutions implementing the project, as well as representatives of schools/institutions providing vocational education, local government units, education boards, crafts, employers, associations and organizations associating employers, public employment services, universities and other institutions.

© Copyright by Łukasiewicz Research Network – Institute Operational Technology in Radom

All rights reserved. No part of this work may be reproduced in any way without written permission, except for brief quotations embodied in articles and reviews. For information, please contact the authors or project partners.

Cover design: Marta Pobereszko

Publishing: Marta Pobereszko

Editorial work: Joanna Iwanowska

The cover was designed using resources from Freepik.com



Łukasiewicz Research Network – Institute for Sustainable Technologies
Scientific Publishing House
26-600 Radom, K. Pułaskiego 6/10, central telephone number (48) 364-42-41
e-mail: institute@itee.lukasiewicz.gov.pl

CONTENTS

Introduction	5
1. Vocational education in Wielkopolska Wschodnia	12
2. Diagnosis in the field of vocational education and training in Wielkopolska Wschodnia in the context of energy transformation	25
3. Vocational education and training strategy in the context of the energy transformation of Wielkopolska Wschodnia – vision and goals.....	28
3.1. Vision of vocational education in Wielkopolska Wschodnia until 2040	28
3.2. Goals for vocational education in Wielkopolska Wschodnia until 2040	30
3.3. Priority project: Diagnosing and developing the educational offer of schools and institutions providing training in vocational training professions in accordance with the needs of the labor market	35
3.4. Priority project: Diagnosing the needs and equipping schools and institutions providing training in vocational training professions with modern equipment and materials, enabling the implementation of educational outcomes in conditions similar to the real work environment	38
3.5. Priority project: Identifying staff needs and improving the competences of vocational education teachers and practical vocational training instructors	39
3.6. Priority project: Supporting employers in the process of engaging in activities aimed at improving the quality of education in vocational training professions.....	42
3.7. Priority project: Expanding the offer of cooperation between employers and schools and institutions providing education in vocational training professions.....	44
3. 8. Priority project: Taking actions aimed at increasing the efficiency and effectiveness of career counseling for young people studying in schools and institutions providing education in vocational training professions	47
3.9. Priority project: Diagnosing the needs and professional development of career advisors, educators and teachers involved in providing career counseling for young people and equipping career counseling studios	49
3.10. Priority project: Establishing effective and efficient cooperation in the field of career counseling by schools and establishments providing education in vocational training professions with institutions and employers.....	50

- 4. Strategy implementation system 52**
 - 4.1. Institutional system 52
 - 4.2. Financial system 55
- 5. Monitoring, evaluation and change management..... 57**
- Summary..... 60**
- List of tables and figures..... 62**
 - List of tables 62
 - List of drawings 62

Introduction

The study presents *the Strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia until 2040*.

The document was created as part of the project entitled "Innovative vocational education and training in Wielkopolska Wschodnia in the context of energy transformation" (project number: EOG/21/K3/W/0046), which was financed by the EEA Financial Mechanism and the budget of the Republic of Poland under the Education Program.

The project is the result of a regional initiative initiated by the signing of a letter of intent on March 30, 2021 by the following institutions:

- 1) City of Konin,
- 2) Koło district,
- 3) Konin district,
- 4) Sępca district,
- 5) Turek district,
- 6) Regional Development Agency in Konin,
- 7) Chamber of Commerce of Wielkopolska Wschodnia,
- 8) Terecka Chamber of Commerce,
- 9) Guild of Various Crafts in Konin,
- 10) Guild of Various Crafts in Turku,
- 11) Guild of Various Crafts in Koło,
- 12) Guild of Various Crafts in Sępca,
- 13) Academy of Applied Sciences in Konin,
- 14) University of Management Staff in Konin,
- 15) Craft Support Center, Dual and Vocational Education in Konin.

When formulating the Strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia until 2040, the following documents were taken into account:

- 1) **The European Green Deal**, which is an action plan for Europe to become a climate-neutral continent by 2050¹, together with the creation of a just transition mechanism in the form of the Just Transition Fund for 2021–2027². The fund is intended to support regions and sectors that are most affected by the transition towards climate neutrality due to their high dependence on fossil fuels and high-emission processes. Energy policy and just transformation are the key priorities of Poland's Energy Policy until 2040. Energy transformation is an opportunity to create new jobs, which will build a competitive advantage. The energy transformation process is taking place in 6 regions of Poland, including Wielkopolska Wschodnia, which includes the city of Konin and the districts of Konin, Turek, Słupca and Koło.
- 2) **The Just Transition concept for Wielkopolska Wschodnia** announced at the end of 2020, in its vision, presents Wielkopolska Wschodnia as *a region with a zero-emission, resource-efficient and innovative economy, a national leader in green energy, providing its inhabitants with very good living conditions and decent work tailored to their qualifications, and new sources of income for local governments; respecting European values, protecting the natural environment and enabling self-realization for every resident*³. This will be possible by ceasing coal mining and moving away from its combustion in the energy sector by 2030. Wielkopolska Wschodnia is the first region in Poland to set the main directions of government intervention related to counteracting the negative effects of transformation by improving management strategies in the education sector and separating the goals related to the development of the education and learning sector, including vocational education and training, which requires education sector stakeholders to take complementary actions. The concept also specifies objectives and indicates actions to be taken, including: **improving the quality of vocational education and training** and its **better adaptation to the needs of the labor market**, new specializations of the subregion or the modern economy.

¹ *Green Deal: the key to a climate neutral and sustainable EU*: https://www.europarl.europa.eu/news/pl/headlines/society/20200618STO81513/zdrowie-lad-zdrowie-do-neutralnej-klimatyczne-i-zrownowazowana-ue?&at_campaign=20234-Green&at_medium=Google_Ads&at_platform=Search&at_creation=RSA&at_goal=TR_G&at_audience=european%20zdrowie%20%C5%82ad&at_topic=Green_Deal&at_location=PO&gclid=Cj0KCQjwhL6pBhDjARIsAGx8D59Ah2FCcWeS50kSV5Z6ZVDLvtLQXieX_n1m1tc_Tlr89t35ZNT3tCYaAsM6EALw_wcB (access: July 17, 2023).

² Just Transition Fund: <https://www.europarl.europa.eu/factsheets/pl/sheet/214/fundusz-na-rzecz-spowiedzialj-transformacji> (accessed: 17/07/2023).

³ M. Sytek, *The concept of a just transformation of Eastern Greater Poland*, <https://arrtransformacja.org.pl/wp-content/uploads/2020/10/Koncepcja-Sprawedliwyj-Transformacji-Wielkopolski-Wschodni.pdf> (accessed: July 17, 2023).

3) Development strategy for the Greater Poland Voivodeship until 2030⁴, in which:

- Wielkopolska Wschodnia was presented as the largest industrial area in the Greater Poland Voivodeship, which is experiencing a constantly deteriorating socio-economic situation. The area was dominated by traditional industry based on the production of energy from the combustion of brown coal. This situation poses a real threat of losing its current functions in the area of Wielkopolska Wschodnia in the near future;
- Wielkopolska Wschodnia has diverse conditions for the development of renewable energy and, due to its potential, may become an important place for the production of energy from alternative sources, especially in Wielkopolska Wschodnia;
- it was emphasized that the transformation of Wielkopolska Wschodnia concerns not only its energy transformation, but also a comprehensive socioeconomic transformation, and one of the key activities is the development of a strategy for Wielkopolska Wschodnia⁵.
- for **operational purposes** 1.3. Increase and improvement of the use of human capital in the labor market, the **key directions of intervention** include "**Improvement of the quality of education and training, including adaptation to the needs of the labor market**" and "**Modern infrastructure for education, including ICT**". The improvement of accessibility and quality is to be facilitated by, among others, introducing a regional scholarship system, developing universal, social, linguistic and practical skills (including those focused on Industry 4.0), entrepreneurship, independence, increasing motivation to learn, broad involvement of employers in the education and examination process, as well as improving the qualifications of teachers, developing consulting professional. Thanks to the use and increased access to information and communication technologies, it may be possible to digitize teaching materials, introduce innovative forms of teaching, and use digital libraries.
"Education for Greater Poland" package of measures indicates the need **to improve the quality and access to education**, acquire and develop skills, including key ones, and **adapt vocational education to the current needs of the labor market**. The following projects are intended to serve this purpose:
 - ✓ "Improving access to vocational education, including dual education", aimed at intensifying cooperation between vocational schools and employers. As part of the cooperation, it was proposed to increase the involvement of employers in organizing

⁴ *Development strategy for the Greater Poland Voivodeship until 2030*. Management Board of the Greater Poland Voivodeship, Poznań, January 27, 2020, p. 29, <https://www.umwww.pl/artykuly/55878/pliki/strategiawielkopolska2030uchwalaswwnrxvi28720.pdf> (accessed: July 17, 2023).

⁵ *Ibid.*, p. 81.

apprenticeships for students in their companies. It was also important to increase the active participation of industry experts in the preparation of teaching programs;

- ✓ "Professionals' Time 4.0", which is to be continued and focused on improving the qualifications of people working in the field of new technologies;
- ✓ "Education and development of teaching staff", including teachers of schools and educational institutions in the Greater Poland Voivodeship, methodological advisors, educational management staff and pedagogical supervision staff. We have also not forgotten about providing a modern training base supporting the introduction of innovative solutions for education⁶.

4) **Development strategy for Wielkopolska Wschodnia 2040**, which includes:

- the vision and development goals until 2040 were defined, although the content of the report indicated that for the selected projects the expected implementation date was set until 2030⁷. The objectives defined strategic objectives, integrated operational objectives, which were assigned directions of intervention, and then indicated priority projects.
- the development vision strongly emphasized the move away from a coal-based economy towards green growth linked to the energy transformation. The proposed changes require active participation of representatives of the subregion's inhabitants.
- it was indicated that *three strategic goals have a direct impact on the implementation of the development vision, which will be implemented by six operational goals, which together constitute a path to reach the vision, treated as the MAIN OBJECTIVE of the document*⁸.
- As part of the strategic objective "Active, conscious and inclusive society creating a community of values," an integrated operational objective "Modern and inclusive labor market" was indicated, in which "Improving the quality of education and its adaptation to the needs of the labor market" was distinguished as one of the two directions of intervention. The second direction is related to "Professional activation of residents".
- As part of the integrated operational goal "Modern and inclusive labor market," the authors pointed out that *the education system needs changes (especially of a qualitative nature) in order to adapt the fields and profiles of education to the needs of the labor market of Wielkopolska Wschodnia, effectively responding to the contemporary challenges of an economy based on knowledge and innovations*⁹. Vocational education is perceived as a

⁶ Ibid., pp. 62–63.

⁷Ibid., p. 30.

⁸Development strategy for Eastern Greater Poland 2040, p. 30.

⁹ Ibid., p. 39.

success factor in achieving the remaining objectives of the Strategy. Therefore, special support for vocational and higher education, the development of key competences, and the promotion of the idea of education and continuous learning are necessary.

- under the direction of intervention "Improving the quality of education and its adaptation to the needs of the labor market", 6 groups of planned activities were identified:
 - ✓ 1.1. Development of career counseling and educational guidance at every level of education (starting from primary school) and at every stage of life,
 - ✓ 1.2. Providing high-quality vocational education,
 - ✓ 1.3. Development of key competences and universal skills at every stage of education, including child care (nurseries, kindergartens) and early school education, important for functioning in professional and social life, as well as in the private sphere,
 - ✓ 1.4. Improving the quality of the educational environment,
 - ✓ 1.5. Development of higher education,
 - ✓ 1.6. Promoting continuing education adequate to the needs of the labor market.

5) Research report entitled "Diagnosis in the field of vocational education and training in Wielkopolska Wschodnia in the context of energy transformation":

- the diagnosis was carried out in 2022 as part of the project "Innovative vocational education and training in Wielkopolska Wschodnia in the context of energy transformation" (Project No.: EOG/21/K3/W/0046), which was financed by the EEA Financial Mechanism and the budget of the Republic of Poland in under the Education Program.
- Detailed diagnosis results are presented in Chapter 2 of the given Strategy and in the compact study entitled "Diagnosis in the field of vocational education and training in Wielkopolska Wschodnia in the context of energy transformation" edited by E. Kozieł, M. Sołtysiak, M. Żurek.

Special words **of thanks** are due to **school principals and institutions** providing education in vocational education professions and **the employees involved by them** for providing data enabling **the preparation of a diagnosis** of the state of vocational education and training in Wielkopolska Wschodnia in the context of energy transformation (Table 1).

Table 1. List of schools/educational institutions from Wielkopolska Wschodnia whose directors or employees designated by them participated in the survey

No.	Name of the school/educational institution	City / district
1	Special Educational Center named after J. Korczak in Konin*	City of Konin
2	School Complex of the Continuing Education Center. Stefan Batory in Konin	City of Konin
3	Greater Poland Local Government Center for Vocational and Continuing Education in Konin	City of Konin
4	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski in Konin	City of Konin
5	Mining and Energy School Complex. Stanisław Staszic in Konin	City of Konin
6	School Complex named after Nicolaus Copernicus in Konin	City of Konin
7	Technical School Complex in Konin	City of Konin
8	Craft Vocational School of the Guild of Various Crafts in Konin - First Level Vocational School in Konin	City of Konin
9	Special Vocational School of the 1st Degree in Rychwał* https://soswrychwal.pl/branzowa-szkola-i-stopnia/	Koninski
10	Complex of Economic and Service Schools named after F. Chopin in Żychlin	Koninski
11	Complex of General and Technical Schools in Kleczew	Koninski
12	Complex of General and Technical Schools in Sompolno	Koninski
13	Technical School Complex in Turku	Turecki
14	Complex of Agricultural Schools, Practical Education Center in Kaczki Średnie	Turecki
15	Special Secondary Vocational School - for intellectually disabled students in Turek *	Turecki
16	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca	Słupca
17	Complex of Economic Schools named after Maksymilian Jackowski in Słupca	Słupca
18	Complex of General and Vocational Schools in Zagórów	Słupca
19	First Level Vocational School in Słupca*	Słupca
20	Vocational and Continuing Education Center in Strzałkowo	Słupca
21	Complex of General and Technical Schools in Kłodawa	kolski
22	Vocational Special School of the 1st degree at the Special Educational and Educational Center named after Saint Nicholas in Koło at the Care, Education and Upbringing Complex in Koło*	kolski
23	Technical School Complex in Koło	kolski
24	School Complex Agricultural Center for Continuing Education named after Stanisław Staszic in Kościelec	kolski
25	Complex of Economic and Administrative Schools named after Stanisław and Władysław Grabski in Koło	kolski
26	School Complex of the Agricultural Education Center in Powiercie	kolski

* Special schools

Source: own study.

It would not be possible to prepare the Strategy without the ideas presented in the form of actions recommended by the workshop participants. For each of these recommendations, we would like to thank the representatives of schools/institutions providing vocational education, local government

units, education boards, crafts, employers, associations and organizations of employers, public employment services, universities and other institutions (Table 2).

Table 2. List of institutions whose representatives participated in workshops organized in Konin, Koło, Słupca and Turek on November 15–18, 2022.

No.	Facility name
1	Regional Development Agency SA in Konin
2	Academy of Applied Sciences in Konin
3	First-cycle Vocational School at the Special Educational and Educational Center named after Maria Grzegorzewska in Słupca
4	Vocational and Continuing Education Center in Strzałkowo
5	Chamber of Commerce of Wielkopolska Wschodnia
6	Education Board in Poznań
7	Miejskie Przedsiębiorstwo Energetyki Ciepłej – Konin Sp. z o. o
8	Municipal Waste Management Plant Spółka z o. o., Konin
9	District Labor Office in Turek
10	District Office in Koło
11	District Office in Konin
12	District Office in Turek
13	District Office in Słupca
14	Turecka Chamber of Commerce
15	City Hall in Konin
16	University of Management Staff in Konin
17	Vocational Development Center in Konin
18	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski in Konin
19	School Complex of the Continuing Education Center. Stefan Batory in Konin
20	Complex of Economic and Service Schools named after Fryderyk Chopin in Żychlin
21	Complex of Economic and Administrative Schools named after St. and Wł. Grabski in Koło
22	Complex of Economic Schools named after Maksymilian Jackowski in Słupca
23	Mining and Energy School Complex. Stanisław Staszic in Konin
24	School Complex named after Nicolaus Copernicus in Konin
25	Complex of General and Technical Schools in Kłodawa
26	Complex of General and Technical Schools in Kleczew
27	Complex of General and Vocational Schools in Zagórz
28	School Complex Agricultural Center for Continuing Education named after Stanisław Staszic in Kościelec
29	Agricultural School Complex, Practical Education Center
30	Complex of Technical Schools named after general prof. New Year's Eve of Kalisz in Turek
31	Technical School Complex in Koło
32	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca

Source: own study.

Without your support and contribution, it would not be possible to carry out a diagnosis of the state and develop so many ideas for actions contributing in the future to improving the quality of education in vocational education professions and its adaptation to the needs of the labor market in Wielkopolska Wschodnia.

1. Vocational education in Wielkopolska Wschodnia

Data from the Educational Information System (as of September 30, 2023) show that in the poviats of Wielkopolska Wschodnia, there are 26 public schools and institutions providing education in vocational training professions, in which 20 first-level vocational schools and 20 technical schools are located., 2 second-cycle vocational schools and 3 post-secondary schools (Table 3).

Table 3. Number of schools in individual cities and counties with a list of schools - data for the 2023/2024 school year as of September 30, 2023

City Name/ district	No.	School name	School types – number of schools			
			BS I ¹	T ²	BS II ³	PS ⁴
City of Konin	1	Special Educational Center named after J. Korczak in Konin	7	5	2	2
	2	School Complex of the Continuing Education Center. Stefan Batory in Konin				
	3	Greater Poland Local Government Center for Vocational and Continuing Education in Konin				
	4	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski in Konin				
	5	Mining and Energy School Complex. Stanisław Staszic in Konin				
	6	School Complex named after Nicolaus Copernicus in Konin				
	7	Technical School Complex in Konin				
	8	Craft Vocational School of the Guild of Various Crafts in Konin - First Level Vocational School in Konin				
Konin district	1	Special Vocational School of the 1st Level in Rychwał	4	3		1
	2	Complex of Economic and Service Schools named after F. Chopin in Żychlin				
	3	Complex of General and Technical Schools in Kleczew				
	4	Complex of General and Technical Schools in Sompolno				
Turek district	1	Technical School Complex in Turku	3	3		
	2	Complex of Agricultural Schools, Practical Education Center in Kaczki Średnie				
	3	Special Secondary Vocational School - for intellectually disabled students in Turek				
Słupca district	1	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca	3	4		
	2	Complex of Economic Schools named after Maksymilian Jackowski in Słupca				
	3	Complex of General and Vocational Schools in Zagórow				
	4	Secondary Vocational School in Słupca				
	5	Vocational and Continuing Education Center in Strzałkowo				
	1	Complex of General and Technical Schools in Kłodawa	3	5		

City Name/ district	No.	School name	School types – number of schools			
			BS I ¹	T ²	BS II ³	PS ⁴
Koło district	2	Vocational Special School of the 1st degree at the Special Educational and Educational Center named after Saint Nicholas in Koło at the Care, Education and Upbringing Complex in Koło				
	3	Technical School Complex in Koło				
	4	School Complex Agricultural Center for Continuing Education named after Stanisław Staszic in Kościelec				
	5	Complex of Economic and Administrative Schools named after Stanisław and Władysław Grabski in Koło				
	6	School Complex of the Agricultural Education Center in Powiercie				
Together:			20	20	2	3

Where: BS I¹ – 1st stage Vocational School; T² – Technical school; BS II³ – Secondary Vocational School; PS⁴ – Post-secondary school.

Source: own study.

In Konin, there are 8 groups of schools and institutions providing education in vocational training, including 7 first-cycle vocational schools, 5 technical schools, 2 second-cycle vocational schools and 2 post-secondary schools. It should be emphasized that the local government of the city of Konin was the only one in Wielkopolska Wschodnia to launch youth education in second-cycle vocational schools.

In the Konin district, 4 complexes of schools and institutions run 4 first-cycle vocational schools, 3 technical schools and 1 post-secondary school.

Post-secondary school graduates in the Turek district can take advantage of the educational offer of three first-cycle vocational schools, including one intended for students with intellectual disabilities and three technical schools located in two school complexes and in a first-level vocational school (special school).

The educational offer of vocational education in the Słupca district is created in 3 school complexes, a first-level vocational school and a vocational and continuing education center, in which there are a total of 3 first-level vocational schools and 4 technical schools.

In the Koło district, 3 vocational schools of the first level (including one special school) and 4 technical schools are located in 6 educational institutions.

Primary school graduates in Wielkopolska Wschodnia are more willing to choose further education in vocational training professions educating technicians rather than skilled workers. Data from the Educational Information System show that in the 2023/2024 school year in Wielkopolska Wschodnia,

3,050 students studied in first-cycle vocational schools, i.e. approximately 24% of the total number of students in vocational education (Table 4). However, 9,690 students attend technical secondary schools, which constitutes 76% of all students in vocational education in Wielkopolska Wschodnia. The possibility of continuing education at a second-cycle vocational school is of relatively low interest among young people. 187 students use this form of learning (SIO, as of September 30, 2023).

Table 4. Number of students studying in particular types of schools divided into cities and counties - individual data by departments in the 2023/2024 school year as of September 30, 2023

City Name/ district	School name	Types of schools – number of students			
		BS I ¹	T ²	BS II ³	PS ⁴
City of Konin	Special Educational Center named after J. Korczak in Konin	77			
	School Complex of the Continuing Education Center. Stefan Batory in Konin	81	485		14
	Greater Poland Local Government Center for Vocational and Continuing Education in Konin				229
	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski in Konin	489	617	143	
	Mining and Energy School Complex. Stanisław Staszic in Konin	92	1169		
	School Complex named after Nicolaus Copernicus in Konin	122	956		
	Technical School Complex in Konin	25	184		
Konin district	Craft Vocational School of the Guild of Various Crafts in Konin - First Level Vocational School in Konin	239		44	
	Special Vocational School of the 1st Level in Rychwał	43			
	Complex of Economic and Service Schools named after F. Chopin in Żychlin	76	630		
	Complex of General and Technical Schools in Kleczew	74	0		0
Turek district	Complex of General and Technical Schools in Sompolno	97	190		
	Technical School Complex in Turku	594	1339		
	Complex of Agricultural Schools, Practical Education Center in Kaczki Średnie		840		
Słupca district	Special Secondary Vocational School - for intellectually disabled students in Turek	15			
	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca	338	290		
	Complex of Economic Schools named after Maksymilian Jackowski in Słupca		667		
	Complex of General and Vocational Schools in Zagórow	173	214		
	Secondary Vocational School in Słupca	15			
Koło district	Vocational and Continuing Education Center in Strzałkowo		200		
	Complex of General and Technical Schools in Kłodawa		305		
	Vocational Special School of the 1st degree at the Special Educational and Educational Center named after Santa Claus in Koło at the Care, Education and Upbringing Complex in Koło	70			
	Technical School Complex in Koło	368	425		
	School Complex Agricultural Center for Continuing Education named after Stanisław Staszic in Kościelec		478		
	Complex of Economic and Administrative Schools named after Stanisław and Władysław Grabski in Koło		401		
School Complex of the Agricultural Education Center in Powiercie		62	300		
Together:		3050	9690	187	243

Where: *BS I¹* – 1st stage Vocational School; *T²* – Technical school; *BS II³* – Secondary Vocational School; *PS⁴* – Post-secondary school.

Source: own study.

The data in tables 5-9 show that in the 2023/2024 school year, 26 schools and educational institutions in Wielkopolska Wschodnia provide education in 41 professions at first-cycle vocational schools and 36 professions at the technical secondary school level.

Primary school graduates can take advantage of the educational offer in:

- Konin - from 29 professions leading to the qualification of a skilled worker, for which education is provided in first-cycle vocational schools and from 23 professions at the technician level;
- Konin district - from 24 professions taught at a first-cycle vocational school and from 9 professions at a technical secondary school;
- Słupca district – 20 in vocational schools of the first stage and 16 professions in technical schools, respectively;
- Turek district - from 9 professions taught at a first-cycle vocational school and from 23 professions at a technical secondary school;
- Koło County – from 8 professions taught at a first-cycle vocational school and from 14 professions at a technical secondary school.

Table 5. Vocational education offer in **the city of Konin** (as of 2023-09-30)

No.	Occupation	School
First Level Vocational School:		
1	Tinsmith	Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
2	Car tinsmith	Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
3	Carpenter	Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
4	Confectioner	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
		Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
5	Roofer	Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
6	Electromechanic	Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
7	Automotive electromechanic	Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
		Technical School Complex in Konin
8	Electrician	Mining and Energy School Complex. Stanisław Staszic in Konin
		Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School

1. Vocational education in Eastern Greater Poland

No.	Occupation	School
		Technical School Complex in Konin
9	Photographer	Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
10	Hairdresser	School Complex named after Nicolaus Copernicus in Konin
		Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
		Technical School Complex in Konin
11	Stonemason	Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
12	Waiter	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
13	Blacksmith	Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
14	Cook	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
		Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
15	Cook (integration unit)	School Complex named after Nicolaus Copernicus in Konin
16	Car painter	Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
17	Warehouseman and logistician	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
		School Complex of the Continuing Education Center. Stefan Batory in Konin
18	Car mechanic	Mining and Energy School Complex. Stanisław Staszic in Konin
		Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
		Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
		Technical School Complex in Konin
19	Installer of sanitary networks and installations	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
		Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
20	Installer of construction and finishing works in construction	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
		Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
21	Bricklayer plasterer	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
		Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
22	Gardener	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
23	Baker	Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
24	Hotel service employee	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
25	Catering auxiliary worker	Special Educational Center named after Janusz Korczak
26	Meat processor	Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
27	Seller	School Complex of the Continuing Education Center. Stefan Batory in Konin
28	Seller (integration branch)	School Complex named after Nicolaus Copernicus in Konin

No.	Occupation	School
29	Carpenter	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
		Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
		Technical School Complex in Konin
30	Locksmith	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
		Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
		Technical School Complex in Konin
31	Upholsterer	Craft Vocational School of the Guild of Various Crafts in Konin - 1st Level Vocational School
Technical school:		
1	Landscape architecture technician	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
2	Construction technician	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
3	Refrigeration and air conditioning technician	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
4	Techniques economist	Mining and Energy School Complex. Stanisław Staszic in Konin
		School Complex named after Nicolaus Copernicus in Konin
		School Complex of the Continuing Education Center. Stefan Batory in Konin
5	Electrical technician	Mining and Energy School Complex. Stanisław Staszic in Konin
6	Graphics and digital printing technician	Mining and Energy School Complex. Stanisław Staszic in Konin
7	Sales technician	School Complex of the Continuing Education Center. Stefan Batory in Konin
8	Hotel technician	School Complex named after Nicolaus Copernicus in Konin
		Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
9	IT specialist	Mining and Energy School Complex. Stanisław Staszic in Konin
		School Complex named after Nicolaus Copernicus in Konin
		Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
		School Complex of the Continuing Education Center. Stefan Batory in Konin
10	Logistics technician	Technical School Complex in Konin
		Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
11	Mechanical technician	School Complex of the Continuing Education Center. Stefan Batory in Konin
		Mining and Energy School Complex. Stanisław Staszic in Konin
12	Mechatronics technician	Mining and Energy School Complex. Stanisław Staszic in Konin
13	Environment protection Technician	School Complex named after Nicolaus Copernicus in Konin
14	Car technician	Mining and Energy School Complex. Stanisław Staszic in Konin
		Technical School Complex in Konin
15	Programming technician	Mining and Energy School Complex. Stanisław Staszic in Konin
		School Complex of the Continuing Education Center. Stefan Batory in Konin
		Technical School Complex in Konin
16	Accountancy technician	School Complex named after Nicolaus Copernicus in Konin

1. Vocational education in Eastern Greater Poland

No.	Occupation	School
17	Finishing technician in construction	Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski
18	Forwarding technician	integration class – Mining and Energy School Complex. Stanisław Staszic in Konin
19	Stylist technician	School Complex of the Continuing Education Center. Stefan Batory in Konin
20	ICT technician	School Complex named after Nicolaus Copernicus in Konin
21	Renewable energy equipment and systems technician	Mining and Energy School Complex. Stanisław Staszic in Konin
22	Hairdressing service technician	Technical School Complex in Konin
23	Nutrition and catering services technician	School Complex named after Nicolaus Copernicus in Konin
		Complex of Schools of Construction and Vocational Education named after Eugeniusz Kwiatkowski

Source: own study.

Table 6. Vocational education offer in the Konin district (as of 2023-09-30)

No.	Occupation	School
First Level Vocational School:		
1	Car tinsmith	Complex of General and Technical Schools in Kleczew
2	Carpenter	Complex of General and Technical Schools in Kleczew
3	Confectioner	Complex of General and Technical Schools in Kleczew
4	Roofer	Complex of General and Technical Schools in Kleczew
5	Electrician	Complex of General and Technical Schools in Kleczew
6	Hairdresser	Complex of General and Technical Schools in Kleczew
7	Driver mechanic	Complex of Economic and Service Schools named after F. Chopin in Żychlin
8	Tailor	Complex of General and Technical Schools in Kleczew
9	Cook	Complex of General and Technical Schools in Kleczew
		Complex of General and Technical Schools in Sompolno
		Complex of Economic and Service Schools named after F. Chopin in Żychlin
		Special Vocational School of the 1st Level in Rychwał
10	Car painter	Complex of General and Technical Schools in Kleczew
11	Warehouseman and logistician	Complex of General and Technical Schools in Sompolno
		Complex of Economic and Service Schools named after F. Chopin in Żychlin
12	Car mechanic	Complex of General and Technical Schools in Kleczew
13	Fitter of building structures	Complex of General and Technical Schools in Kleczew
14	Installer of sanitary networks and installations	Complex of General and Technical Schools in Kleczew
15	Bricklayer plasterer	Complex of General and Technical Schools in Kleczew
16	Gardener	Complex of General and Technical Schools in Kleczew
17	Baker	Complex of General and Technical Schools in Kleczew
18	Catering auxiliary worker	Complex of Economic and Service Schools named after F. Chopin in Żychlin
19	Hotel service assistant	Complex of Economic and Service Schools named after F. Chopin in Żychlin
20	Farmer	Complex of General and Technical Schools in Kleczew
		Complex of Economic and Service Schools named after F. Chopin in Żychlin
21	Seller	Complex of General and Technical Schools in Kleczew
		Complex of General and Technical Schools in Sompolno

No.	Occupation	School
22	Carpenter	Complex of General and Technical Schools in Kleczew
		Complex of General and Technical Schools in Sompolno
23	Upholsterer	Complex of General and Technical Schools in Kleczew
24	Meat maker	Complex of General and Technical Schools in Kleczew
Technical school:		
1	Agribusiness technician	Complex of Economic and Service Schools named after F. Chopin in Żychlin
2	Techniques economist	Complex of General and Technical Schools in Kleczew
		Complex of General and Technical Schools in Sompolno
		Complex of Economic and Service Schools named after F. Chopin in Żychlin
3	Hotel technician	Complex of Economic and Service Schools named after F. Chopin in Żychlin
4	Forest technician	Complex of Economic and Service Schools named after F. Chopin in Żychlin
5	Logistics technician	Complex of General and Technical Schools in Sompolno
6	Advertising technician	Complex of General and Technical Schools in Sompolno
		Complex of Economic and Service Schools named after F. Chopin in Żychlin
7	Forwarding technician	Complex of Economic and Service Schools named after F. Chopin in Żychlin
8	Waiter service technician	Complex of General and Technical Schools in Sompolno
9	Nutrition and catering services technician	Complex of General and Technical Schools in Sompolno
		Complex of Economic and Service Schools named after F. Chopin in Żychlin

Source: own study.

Table 7. Vocational education offer in **Słupca district** (as of 2023-09-30)

No.	Occupation	School
First Level Vocational School:		
1	Tinsmith	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
2	Car tinsmith	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
		Complex of General and Vocational Schools in Zagórow
3	Automotive electromechanic	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
4	Electrician	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
		Complex of General and Vocational Schools in Zagórow
5	Hairdresser	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
		Complex of General and Vocational Schools in Zagórow
6	Driver mechanic	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
7	Cook	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
		Complex of General and Vocational Schools in Zagórow
8	Car painter	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
9	Mechanic – assembler of machines and devices	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca

1. Vocational education in Eastern Greater Poland

No.	Occupation	School
10	Mechanic and operator of agricultural vehicles and machines	Complex of General and Vocational Schools in Zagórow
11	Car mechanic	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
		Complex of General and Vocational Schools in Zagórow
12	Installer of sanitary networks and installations	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
		Complex of General and Vocational Schools in Zagórow
13	Installer of construction and finishing works in construction	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
14	Bricklayer plasterer	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
		Complex of General and Vocational Schools in Zagórow
15	Operator of food industry machines and equipment	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
16	Baker	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
17	Seller	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
		Complex of General and Vocational Schools in Zagórow
18	Carpenter	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
		Complex of General and Vocational Schools in Zagórow
19	Locksmith	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
20	Upholsterer	Complex of General and Vocational Schools in Zagórow
Technical school:		
1	Landscape architecture technician	Vocational and Continuing Education Center in Strzałkowo
2	Construction technician	Vocational and Continuing Education Center in Strzałkowo
3	Economic technician (additional Spanish language)	Complex of Economic Schools named after Maksymilian Jackowski in Słupca
4	Electrical technician	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
5	Surveyor technician	Complex of General and Vocational Schools in Zagórow
6	IT specialist	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
7	Logistics technician (police uniform class)	Complex of Economic Schools named after Maksymilian Jackowski in Słupca
8	Agricultural mechanization and agrotechnics technician	Vocational and Continuing Education Center in Strzałkowo
9	Mechatronics technician	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
10	Tourism organization technician	Complex of General and Vocational Schools in Zagórow
11	Car technician	Complex of Vocational Schools named after Gen. Władysław Sikorski in Słupca
12	Accounting technician with additional Spanish	Complex of Economic Schools named after Maksymilian Jackowski in Słupca
13	Advertising technician with photography and videography	Complex of Economic Schools named after Maksymilian Jackowski in Słupca
14	Forwarding technician (police uniform class)	Complex of Economic Schools named after Maksymilian Jackowski in Słupca

No.	Occupation	School
15	ICT technician	Complex of General and Vocational Schools in Zagórow
16	Nutrition and catering services technician	Vocational and Continuing Education Center in Strzałkowo

Source: own study.

Table 8. Vocational education offer in Turek district (as of 2023-09-30)

No.	Occupation	School
First Level Vocational School:		
1	Automation	Complex of Technical Schools named after general prof. S. Kaliski in Turek
2	Hairdresser	Complex of Technical Schools named after general prof. S. Kaliski in Turek
3	Cook	Special Secondary Vocational School at the Special Educational and Upbringing Center in the Complex of Educational and Upbringing Institutions in Turek
		Complex of Technical Schools named after general prof. S. Kaliski in Turek
4	Car mechanic	Complex of Technical Schools named after general prof. S. Kaliski in Turek
5	Cutting machine operator	Complex of Technical Schools named after general prof. S. Kaliski in Turek
6	Seller	Complex of Technical Schools named after general prof. S. Kaliski in Turek
7	Carpenter	Special Secondary Vocational School at the Special Educational and Upbringing Center in the Complex of Educational and Upbringing Institutions in Turek
		Complex of Technical Schools named after general prof. S. Kaliski in Turek
8	Locksmith	Complex of Technical Schools named after general prof. S. Kaliski in Turek
9	Upholsterer	Complex of Technical Schools named after general prof. S. Kaliski in Turek
Technical school:		
1	Landscape architecture technician	Agricultural School Complex, Practical Education Center
2	Construction technician	Agricultural School Complex, Practical Education Center
3	Economic technician with elements of law	Complex of Technical Schools named after general prof. S. Kaliski in Turek
4	Electronics technician	Complex of Technical Schools named after general prof. S. Kaliski in Turek
5	Electrical technician with automation elements	Complex of Technical Schools named after general prof. S. Kaliski in Turek
6	Surveying technician	Agricultural School Complex, Practical Education Center
7	Graphics and digital printing technician	Complex of Technical Schools named after general prof. S. Kaliski in Turek
8	Sales technician – trade manager	Complex of Technical Schools named after general prof. S. Kaliski in Turek
9	IT specialist	Complex of Technical Schools named after general prof. S. Kaliski in Turek
10	Logistics technician	Complex of Technical Schools named after general prof. S. Kaliski in Turek
11	Mechanical technician	Complex of Technical Schools named after general prof. S. Kaliski in Turek
12	Agricultural mechanization and agrotronics technician	Agricultural School Complex, Practical Education Center
13	Mechatronics technician	Complex of Technical Schools named after general prof. S. Kaliski in Turek
14	Car technician	Agricultural School Complex, Practical Education Center
15	Programming technician	Agricultural School Complex, Practical Education Center

1. Vocational education in Eastern Greater Poland

No.	Occupation	School
16	Accountancy technician	Complex of Technical Schools named after general prof. S. Kaliski in Turek
17	Advertising technician	Agricultural School Complex, Practical Education Center
18	Robotic technician	Complex of Technical Schools named after general prof. S. Kaliski in Turek
19	Uniformed forwarding technician - military training unit	Agricultural School Complex, Practical Education Center
20	Road transport technician	Agricultural School Complex, Practical Education Center
21	Renewable energy equipment and systems technician	Agricultural School Complex, Practical Education Center
22	Hairdressing service technician with elements of cosmetology	Complex of Technical Schools named after general prof. S. Kaliski in Turek
23	Nutrition and catering services technician	Complex of Technical Schools named after general prof. S. Kaliski in Turek
		Agricultural School Complex, Practical Education Center

Source: own study.

Table 9. Vocational education offer in **the Koło district** (as of 2023-09-30)

No.	Occupation	School
First Level Vocational School:		
1	Confectioner	Special Vocational Secondary School in Koło
2	Hairdresser	Technical School Complex in Koło
3	Cook	Special Vocational Secondary School in Koło
4	Car mechanic	Technical School Complex in Koło
		Special Vocational Secondary School in Koło
5	Bricklayer plasterer	Special Vocational Secondary School in Koło
6	Cutting machine operator	Technical School Complex in Koło
7	Baker	Special Vocational Secondary School in Koło
8	Seller	Technical School Complex in Koło
9	Multi-professional class	Technical School Complex in Koło (we educate in all professions, provided that the student has the opportunity to undergo practical vocational training with the employer)
Technical school:		
1	Analytical technician	Technical School Complex in Koło
2	Techniques economist	School Complex Agricultural Center for Continuing Education named after Stanisław Staszic in Kościelec
		Complex of Economic and Administrative Schools named after St. and Wł. Grabski
3	Electrical technician	Complex of General and Technical Schools in Kłodawa
4	Surveyor technician	Complex of Economic and Administrative Schools named after St. and Wł. Grabski
5	Underground mining technician	Complex of General and Technical Schools in Kłodawa
6	Graphics and digital printing technician	School Complex Agricultural Center for Continuing Education named after Stanisław Staszic in Kościelec
7	IT specialist	School Complex Agricultural Center for Continuing Education named after Stanisław Staszic in Kościelec
		Technical School Complex in Koło
		Complex of General and Technical Schools in Kłodawa
8	Logistics technician	School Complex Agricultural Center for Continuing Education named after Stanisław Staszic in Kościelec
		Complex of General and Technical Schools in Kłodawa

No.	Occupation	School
9	Tourism organization technician	Complex of Economic and Administrative Schools named after St. and Wł. Grabski
10	Environment protection Technician	Technical School Complex in Koło
11	Car technician	Technical School Complex in Koło
12	Accountancy technician	Complex of Economic and Administrative Schools named after St. and Wł. Grabski
13	Agricultural technician	School Complex Agricultural Center for Continuing Education named after Stanisław Staszic in Kościelec
14	Nutrition and catering services technician	School Complex Agricultural Center for Continuing Education named after Stanisław Staszic in Kościelec

Source: own study.

Among primary school graduates in Wielkopolska Wschodnia, the greatest interest is in continuing education in the following professions: IT technician, logistics technician, economics technician, nutrition and catering services technician, advertising technician, mechatronics technician, in which approximately 37% of the total number of students study during the school year. youth in vocational schools (Table 10). At the level of a first-cycle vocational school, the most frequently chosen professions are car mechanics, salespeople, cooks and hairdressers.

Table 10. The most popular from the vocational education profession in Wielkopolska Wschodnia and in individual counties (as of 2023-09-30 based on data taken from the Educational Information System (SIO))

No.	Number students	City of Konin	County kolski	Konin district	Ślupca district	Turek district	Total number of students in competitions in the subregion	Percentage of students in the profession in the total number of students in the subregion (Total: 13,170)
1	IT specialist	581	274		94	153	1102	8.4%
2	Logistics technician	272	241	45	197	238	993	7.5%
3	Techniques economist	415	246	67	41	96	865	6.6%
4	Nutrition and catering services technician	205	79	173	133	185	775	5.9%
5	Advertising technician			245	179	127	551	4.1%
6	Mechatronics technician	151			79	313	543	4.1%
7	Car mechanic	186	115	18	50	135	504	3.8%
8	Forwarding technician	84	124		176	98	482	3.7%
9	Car technician	167	113		61	135	476	3.6%
10	ICT technician	163			141	129	433	3.3%
11	Graphics and digital printing technician	160	75			166	401	3.0%
12	Seller	73	59	39	99	64	334	2.5%
13	Cook	94	43	63	51	82	333	2.5%
14	Hairdresser	109	64	4	53	87	317	2.4%
15	Environment protection Technician	145	122				267	2%
16	Hotel technician	202		57			259	1.9%
17	Programming technician	191				56	247	1.8%

1. Vocational education in Eastern Greater Poland

No.	Number students Competition	City of Konin	County kolski	Konin district	Ślupca district	Turek district	Total number of students in competitions in the subregion	Percentage of students in the profession in the total number of students in the subregion (Total: 13,170)
18	Landscape architecture technician	106			76	60	242	1.8%
19	Electrical technician		70		56	90	216	1.6%
20	Accountancy technician	70	78		17	41	206	1.5%

Source: own study.

However, the least popular vocational education professions chosen by primary school graduates in Eastern Wielkopolska are: sheet metal worker, stonemason, roofer, meat processor, whose education is conducted in a first-level vocational school (Table 11). At the technical secondary school level, young people are least interested in vocational training: road transport technician, food technology technician and administration technician.

Table 11. Least popular from the vocational education profession in Wielkopolska Wschodnia in individual counties (as of 2023-09-30 based on data taken from the Educational Information System (SIO))

No.	Number students Competition	City of Konin	County kolski	Konin district	Ślupca district	Turek district	Total number of students in competitions in the subregion
1	Tinsmith	1					1
2	Stonemason	1					1
3	Roofer					1	1
4	Meat processor				1		1
5	Plumber-fitter of sanitary installations			2			2
6	Fitter of buildings and construction works			2			2
7	Blacksmith	3					3
8	Automation					3	3
9	Mechanic-fitter of machines and devices					3	3
10	Electromechanic	1	3			2	6
11	Car painter	3			1	3	7
12	Electronics				1	6	7
13	Photographer	8					8
14	Upholsterer		2		7		9
15	Baker	2	3	1	1	5	12
16	Road transport technician					12	12
17	Food technology technician	13					13
18	Administration technician	14					14
19	Car tinsmith	2			10	2	14
20	Waiter	17					17

Source: own study.

2. Diagnosis in the field of vocational education and training in Wielkopolska Wschodnia in the context of the energy transformation

The chapter presents the work carried out as part of the first result of the project entitled: "Diagnosis in the field of vocational education and training in Wielkopolska Wschodnia in the context of energy transformation", the aim of which, as the title itself indicates, was to develop and prepare a diagnosis in the field of vocational education and training in Wielkopolska Wschodnia in the context of energy transformation.

The research was carried out in 2022 as part of the project entitled "Innovative vocational education and training in Wielkopolska Wschodnia and the context of energy transformation", the main goal of which is to prepare local government units (LGUs), as bodies running vocational education institutions, and other stakeholders, to take up the challenges related to the change in the economic structure as a result of the energy transformation in Wielkopolska Wschodnia region.

The thematic scope of the report has been expanded in relation to the assumptions in the project application. As part of the diagnosis, not only the curricula or directions of vocational education and their importance for employers, the demand for market qualifications or sets of educational outcomes were verified, but also attempts were made to diagnose the state of vocational education in vocational education professions and career counseling in vocational schools in Greater Poland. Eastern.

In order to comprehensively analyze the research subject, triangulation of research methods was used. This approach is based on the use of both quantitative and qualitative research methods in research. The research began with a literature study on the specific functioning of institutions providing training in vocational training and the energy transformation of Wielkopolska Wschodnia. The obtained data served as input, among others: to prepare the content of research tools, i.e. survey questionnaires, and thus use the **diagnostic survey method as the main research method** (quantitative method) and survey techniques. The survey covered two groups of respondents, including representatives of:

- management staff of a school/educational institution providing education in vocational training professions (support: teaching staff, career advisor, manager of practical education);
- employers.

The research methodology and constructed research tools - survey questionnaires - were the subject of consultations within the project partnership and as part of the pilot project by external experts - representatives of secondary schools providing education in vocational education professions and employers.

As a result of the consultations, two research survey questionnaires were created:

- Survey questionnaire for vocational education "Identification of needs in the development of vocational education in institutions providing education in vocational education professions to the requirements of the labor market, in particular related to the energy transformation of Wielkopolska Wschodnia",
- Survey questionnaire for representatives of enterprises "Identification of needs in the development of vocational education in institutions providing training in vocational education professions to the requirements of the labor market, in particular related to the energy transformation of Wielkopolska Wschodnia."

After completing the survey, as part of the qualitative assessment of the obtained data, a complementary method was used, which was **an in-depth interview supported by the Metaplan method** (qualitative method). Metaplan is a discussion method in which, during a debate, participants jointly create a poster that is a graphic abbreviation of the debate. The starting point for determining the current state of vocational education were the conclusions from quantitative research conducted using the diagnostic survey method.

Discussions were conducted with a wide range of stakeholders, including representatives of schools/institutions providing vocational education, local government units, education boards, crafts, employers, associations and organizations of employers, public employment services, universities, etc. Workshops were conducted in:

- District Office in Koło (November 15, 2022, 9.00 a.m.–3.00 p.m., 16 participants);
- City Hall in Konin (November 16, 2022, 9.00 a.m.–3.00 p.m., 66 participants);
- District Office in Turek (November 17, 2022, 9.00 a.m.–3.00 p.m., 19 participants);
- District Office in Słupca (November 18, 2022, 9.00 a.m.–3.00 p.m., 16 participants).

of 26 schools and educational institutions that provide education in vocational training professions in Wielkopolska Wschodnia took part in the research, including 8 schools from the city of Konin, 4

from Konin County, 3 from Turek County, 5 from Słupca County and 6 from Koło County). Opinions were also obtained from **56 employers** with their company headquarters in the city of Konin (29 respondents), Konin County (8 respondents), Turek County (4 respondents), Słupca County (6 respondents) and Koło County (9 respondents).

Based on the collected data, recommendations were formulated, which became the basis for developing recommended actions to be implemented under the "Strategy of vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia by 2040".

The recommended actions are grouped into three areas

- Area 1. Educational offer of schools, school equipment and accessories, teachers' competences;
- Area 2. The impact of energy transformation on the activities of enterprises and cooperation between employers and schools;
- Area 3. Career counseling in schools providing education in vocational training professions.

Detailed diagnosis results can be found in the compact study entitled: "Diagnosis in the field of vocational education and training in Wielkopolska Wschodnia in the context of energy transformation."

3. Vocational education and training strategy in the context of the energy transformation of Wielkopolska Wschodnia – vision and goals

3.1. Vision of vocational education in Wielkopolska Wschodnia until 2040

In the parent document, *the Development Strategy for Wielkopolska Wschodnia 2040* developed by Regional Development Agency SA in Konin, the following **vision** of the development of Wielkopolska Wschodnia in the long term was formulated and adopted:

WIELKOPOLSKA WSCHODNIA IN 2040 IS:
INTEGRATED VALLEY OF ENERGY OF RESIDENTS, ECONOMY AND SPACE,
STRONG LOCAL GOVERNMENT, PARTNERSHIP AND INCLUSIVE:
inhabited by conscious, proactive and enterprising citizens who create a community of values and are open to new ideas while respecting European traditions,
being a national leader in green growth, providing residents with good quality of life and development opportunities,
prospective, climate neutral, constituting an attractive and friendly place to live, work and invest in a clean environment, encouraging people to associate their future with it¹⁰.

In the vision presented above, its authors emphasize that the leitmotif in the context of formulating the vision of the development of Wielkopolska Wschodnia in 2040 was to identify new foundations for development and shape the NEW IDENTITY of Wielkopolska Wschodnia "after coal", i.e. resulting from the ongoing energy transformation.

¹⁰ *Development strategy for Eastern Greater Poland 2040*. ARR Transformation Sp. z o. o., Greater Poland Spatial Planning Office in Poznań, Poznań, 2022, p. 28.

Taking into account the above vision of the development of Wielkopolska Wschodnia by 2040, quantitative and qualitative results from the diagnosis of the state of vocational education in Wielkopolska Wschodnia, and experts' recommendations, the following vision of the development of vocational education in Wielkopolska Wschodnia by 2040 was proposed:

Vocational education in Wielkopolska Wschodnia in 2040:

**enables young people and adults
obtaining high-quality professional education**

consistent with the needs of a changing, innovative labor market,

**taking into account the energy transformation processes taking place
in Wielkopolska Wschodnia.**

In order to achieve such a vision of the development of vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia by 2040, it will be necessary:

- adapting the educational offer of institutions and schools providing training in vocational training to the needs of the labor market;
- continuous professional development of teaching staff, in particular teachers of theoretical and practical vocational training;
- ensuring that the teaching equipment of school laboratories and/or workshops in institutions and schools providing education in vocational education professions is updated and supplemented;
- tightening cooperation between institutions and schools providing training in vocational training professions with employers;
- increasing the effectiveness and efficiency of career counseling activities in institutions and schools providing education in vocational education professions.

With such a broad systemic approach, the development of vocational education and training until 2040 in Wielkopolska Wschodnia will require the involvement of not only representatives of institutions and schools providing education in vocational education professions, but also employers, representatives of local government units, the Center for the Support of Crafts, Dual and Vocational Education in Konin and experts from many other institutions related to vocational education.

3.2. Goals for vocational education in Wielkopolska Wschodnia until 2040

In *the Development Strategy for Wielkopolska Wschodnia until 2040*, the structure of objectives consists of the following levels:

- strategic goal,
- integrated operational goal,
- directions of intervention,
- planned activities and their characteristics acting as a framework action plan¹¹.

Referring to this, *the Strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia until 2040* considered it justified to include the direction of intervention: Improving the quality of education and its adaptation to the needs of the labor market.

It should be emphasized that the developed *Strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia until 2040* is a lower-level document in relation to *the Development Strategy for Wielkopolska Wschodnia 2040* and taking into account the fact that the subject of the diagnosis was vocational education in Wielkopolska Wschodnia, it was formulated (Fig. 1):

1. **Strategic goal:** Improving the quality of education in vocational education professions and adapting it to the needs of the local labor market.
2. **Directions of intervention:**
 - 2.1. Adapting the educational offer of schools, school equipment and accessories, and teachers' competences to the needs of the labor market ;
 - 2.2. Tightening cooperation between institutions and schools providing training in vocational training professions with employers ;
 - 2.3. Increasing the effectiveness and efficiency of career counseling activities in institutions and schools providing education in vocational education professions.
3. **Priority projects:**
 - 3.1. Diagnosing and developing the educational offer of schools and institutions providing training in vocational training professions in accordance with the needs of the labor market;

¹¹*Development strategy for Eastern Greater Poland*. ARR Transformation Sp. z o. o., Greater Poland Spatial Planning Office in Poznań, Poznań, 2022, p. 30.

- 3.2. Diagnosing the needs and equipping schools and institutions providing training in vocational training professions with modern equipment and materials, enabling the implementation of educational outcomes in conditions similar to the real work environment;
- 3.3. Identifying staffing needs and improving the competences of vocational education teachers and practical vocational training instructors;
- 3.4. Supporting employers in the process of engaging in activities aimed at improving the quality of education in vocational training professions;
- 3.5. Expanding the offer of cooperation between employers and schools and institutions providing education in vocational training professions;
- 3.6. Taking actions aimed at increasing the efficiency and effectiveness of career counseling for young people studying in schools and institutions providing education in vocational training professions;
- 3.7. Diagnosing the needs and professional development of career advisors, educators and teachers involved in the implementation of career counseling for young people and equipping career counseling laboratories;
- 3.8. Undertaking effective and efficient cooperation in the field of career counseling by schools and institutions providing education in vocational training professions with institutions and employers.

For the priority projects formulated in this way, activities were assigned that were reported by participants of workshops organized as part of the project "Innovative vocational education and training in Wielkopolska Wschodnia in the context of energy transformation" (project no.: EOG/21/K3/W/0046), which was financed from the EEA Financial Mechanism and the budget of the Republic of Poland under the Education Program.

This approach will ensure that both strategies are synchronized and therefore complementary.

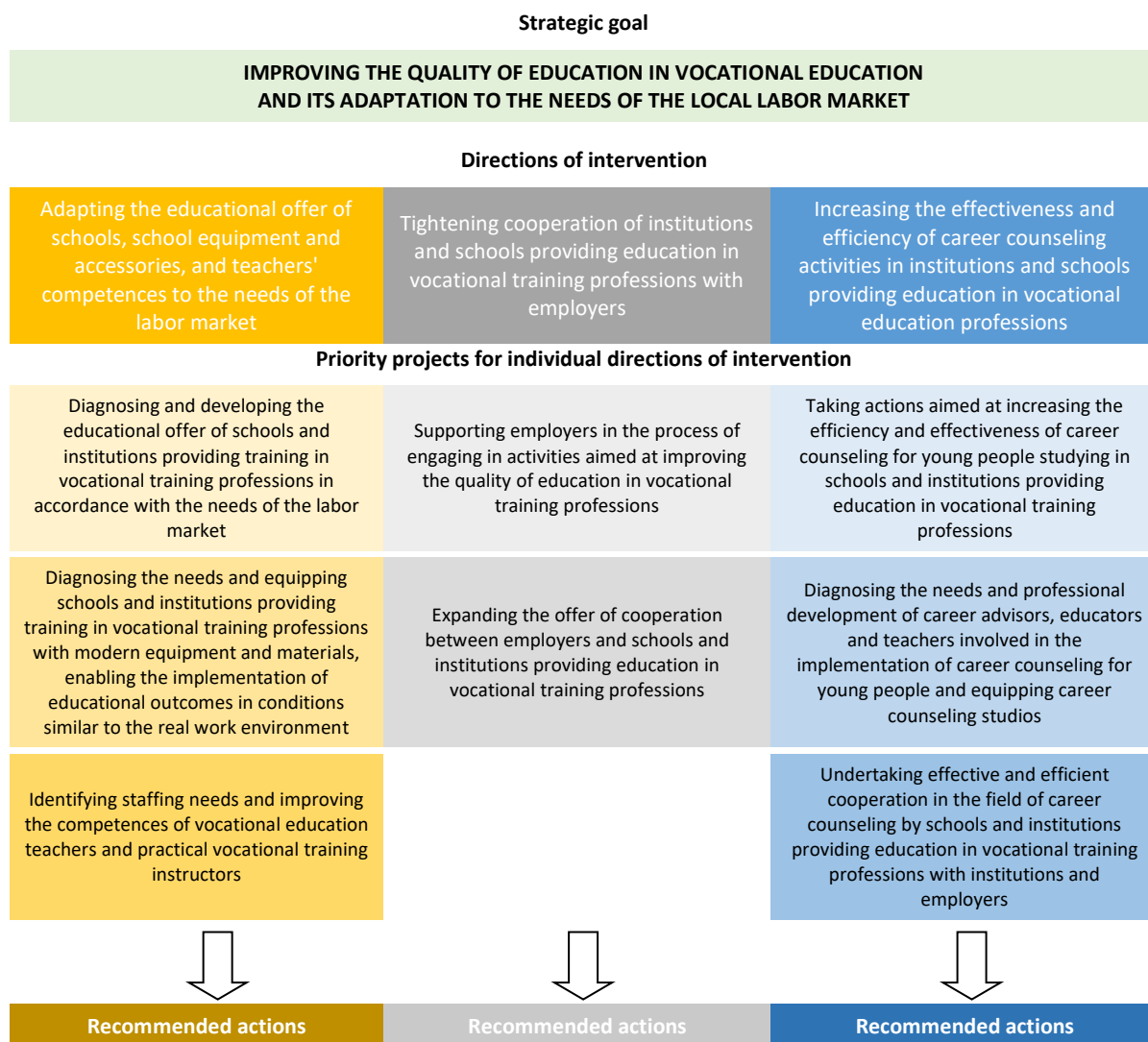


Fig. 1. Structure of the objectives of the Vocational Education and Training Strategy in the context of the energy transformation of Wielkopolska Wschodnia until 2040

Source: own study.

In support of *the Development Strategy for Wielkopolska Wschodnia 2040*, it was assumed that it would be justified to develop a Strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia by 2040, also in the time horizon until 2040.

With respect to *the Development Strategy for Wielkopolska Wschodnia 2040*, *the Strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia until 2040* narrows down the directions of intervention and related priority projects, as well as planned activities (see table 12). The narrowness is due to the fact that in the diagnosis of the state of affairs for *the Strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia by 2040*, the focus was strictly on the areas of activities

related to education in vocational training professions in Wielkopolska Wschodnia, for which experts formulated recommendations (actions).

The entries in Table 12 show that *the Strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia by 2040* does not make any reference to the priority project "Development of higher education" included in *the Development Strategy for Wielkopolska Wschodnia 2040*. In the case of priority projects:

- Development of key competences and universal skills at every stage of education, including child care (nurseries, kindergartens) and early school education, important for functioning in professional and social life, as well as in the private sphere,
- Promoting continuing education adequate to the needs of the labor market

their scope was narrowed to activities related to vocational education.

Table 12. Matrix of connections between priority projects in the compared strategies

Directions of intervention – Strategy of vocational education and training	1.1. Adapting the educational offer of schools, equipping and supplementing schools, teachers' competences to the needs of the labor market	1.2. Tightening cooperation of institutions and schools providing education in vocational training professions with employers	1.3. Increasing the effectiveness and efficiency of career counseling activities in institutions and schools providing education in vocational education professions
Priority projects – WW 2040 development strategy			
1.1. Development of career counseling and educational guidance at every level of education (starting from primary school) and at every stage of life			X
1.2. Providing high-quality vocational education	X	X	
1.3. Development of key competences and universal skills at every stage of education, including child care (nurseries, kindergartens) and early school education, important for functioning in professional and social life, as well as in the private sphere	X*		X*
1.4. Improving the quality of the educational environment	X		
1.5. Development of higher education			
1.6. Promoting continuing education adequate to the needs of the labor market	X**		

* Development of key competences and skills only in the field of vocational education.

** In the scope of continuing education offered by vocational education for adults in the form of vocational qualification courses.

Source: own study.

It should be emphasized that the recommended actions under individual priority projects are often of a universal nature and are not directly related to the energy transformation processes taking place in Wielkopolska Wschodnia. This is a purposeful approach, because when developing a diagnosis of the state of education in vocational education professions for Wielkopolska Wschodnia, the members of the author's team, in consultation with external experts, found it justified to use a broader approach and not limit themselves only to the diagnosis of the state of the impact of energy transformation on vocational education. Moreover, the energy transformation processes taking place in Wielkopolska Wschodnia are quite loud in the media, but there are no specific actions related to it in the region yet, which also resulted in difficulties in experts assessing the impact of the transformation on vocational education.

It is also important to emphasize the differences in terms of industrialization and the development of vocational education in individual cities and counties of Wielkopolska Wschodnia. Therefore, the recommended actions should be selected and adapted to the needs and possibilities of implementation in individual territorial units.

Further in the study, very broad catalogs of planned activities to be implemented are presented for the 8 priority projects listed in the "Strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia until 2040". This does not mean, however, that these activities will be 100% completed by 2040. Taking into account the specificity and needs of the local labor market, it is necessary to select those activities whose introduction will translate into effective and efficient implementation of measures to improve the quality of education in vocational education professions and its adaptation to the needs of the local labor market. It should also be emphasized that the catalog of planned activities is not closed, because at the time of preparing the diagnosis of the state of vocational education in Wielkopolska Wschodnia, or at the time of formulating recommendations, their authors are not able to predict with 100% certainty the changes that will take place in the near future. time.

3.3. Priority project: Diagnosing and developing the educational offer of schools and institutions providing training in vocational training professions in accordance with the needs of the labor market

Recommended actions:

- 1) Appointing an entity/entities (e.g. Center for the Support of Crafts, Dual and Vocational Education in Konin) to conduct periodic diagnoses of needs aimed at developing the educational offer of schools and institutions providing education in vocational education professions in accordance with the needs of the labor market.
- 2) Conducting in-depth, cyclical diagnosis in the field of optimizing the educational offer in individual cities and counties of Wielkopolska Wschodnia, in particular in vocational schools providing education in the same professions.
- 3) Agreeing at the supra-local level (Wielkopolska Wschodnia) on the directions of vocational education, consistent with the current and forecast needs of local labor markets, including those related to the energy transformation of Wielkopolska Wschodnia.
- 4) Concluding agreements between bodies managing vocational schools in the poviats of Wielkopolska Wschodnia regarding the conduct and introduction of fields of study in individual schools.
- 5) Developing mechanisms encouraging a shift away from competition between vocational schools operating in a given town or district, and a shift to cooperation through the exchange of good practices, providing advice, supporting other schools wanting to implement a new solution, by employees of schools where a given solution has been successfully implemented functions.
- 6) Conducting in-depth, periodic diagnosis of students' needs with special educational needs regarding further secondary education at a technical secondary school or a second-cycle vocational school.
- 7) Expanding the educational offer for students with special educational needs, including those studying in special schools in Wielkopolska Wschodnia, in line with the needs of the local labor market by developing new proposals:
 - additional professional skills courses (DUZ);
 - market (sectoral) qualifications;
 - additional professional qualifications;
 - vocational qualification courses or vocational skills courses;
 - training related to activities introduced as a result of the energy transformation in Wielkopolska Wschodnia.

- 8) Conducting periodic labor market diagnoses, including in the field of creating new jobs in the short and medium term, including in areas related to energy transformation, and on this basis expanding the offer of schools providing vocational education in vocational training professions in Wielkopolska Wschodnia with the possibility of education in new professions, including those not included in the classification of vocational education professions, and thus expanding the educational offer, in particular to include professions created as a result of changes caused by the energy transformation.
- 9) Preparing documentation for new vocational education professions, including those related to the energy transformation of Wielkopolska Wschodnia, not included in the classification of vocational education professions, and introducing them to the educational offer of schools providing vocational education as part of, for example, a pedagogical experiment.
- 10) Carrying out periodic labor market diagnoses, including in areas related to energy transformation, and on this basis expanding the offer of schools providing vocational education in vocational education professions by introducing the following to existing school professions:
 - additional professional skills (DUZ);
 - market (sectoral) qualifications;
 - additional professional qualifications;
 - vocational qualification courses or vocational skills courses;
 - training related to activities introduced as a result of the energy transformation in Wielkopolska Wschodnia.

It should be emphasized that introducing a new vocational training profession into the educational offer is quite a complex process and requires time, as well as the provision of appropriate teaching staff and equipment, including the possibility of undergoing practical classes at employers. Optimistically, the process of introducing a new vocational education profession into the educational offer and preparing the first batch of graduates may take from 4 (in the case of a profession educated at a first-cycle vocational school) to 6 years (a profession educated at a technical secondary school). In a rapidly changing reality, employers will not wait so long for a prepared employee. Therefore, it is recommended to use solutions that are shorter in terms of time (e.g. developing and introducing new courses of additional professional skills, market qualifications, vocational qualification courses or additional professional qualifications into the vocational education professions already trained in Wielkopolska Wschodnia. It is much faster to introduce a new range of learning outcomes in an already existing school profession, than to introduce a new profession from scratch into the classification of vocational education professions, develop a vocational education curriculum, curriculum, teaching materials for it, and educate the first graduates.

The basic criterion for expanding the educational offer should be the needs of the labor market, which should be diagnosed periodically. For this purpose, a Competence Center for Wielkopolska Wschodnia can be established.

In the case of market (sectoral) qualification, activities can be implemented in the form of an additional training offer financed by aid projects. Funds from the project will be used to cover the costs of training and the costs of validation and certification of qualifications incurred by participants.

- 11) Developing programs and teaching materials for new thematic areas, taking into account the needs resulting from the implemented activities, investments related to the energy transformation of Wielkopolska Wschodnia or other labor market needs, including:
 - additional professional skills (DUZ);
 - market (sectoral) qualifications;
 - additional professional qualifications;
 - vocational qualification courses or vocational skills courses;
 - training related to activities introduced as a result of the energy transformation in Wielkopolska Wschodnia.
- 12) Disseminating good practices among other schools of activities carried out by schools that have included the following topics in their offer:
 - additional professional skills (DUZ);
 - market (sectoral) qualifications;
 - additional professional qualifications;
 - vocational qualification courses or vocational skills courses;
 - training related to activities introduced as a result of the energy transformation in Wielkopolska Wschodnia.
- 13) Conducting by a designated entity (e.g. the Center for the Support of Crafts, Dual and Vocational Education in Konin) cyclical analyzes aimed at identifying the needs for introducing changes in the educational offer of schools, including updating the learning outcomes in the topics of additional professional skills courses and market qualifications introduced into the offer (sectoral), additional professional qualifications, professional qualification courses or professional skills courses, training related to activities introduced as a result of the energy transformation in Wielkopolska Wschodnia, and informing school principals and/or representatives of the teaching staff appointed by them about the results of diagnoses.
- 14) Conducting activities to raise students' awareness, including presenting them with the benefits of participating in classes including:
 - additional professional skills;
 - market (sectoral) qualification ;
 - additional professional qualifications;
 - vocational qualification course or vocational skills course;

- training related to activities introduced as a result of the energy transformation in Wielkopolska Wschodnia.
- 15) Conducting extensive awareness-raising activities among young people studying in primary schools and promoting the fields of education that best respond to the current and forecast demand of the labor market, including those related to the energy transformation of Wielkopolska Wschodnia.
 - 16) Introduction of activities to promote access to further education within a second-cycle vocational school among students/graduates of first-cycle vocational schools in Wielkopolska Wschodnia.

These activities may be related to periodic research on the choices made by students of stage I vocational schools and, on this basis, adapting the educational offer at stage II vocational schools to the needs of students.
 - 17) Identifying and applying for funding sources to cover the costs of organizing and conducting training/courses, as well as conducting examinations and certification of additional professional qualifications for students.

3.4. Priority project: Diagnosing the needs and equipping schools and institutions providing training in vocational training professions with modern equipment and materials, enabling the implementation of educational outcomes in conditions similar to the real work environment

Recommended actions:

- 1) Introducing periodic diagnoses regarding the needs for additional equipment for school laboratories and workshops in schools providing vocational education in vocational training professions in Wielkopolska Wschodnia, including those related to updating the existing database and the needs for additional equipment in connection with the introduction of the following topics to the school's/institution's educational offer:
 - additional professional skills;
 - market (sectoral) qualifications;
 - additional professional qualifications;
 - vocational qualification courses or vocational skills courses;
 - training related to activities introduced as a result of the energy transformation in Wielkopolska Wschodnia.
- 2) Providing financial resources to equip schools providing vocational education in vocational education professions with machines, devices and tools necessary to update their techno-didactic base and to launch education in new vocational education professions in Wielkopolska

Wschodnia or as a result of expanding the offer with more flexible and shorter forms of education, which are:

- additional professional skills;
- market (sectoral) qualifications;
- additional professional qualifications;
- vocational qualification courses or vocational skills courses;
- training related to activities introduced as a result of the energy transformation in Wielkopolska Wschodnia.

3.5. Priority project: Identifying staff needs and improving the competences of vocational education teachers and practical vocational training instructors

Recommended actions:

1) Systematic monitoring of teachers' training needs, including vocational education at school level, in consultation with the managing body, and based on it, building a professional development offer along with didactic support for teachers, including topics focused on the following topics introduced into the school's educational offer:

- new professions in vocational education;
- additional professional skills;
- additional professional qualifications;
- vocational qualification courses or vocational skills courses;
- training related to activities introduced as a result of the energy transformation in Wielkopolska Wschodnia.

2) Introduction of monitoring of activities related to the energy transformation of Wielkopolska Wschodnia, combined with the development of a professional development offer for teachers of vocational education (theoretical and practical) and instructors of practical vocational training in companies, aimed at familiarizing teachers with the effects of the energy transformation of Wielkopolska Wschodnia on the one hand, and on the other with professional development or retraining of vocational education teachers in a real work environment.

Possibly, based on monitoring, developing an offer of new fields of full-time or postgraduate studies, specialized training, supported by the above-mentioned opportunities for teachers to undergo internships and apprenticeships in companies.

3) Conducting training for vocational education teachers aimed at acquiring:

- qualifications for education in a new profession, vocational education;

- additional professional skills;
 - additional professional qualifications;
 - vocational qualification courses or vocational skills courses;
 - training related to activities introduced as a result of the energy transformation in Wielkopolska Wschodnia.
- 4) Introducing monitoring of the demand and supply of teachers in schools providing vocational education in vocational training professions in Wielkopolska Wschodnia, in particular aimed at recruiting labor market specialists as vocational education teachers.
 - 5) Introducing a mentoring program in which a vocational teacher with many years of professional experience, pre-retirement or working and receiving a pension could play the role of a mentor, a champion supporting a beginner, less experienced teacher in his or her professional development.
 - 6) Conducting activities aimed at improving the image of the teaching profession, in particular vocational education teachers.

For example, by implementing a campaign focusing on increasing the social prestige of the profession in the social environment, or aimed at increasing the attractiveness of the teaching profession among potential future candidates for education in this profession, currently working teachers or encouraging former teachers to return to the profession. Another way to increase the attractiveness of the teaching profession may be to focus on factors that evoke positive associations, firstly, teachers' professional satisfaction and their perception of whether and how much society values their work, and secondly, the school environment and working conditions ¹².

- 7) Introduction of activities to disseminate knowledge about the energy transformation of Wielkopolska Wschodnia among representatives of vocational schools and employers, in particular specific activities requiring the expansion of the educational offer of schools providing education in vocational education professions to include school professions included in the classification of vocational education professions, as well as new ones introduced, e.g..in the form of a pedagogical experiment.
- 8) In the processes of improving the professional competences of teachers of vocational education, practical vocational training and instructors in companies, including the use of various forms of development, including the possibility of taking advantage of a study visit, professional internship or internship in enterprises.

In particular, this applies to the organization of indicated forms of improvement in enterprises implementing activities related to the energy transformation of Wielkopolska Wschodnia.
- 9) Introduction of innovative modular training for teachers, based on IT technologies.

¹² European Commission/EACEA/Eurydice, 2015. *The Teaching Profession in Europe: Practices, Perceptions, and Policies. (The teaching profession in Europe: policy, practice and public perception) Eurydice Report*. Luxembourg: Publications Office of the European Union, p. 101.

- 10) Increasing the quality of training for vocational teachers through monitoring and evaluation.
- 11) Creation of a teacher training system in the field of improving the development of students' social competences indicated in the core curriculum for vocational education. In particular, related to shaping students' openness to changes, coping with stress, updating knowledge, negotiations, etc.
- 12) Certifying schools as institutions conducting examinations or teachers as conducting training/courses under additional professional qualifications (if there are such requirements).
- 13) Identifying and applying for funding sources to cover the costs of organizing and conducting training/courses, as well as conducting examinations and certification of additional professional qualifications for teachers.

3.6. Priority project: Supporting employers in the process of engaging in activities aimed at improving the quality of education in vocational training professions

Recommended actions:

- 1) Developing mechanisms at the levels of individual counties and the entire Wielkopolska Wschodnia region to motivate employers to cooperate with schools providing vocational education in vocational training professions in order to shape the educational offer tailored to the needs expressed by entrepreneurs.
- 2) Taking actions aimed at improving cooperation between employers' representatives and schools providing vocational education in vocational training professions in terms of expanding the educational offer with new vocational training professions, including those created as a result of changes caused by the energy transformation processes of Wielkopolska Wschodnia.
- 3) Expanding cooperation between employers and schools by transferring practical classes to companies, and thus often using unique, modern machines, devices and tools.
- 4) Increasing the effectiveness of information activities on the energy transformation of Wielkopolska Wschodnia and the related changes taking place on the labor market, in particular in schools, employers' organizations and employers themselves.
- 5) Adjusting the education offered in the region to the regional labor market, based on labor market analyses.
- 6) Introducing and promoting activities aimed at adapting vocational education to the current needs of the labor market.
Including activities including: aimed at improving the quality of universal skills of students/graduates (allowing their use in many different professions), including social skills related to cooperation and communication, language skills (bilingual education), practical skills, entrepreneurship, independence, supporting the development of talents and individual abilities, as well as qualifications, competences and skills in strategic industries of the region.
- 7) Improving the quality and attractiveness of vocational education by involving employers on a large scale in the process of vocational education (including dual education, patronage classes) and examinations, as well as increasing the level of preparation and practical experience of teachers and lecturers, rationalizing the choice of educational path and developing career counseling and guidance. Making representatives of employers and schools aware of the need to increase the emphasis on developing students' practical skills by taking actions aimed at gradually increasing the number of internships and internships carried out

at employers, enabling education in a real work environment - development and dissemination of dual education.

- 8) Taking actions aimed at improving efficiency and effectiveness in the area of developing cooperation between employers and schools providing vocational education by including economic specialists in the education process.

This is particularly important when introducing activities on the labor market related to the energy transformation of Wielkopolska Wschodnia.

- 9) Involvement of external entities (e.g. representatives of the governing body, employers' organizations, employers, public employment services, employment and employment agencies and other institutions) in cyclical reviews of educational offers of schools providing vocational education in vocational training professions in Wielkopolska Wschodnia in terms of the need to update them.

- 10) Developing mechanisms encouraging schools and companies to gradually transfer practical classes from schools to employers in Wielkopolska Wschodnia, taking into account risk and opportunity analyses.

This approach will reduce the needs and costs incurred by schools due to the need to equip and maintain school workshops.

- 11) Involving employees from local enterprises in the process of practical education of students of vocational schools providing education in vocational education professions.

- 12) Introducing mechanisms for assessing the quality of practical classes for students at employers aimed at improving these forms of cooperation.

- 13) Involving employers' representatives in creating additional educational offers in vocational schools providing education in vocational training professions, e.g. in the form of additional professional skills.

- 14) If a school applies to introduce a new vocational training profession into its educational offer, the school is obliged to select such a number of employers to take into account the number of students who need to be provided with places for practical classes.

- 15) Development of IT tools to improve cooperation between schools and employers for the development of practical vocational training in companies.

- 16) Taking action at the local level to support an increase in the percentage of students from vocational schools in Wielkopolska Wschodnia participating in foreign internships financed by the Erasmus+ Program.

Such actions are taken, among others: by the Crafts, Dual and Vocational Education Support Center in Konin. The ideal solution would be for 100% of students to have such an opportunity at least once during their studies at a vocational school providing training in vocational training professions.

- 17) Increasing the involvement of employers in improving practical training programs and teaching for the vocational education profession.

This will enable, among others: better adaptation of the practical vocational training program to the technical possibilities of employers.

3.7. Priority project: Expanding the offer of cooperation between employers and schools and institutions providing education in vocational training professions

Recommended actions:

- 1) Introduction of an external institution that will act as a coordinator and integrator between schools and employers, including in the scope of expanding the educational offer of schools with new directions of education, including those related to the energy transformation of Wielkopolska Wschodnia.

This role can be played by the Industry Skills Center or the Crafts, Dual and Vocational Education Support Center in Konin.

- 2) Developing procedures for cooperation with employers and taking actions aimed at conducting periodic analyzes of the validity of the provisions of the core curriculum for vocational education and updating them.

It is advisable that representatives from schools providing vocational education in vocational training professions, as well as employers, including those related to the energy transformation in Wielkopolska Wschodnia, should be involved in this process. The recommendation is part of the effort to increase the influence of enterprises and organizations associating enterprises on the functioning of the vocational education system - the formation of core curricula indicated in the Strategy for responsible development until 2020 (with a perspective until 2030).

- 3) Conducting activities to raise awareness of employers and their employees, including presenting them with the benefits of acquiring professional qualifications by employees through their participation in a Vocational Qualification Course or a Vocational Skills Course.
- 4) Introduction of activities to disseminate knowledge about the energy transformation of Wielkopolska Wschodnia among representatives of vocational schools and employers, in particular specific activities requiring the expansion of the educational offer of schools providing education in vocational education professions to include school professions included in the classification of vocational education professions, as well as newly introduced ones, e.g. in the form of a pedagogical experiment.
- 5) Developing procedures, tools and taking actions aimed at identifying plans, activities and results of the energy transformation of Wielkopolska Wschodnia, on their basis preparing information and informing employers' organizations or employers themselves about it and indicating their impact on their activities.

6) Monitoring aid programs supporting the energy transformation and informing representatives of employers' organizations and employers themselves who might be interested in joining the transformation process with their activities.

7) Development of procedures and tools for monitoring local employers in Wielkopolska Wschodnia regarding the demand for employees, including in the perspective of several years. Monitoring the labor market in terms of the needs of educational policy, classification of professions, introduction of new professions and professions preferred for future needs is one of the activities recommended also under the Strategy for responsible development until 2020 (with a perspective until 2040).

8) Strengthening the cooperation of schools providing vocational education in vocational training professions, local government units and employers by creating a network of connections favoring the development of cooperation between schools providing vocational education in vocational training professions, employers or employer organizations.

It is advisable to achieve this with the support of external entities, e.g. research institutes, universities. This may be facilitated by concluding agreements between school governing bodies, schools providing vocational education in vocational training professions and employers or employers' organizations. Taking into account, for example, the division into 32 industries specified in the classification of vocational education professions of employers and schools providing vocational education in vocational education professions, and on the basis of this, creating single- or multi-sector clusters (depending on needs).

9) School governing bodies and organizations bringing together employers and employees support the idea of networking employers and schools providing vocational education in vocational education professions.

10) Introduction of financing mechanisms for the development of networking of employers and schools providing vocational education in vocational education professions.

At the beginning, these may be financial resources from local budgets (e.g. financing of ideas submitted by schools and employers as part of citizen budgets, from activities intended for the development of vocational and other education), regional, national or EU aid funds (e.g. as part of local competitions, introducing additional criteria in the competition regulations to reward activities for the development of cooperation, including networking between schools providing vocational education and employers).

11) Establishment of one or more entities networking and coordinating cooperation between schools and employers in Wielkopolska Wschodnia within the 32 industries listed in the classification of vocational education professions.

This solution was used in the Radom Metal Cluster, in which the coordinator is a representative of the Radom Region Chamber of Industry and Commerce. In the opinion of the workshop participants, it would be advisable to appoint an employee who, on the employer's or school's side, will act as a local (institutional) coordinator for the development of cooperation and represent their entity in the cooperation network, and provide him/her with appropriate remuneration for additional work.

12) Legal and organizational support for schools and employers establishing cooperation in the area of developing students' practical education in companies.

- 13) Taking into account demographic changes and the needs of local labor markets when carrying out activities aimed at optimizing and adapting the educational services provided in the counties of Wielkopolska Wschodnia.
- 14) Providing employers with knowledge about the specificity of education in vocational education professions, including the learning outcomes to be achieved by the student who will take the exam confirming vocational qualifications.
- 15) Developing mechanisms encouraging employers to mutually support each other in introducing new solutions for taking action to cooperate with vocational schools.
- 16) Promoting examples of good practices in school environments and among employers aimed at developing dual education for students in companies in Wielkopolska Wschodnia, creating patronage classes with the support of employers.

An example of such good practice is the creation of a patronage class for the profession of underground mining technician as part of an agreement between the "Kłodawa" salt mine in Kłodawa and the Complex of General and Technical Schools in Kłodawa. Students of the patronage class are guaranteed practical classes (this is an exception compared to other schools that have patronage classes), vocational training and priority in the job recruitment process. The greatest experience in creating patronage classes is at the Agricultural School Complex of the Practical Education Center in Kaczki Średnie (4 patronage classes) and the Mining and Energy School Complex. Stanisław Staszic in Konin. A departure from the pattern that the patronage class is to be under the patronage of one entity.

- 17) Introducing for employers in Eastern Wielkopolska other financing mechanisms, apart from educational subsidies, for students to take part in practical classes in companies, in particular those aimed at the development of dual education and the creation of patron classes. One of such mechanisms could be the awarding of bonus points to employers applying to equip their companies with equipment and devices, provided, for example, that they are also used by students taking practical classes in the form of dual education.
- 18) Taking into account the specificity and needs of individual cities and counties of Wielkopolska Wschodnia when undertaking activities aimed at developing cooperation between schools providing vocational education and employers in individual counties of Wielkopolska Wschodnia.
- 19) Introduction of mechanisms encouraging employers to expand the scope of cooperation with vocational schools providing education in vocational training professions.
Currently, employers have declared that they are most willing to engage in one form of cooperation.
- 20) Increasing the involvement of schools and employers in the implementation of activities aimed at promoting vocational education, including: by jointly organizing professional skills competitions at the local level, modeled on the idea of WORLDSKILLS and EUROSILLS competitions.

- 21) Developing mechanisms enabling a compromise between the needs of schools and employers in terms of, on the one hand, preparing students taking practical classes in the company for exams confirming vocational qualifications, and on the other, meeting the needs of employers.
- 22) Expanding cooperation between the school and the employer by introducing more remote forms of these meetings using instant messengers. This form was initiated during the COVID-19 pandemic.
- 23) Developing the competences of students, teachers and employers in the use of ICT in the educational process, including mainly digital competences, by equipping/re-equipping schools with ICT tools, and thus improving the quality of the educational process.
- 24) Translating activities carried out as part of the energy transformation of Wielkopolska Wschodnia into directions for supporting educational and training activities.
- 25) Introducing mechanisms to provide companies and schools with suitably qualified staff who are ready to introduce the latest technologies into the content of vocational education.
- 26) Raising the competences and qualifications of employees in companies delegated to cooperate with schools and teachers conducting education at vocational schools.

3. 8. Priority project: Taking actions aimed at increasing the efficiency and effectiveness of career counseling for young people studying in schools and institutions providing education in vocational training professions

Recommended actions:

- 1) Taking into account the specificity of the local area and each school when taking actions aimed at improving career counseling for young people.
- 2) The school principal should appoint a team to develop a program for implementing career counseling in a school providing vocational education, which should include representatives of the school management, educators, teachers teaching various subjects, a pedagogue, a psychologist, and a librarian.
- 3) Development of a career counseling program in secondary vocational schools by the career counseling team for the entire education cycle.
- 4) Including in the career counseling implementation program the components required in the Regulation of the Minister of National Education of February 12, 2019 on career counseling.
- 5) Introducing a change in the awareness of the entire teaching staff and involving them in the implementation of activities and career counseling content within the subjects they teach.

- 6) Including in the developed career counseling implementation program the introduction of activities and program content conducted at:
 - compulsory educational activities in the field of general education or vocational education;
 - career counseling classes (the proverbial "10");
 - classes related to the choice of education and profession conducted as part of psychological and pedagogical assistance;
 - classes with a tutor.
- 7) Increasing the number of hours for conducting career counseling classes in vocational schools in Wielkopolska Wschodnia, beyond the minimum limit of 10 teaching hours, and thus creating the possibility of covering the costs of employing a teacher with full-time career counseling qualifications at the school.
- 8) Introducing activities addressed to students' parents into the developed career counseling program as part of the internal school career counseling system.
- 9) Involving vocational schools in Wielkopolska Wschodnia in the implementation of career counseling for students of the widest possible pedagogical group, including class teachers, teachers of theoretical vocational subjects, representatives of the school management staff, teachers of general subjects, manager of practical vocational training, instructors of practical vocational training, psychologist, teacher, librarian.
- 10) Introducing a measurable effect of the work of the career advisor, the entire teaching staff, the class teacher and experts from the environment with the student in the form of **an individual action plan**.

As part of an individual action plan, the student plans various variants of educational and professional paths based on the balance of their own resources and values as well as information on the education and labor markets, anticipating the consequences of their own decisions. It is also recommended to introduce a portfolio in which the student would collect evidence of his work in career counseling and other documents confirming his achievements.
- 11) The management of the vocational school conducts periodic internal audits of the implementation of career counseling in accordance with applicable legislation and, on this basis, formulates conclusions and recommendations aimed at improving the activities carried out.
- 12) Taking actions aimed at motivating as many students as possible to develop an individual educational and professional plan based on information obtained about themselves, the labor market, including the energy transformation of Wielkopolska Wschodnia.

3.9. Priority project: Diagnosing the needs and professional development of career advisors, educators and teachers involved in providing career counseling for young people and equipping career counseling studios

Recommended actions:

- 1) Conducting a diagnosis of the needs for employing career counselors in vocational schools in Wielkopolska Wschodnia and the related needs for teachers to acquire formal qualifications as a career counselor by completing postgraduate studies.
- 2) Conducting periodic diagnoses of the training needs of vocational counselors, school unit educators and teachers employed in vocational schools in Wielkopolska Wschodnia in terms of updating knowledge and improving skills necessary for the best possible implementation of the career counseling tasks entrusted to them. It is proposed to identify the topics of courses/trainings that could be implemented in short forms as part of the diagnoses.
- 3) Preparing periodic information for career advisors and school class teachers on the energy transformation processes taking place in Wielkopolska Wschodnia, which could be passed on to students and taken into account when creating their further educational and professional development paths.
- 4) Conducting training for representatives of the management staff, the entire teaching staff, and specialists employed in schools providing vocational education in Wielkopolska Wschodnia in the field of legal aspects of the implementation of career counseling in post-primary vocational schools.
- 5) Professionalization of career counseling by employing career counselors who, being full-time school employees, will be prepared to be the main co-creator of the career counseling program, coordinator - at the implementation stage and evaluator of the activities carried out; who, through the implementation of career counseling classes, will combine the effects of the activities of the entire teaching staff and external experts and work with students to develop measurable effects of their activities in the form of a plan for further educational and professional development.

This is the case with a teacher or psychologist.

- 6) Introducing the professional development of collaborating school educators, teachers, employers' representatives, psychological and pedagogical counseling centers and other experts by a vocational advisor.

The scope of improvement could include issues raising awareness of the role, importance of career counseling for young people studying at school, principles of cooperation, involvement in the implemented content of career counseling education, methods and deadlines for implementation, rules for documenting activities by the student and other topics depending on the identified needs of recipients.

- 7) Introduction of professional development for career counselors, school class tutors, teachers and other employees involved in career counseling in the area of motivating students to create an Individual Action Plan (IPD), which will at least specify the goal of the student's further educational and professional development along with a plan for its implementation.
- 8) Development and introduction of simple guides for career advisors, educators/teachers, students and parents enabling the implementation of systemic, cyclical activities in various types of secondary schools aimed at developing an individual educational and vocational plan by students as a document summarizing the effects of activities carried out with students as part of career counseling.
- 9) Creating career counseling laboratories that stand out in schools in terms of appearance and equipment, and at the same time, due to limited space resources, adapted to conduct classes in other subjects.
- 10) Taking actions aimed at ensuring that schools and vocational training institutions are equipped with teaching aids for the implementation of career counseling.

Teaching aids should be:

- attractive in terms of quality of workmanship and form of communication, so as to attract the attention of a student who is accustomed to using modern digital technologies;
 - supported by presentations for conducting classes, which are a kind of "ready-made" materials with a guide showing step by step the stages of implementing the lesson plan. This is especially important for teachers who have no experience in conducting career counseling classes. Currently available teaching materials, e.g. on the website of the Education Development Center, require knowledge and skills in their proper selection and combination. Unfortunately, most teachers involved in the implementation of career counseling do not have such skills;
 - in line with the developed standard of teaching equipment necessary to provide career counseling at a school providing education in vocational training, which would be subject to periodic reviews and updates. Based on the developed standard of teaching equipment, conducting an in-depth diagnosis of needs and equipping the career counseling studio.
- 11) Taking actions aimed at increasing the acquisition of financial resources to support the implementation of career counseling for students as part of additional teaching activities.

3.10. Priority project: Establishing effective and efficient cooperation in the field of career counseling by schools and establishments providing education in vocational training professions with institutions and employers

Recommended actions:

- 1) As part of the implementation of career counseling, expanding cooperation between schools and representatives of:
 - Psychological and pedagogical counseling center;

- Center for Support of Crafts, Dual and Vocational Education in Konin (CWRKDiZ) as an institution supporting the development of education and career counseling;
- other schools providing vocational education, including the Center for Vocational and Continuing Education, for example when organizing joint ventures promoting vocational education in Wielkopolska Wschodnia;
- labor office in the field of information on the local labor market, possibilities of supporting the development of entrepreneurship of graduates interested in starting their own business;
- primary schools in terms of attracting potential students interested in studying at a vocational school;
- teacher training centers as institutions supporting the improvement of professional competences of school employees, including career counselors;
- universities regarding further education of vocational school graduates;
- Volunteer Labor Corps, employment agencies - providing career counseling and information about the labor market;
- employers' organizations, associations, professional self-governments, economic self-governments or other economic organizations.

4. Strategy implementation system

4.1. Institutional system

4.1.1. Implementation of the Strategy

The document *of the Strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia by 2040* should be presented to a wide range of representatives of various social groups, including a team of experts working on the development of the diagnosis and strategy.

The next stage of the initial phase of implementation of the Strategy is to obtain a positive opinion from the authorities managing vocational education institutions in Wielkopolska Wschodnia and the relevant bodies in County Councils (e.g. the committee responsible for education). The key factor determining the broad implementation of the strategy will be the adoption of the document for implementation by the Konin City Council and the District Councils of Wielkopolska Wschodnia.

4.1.2 . Strategic management

The strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia by 2040 is integrated and its implementation requires the cooperation of a wide range of stakeholders. The Mayor of Konin and the Starostas of the Poviats forming the Wielkopolska Wschodnia subregion will be responsible for strategic management in the institutional context.

In order to better coordinate the implementation of the Strategy, it is recommended to establish or appoint an entity to coordinate and integrate the implementation process, in particular in aspects such as: promotion of the strategy and implementation activities, monitoring of projects and activities, evaluation and follow-up. It is recommended to entrust the role of the entity integrating the implementation of the Strategy in Wielkopolska Wschodnia to the Center for the Support of Crafts, Dual and Vocational Education in Konin. Management functions in the city of Konin - the mayor and in the counties of Koło, Konin, Słupca and Turek - starostas, will be performed on the basis of working teams, which will include, for example:

- the president, starostas or their proxies,
- directors of schools providing vocational education or their representatives,

- employees responsible for education issues,
- representatives of key entrepreneurs and employers.

The tasks of the teams will primarily include supervision over the proper implementation of the program, defining priority activities during the implementation of the Strategy based on information on the labor market, trends in education, innovation and entrepreneurship, and recommending or appointing entities responsible for the implementation of individual projects and activities in within the Strategy and its active promotion among the local community.

It is recommended that the team does not exceed 9 people.

The stability of its composition and the high competences and decisiveness of its members are crucial for the efficient functioning of the team.

It is recommended that details regarding the composition of the team, dates and frequency of meetings, scope of responsibilities and the method of making binding decisions regarding the Strategy are specified separately in the document - Regulations of the Operation of the Team for Management of the Implementation of the *Vocational Education and Training Strategy in the context of the energy transformation of Wielkopolska Wschodnia by 2040*.

4.1.3 . Operational management

the operational management *of the Strategy* to the President's Plenipotentiary or Starosta's Plenipotentiaries for the program strategy, whose role will be primarily:

- coordinating the coherence of work under the Strategy,
- collecting and transmitting data on projects, in particular achieved results and monitoring indicators, to the institution integrating the implementation of the Strategy.

The management of individual projects will be the responsibility of people managing the institutions responsible for their implementation, i.e. mainly directors of schools providing education in vocational training professions in the city of Konin and in the poviats.

The role of the coordinator and institution coordinating activities outside the education system will be played by the Center for the Support of Crafts, Dual and Vocational Education in Konin.

It is recommended to establish a Council for the implementation of the Strategy, which would act as a steering committee and consist of:

4. Strategy implementation system

- director of CWRKDiZ,
- the president of the city of Konin and the starostas of the counties of Wielkopolska Wschodnia,
- President of the Regional Development Agency in Konin,
- Rector of the Academy of Applied Sciences in Konin.

Moreover, representatives of a wide range of institutions and organizations from the vocational education environment, including organizational units of local government at various levels, non-governmental organizations, universities and organizations of entrepreneurs and employers, will be involved in the operational management and implementation of the Strategy, in particular obtaining financial resources and implementing projects and activities, as well as business environment institutions. Their involvement in the implementation of the Strategy will vary depending on the type of project, competences and the level of declared project co-financing.

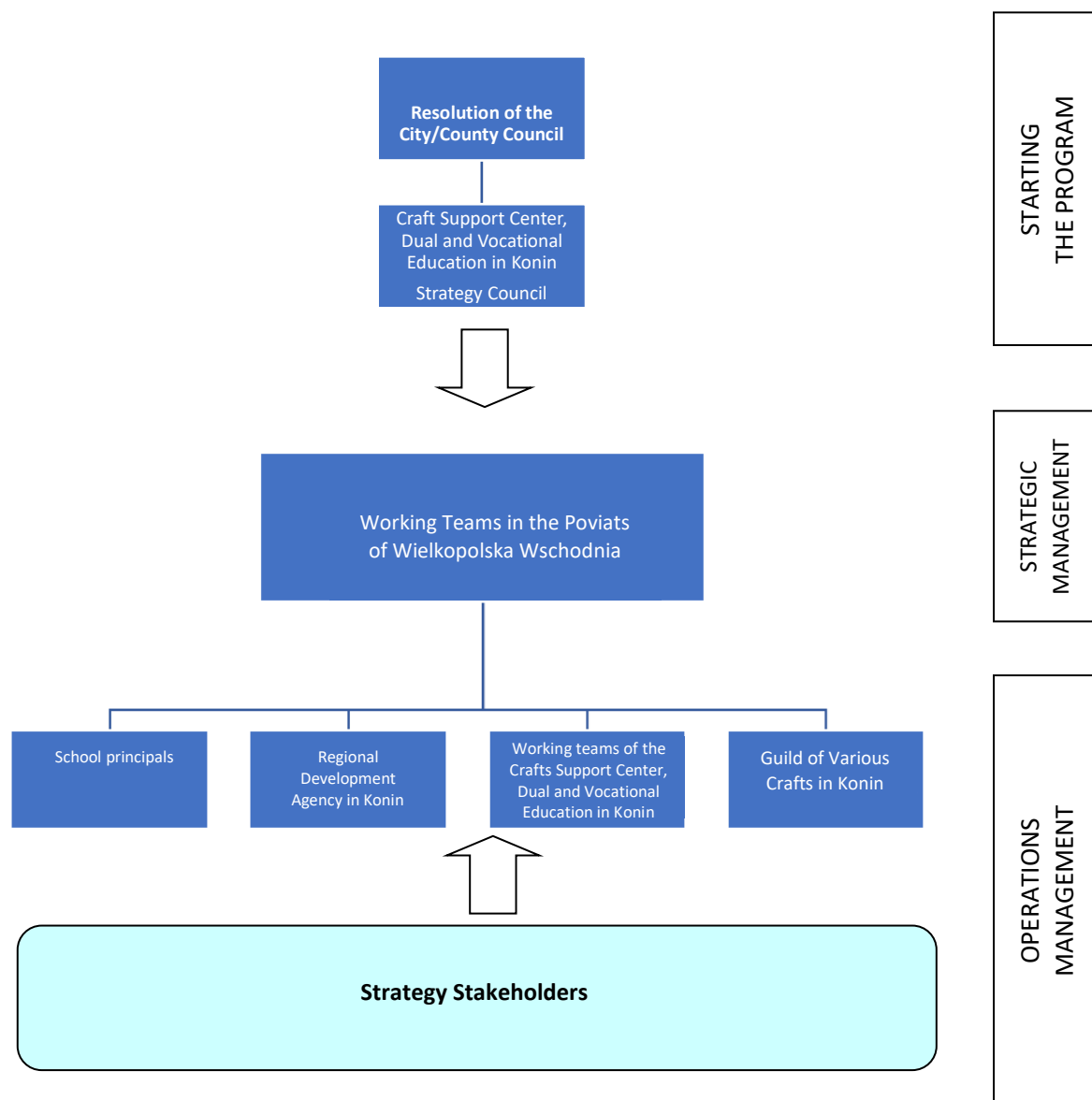


Fig. 2. Strategy implementation and management scheme
Source: own study.

Particular involvement of the Regional Development Agency SA in Konin is recommended as the institution responsible for coordinating the energy transformation process in Wielkopolska Wschodnia and one of the key stakeholders of the Strategy, in particular by establishing strategic criteria for assessing projects implemented under Priority 10 Just transformation of Wielkopolska Wschodnia (European Funds for Greater Poland). for the years 2021–2027), promoting projects in line with the Strategy for vocational education and training in Wielkopolska Wschodnia in the context of energy transformation adopted by the Konin City Council and District Councils.

4.2. Financial system

The strategy, due to its integrated nature and dispersed institutional system, requires ensuring financial arrangements, including financial resources from many sources and for various purposes. The basic source of financing will be the budgetary resources of district governments, also understood as own contribution to projects financed from external sources, in particular from European funds.

It is recommended to use the following sources of financing for the activities described in this document:

- budgets of local governments of the City of Konin and counties of Wielkopolska Wschodnia,
- budget of the local government of the Wielkopolska Voivodeship,
- budgets of local government organizational units,
- National Reconstruction Plan,
- European Funds for Greater Poland for 2021–2027 (and subsequent years), in particular:
 - Measure FEWP.05.01 Improving equal access to high-quality education, training and lifelong learning through support for educational infrastructure,
 - Measure FEWP.09.02 Pre-school, general education and vocational education within local development,
 - Measure FEWP.09.03 Lifelong learning within local development,
 - Priority FEWP.10 Just transformation of Wielkopolska Wschodnia, in particular:
 - ✓ Measure FEWP.10.01 Labor market, education and active society supporting the transformation of the economy,
 - ✓ Measure FEWP.10.03 Building an ecosystem of business environment institutions and supporting public R&D infrastructure and digitization of public administration,

4. Strategy implementation system

- ✓ Measure FEWP.10.07 Infrastructure for an active society, educational and revitalization supporting the transformation of the economy,
 - Erasmus+ program 2021–2027 (and subsequent ones),
 - funds from private and public foundations and other entities supporting educational projects,
 - private funds, in particular enterprises, participants of non-formal and informal education, in the field of practical and continuing education,
 - European Funds for Social Development 2021-2027 (FERS), Measure 01.05 *Skills in higher education*,
 - EEA Financial Mechanism and Norwegian Funds Mechanism (if a financial agreement is signed),
- Guild of Various Crafts in Konin (as the body managing the Craft Vocational School of the Guild of Various Crafts in Konin),
- other available financial resources.

5. Monitoring, evaluation and change management

Monitoring and evaluation of the Vocational Education and Training Strategy in the context of the energy transformation of Wielkopolska Wschodnia by 2040 are processes that aim to examine whether this strategy is implemented in accordance with the assumptions and whether it achieves the assumed goals. Monitoring is a continuous process that takes place during the implementation of the strategy, while evaluation is a periodic process that takes place after the strategy is implemented. Constant and systematic observation of changes taking place in Wielkopolska Wschodnia as a result of the energy transformation will enable a quick and flexible response to changing conditions, will also allow for the identification of problems and threats in the implementation of the objectives of the development of vocational education and training and their causes, and will allow for the introduction of measures adequate to the situation. remedial measures so that the Strategy is effectively implemented.

Properly prepared monitoring should be based on the preparation of basic parameters according to which the Strategy implementation process will be checked. These should be result indicators for activities and impact indicators for strategic goals. These indicators should be measurable so that the achieved values can be easily compared to the assumed values. They should also be realistically achievable, because determining values that cannot be achieved within the expected time anyway defeats the purpose of monitoring. It cannot be assumed that the established goals will not be achieved, but only the implementation of steps closer to operational or strategic goals.

The recommended monitoring scheme is presented in Fig. 3. This scheme takes into account the role of the institution coordinating the implementation of the Strategy - the Center for the Support of Crafts, Dual and Vocational Education in Konin, and the Strategy implementation system proposed in Chapter 4 of this document.

Monitoring goals

The main purpose of monitoring the vocational education and training strategy in Wielkopolska Wschodnia is to ensure that this strategy is implemented in accordance with the assumptions and that it is effective in achieving its goals. Systematic observation of activities taking place in the economy will allow for a quick and flexible response to changes occurring as a result of the transformation.

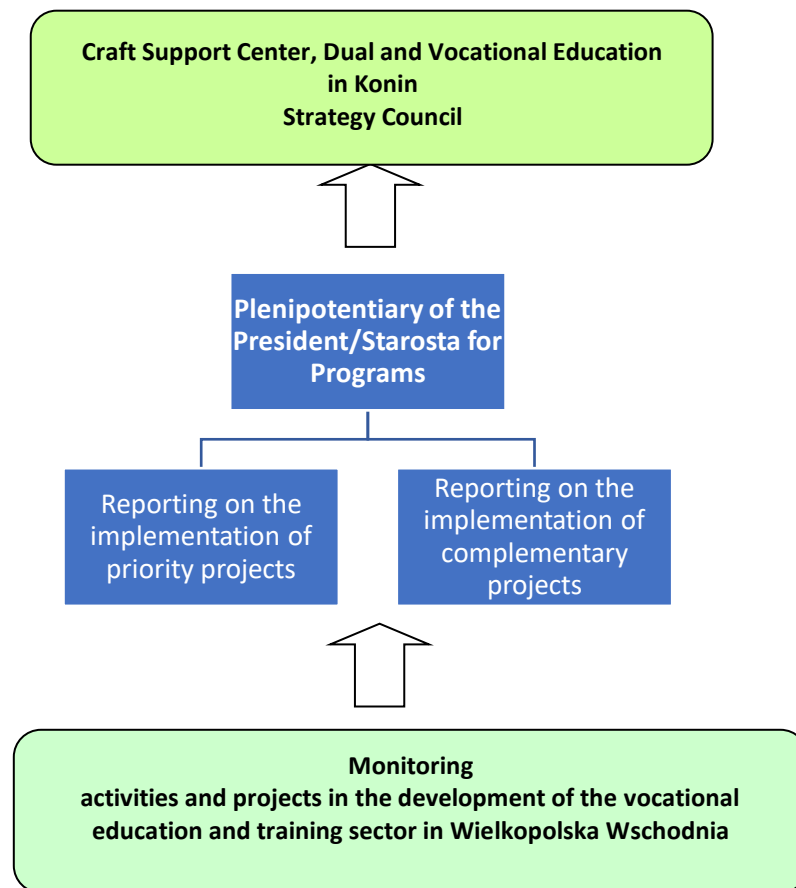


Fig. 3. Scheme of the Strategy Monitoring System

Source: own study.

Monitoring aims to:

- examining whether the strategy is implemented in accordance with the established standards and procedures;
- examining whether the strategy is effective in achieving its goals;
- identifying areas where the strategy can be improved.

Evaluation goals

The main goal of evaluating the vocational education and training strategy in the context of the energy transformation of Wielkopolska Wschodnia is to assess whether this strategy has achieved its assumptions. Evaluation aims to:

- assessing whether the strategy was effective in achieving its objectives;
- assessing whether the strategy was effective in using resources;
- assessing whether the strategy was accepted by stakeholders;
- identification of conclusions and recommendations for further development of the strategy.

Monitoring and evaluation methods

Monitoring and evaluation of vocational education and training strategies can be carried out using various methods, such as:

- document analysis;
- interviews;
- surveys;
- observations;
- experimental research.

Monitoring and evaluation results

The results of monitoring and evaluation of the vocational education strategy should be used to take actions aimed at improving the effectiveness of the strategy implementation. Based on the results of monitoring and evaluation, the following actions can be taken:

- introducing changes to standards and procedures;
- introducing changes to the strategy goals;
- improving communication and cooperation between stakeholders.

Monitoring and evaluation of the vocational education and training strategy in Wielkopolska Wschodnia is important because it helps ensure that the Strategy is implemented as intended and that it is effective in achieving its goals.

Summary

The strategy for vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia until 2040 is a kind of catalog of recommended actions aimed at improving the quality of education in vocational training professions and its adaptation to the needs of the local labor market in the area of the city of Konin, the Koło, Konin and Słupca districts, Turek, forming the Wielkopolska Wschodnia subregion.

The strategy was developed on the basis of detailed quantitative and qualitative research conducted in 26 schools and institutions providing education in vocational training in Wielkopolska Wschodnia and among 56 entrepreneurs. The results obtained from quantitative and qualitative research were used to formulate a vision for the development of vocational education in Wielkopolska Wschodnia, specifying the strategic goal, within which directions of intervention were indicated and priority projects assigned to them, including recommended actions. The use of this approach results in the recommended actions being consistent with the designated strategic goal.

It should be emphasized that the catalog of recommended activities is not closed and you can add your own activities resulting from the needs of local governments in the area of vocational education.

The *Strategy* includes references to higher-level documents, in particular:

- *Just Transition Concept for Wielkopolska Wschodnia* ;
- *Development strategy for the Greater Poland Voivodeship until 2030* ;
- *Development strategy for Wielkopolska Wschodnia 2040*.

Therefore, the actions proposed in *the Strategy* are consistent with the proposals of higher-level strategies.

The important role of local and regional governments in the development of vocational education in Wielkopolska Wschodnia should be strongly emphasized, as well as the fact that this *Strategy* is the first document of this type prepared for vocational education, important for its development and also important for sustainable development and implementation of energy transformation processes in Wielkopolska Wschodnia. For effective and efficient implementation of *the Strategy vocational education and training in the context of the energy transformation of Wielkopolska Wschodnia by 2040* will require the involvement of the local governments of the City of Konin, the counties of Koło, Konin,

Słupca and Turek, which constitute the subregion of Wielkopolska Wschodnia, including, among others, developing their own strategies for the development of vocational education. To do this, the authorities of individual local government units can use the proposed actions or introduce their own actions in line with their needs. It should be emphasized that the selection of actions should depend, among others, on: possibilities of their implementation, the needs of schools and institutions providing training in vocational education professions and the local labor market.

Strategy implementation system is designed to emphasize the role of the Mayor of Konin and the starostas of the Koło, Konin, Słupca and Turek counties in the implementation, but also in monitoring and evaluation, as well as the directors of school complexes and institutions providing education in vocational training professions., as well as the Crafts, Continuing and Vocational Education Support Center in Konin. This approach is aimed at increasing the efficiency and effectiveness of the proposed solutions.

List of tables and figures

List of Tables

Table 1. List of schools/educational institutions from Wielkopolska Wschodnia whose directors or employees designated by them participated in the survey	10
Table 2. List of institutions whose representatives participated in workshops organized in Konin, Koło, Słupca and Turek on November 15–18, 2022.....	11
Table 3. Number of schools in individual cities and counties with a list of schools - data for the 2023/2024 school year as of September 30, 2023	12
Table 4. Number of students studying in particular types of schools divided into cities and counties - individual data by departments in the 2023/2024 school year as of September 30, 2023	14
Table 5. Vocational education offer in the city of Konin (as of 2023-09-30)	15
Table 6. Vocational education offer in the Konin district (as of 2023-09-30).....	18
Table 7. Vocational education offer in Słupca district (as of 2023-09-30)	19
Table 8. Vocational education offer in Turek district (as of 2023-09-30).....	21
Table 9. Vocational education offer in the Koło district (as of 2023-09-30).....	22
Table 10. The most popular from the vocational education profession in Wielkopolska Wschodnia and in individual counties (as of 2023-09-30 based on data taken from the Educational Information System (SIO)).....	23
Table 11. Least popular from the vocational education profession in Wielkopolska Wschodnia in individual counties (as of 2023-09-30 based on data taken from the Educational Information System (SIO))	24
Table 12. Matrix of connections between priority projects in the compared strategies.....	33

List of drawings

Fig. 1. Structure of the objectives of the Vocational Education and Training Strategy in the context of the energy transformation of Wielkopolska Wschodnia until 2040.....	32
Fig. 2. Strategy implementation and management scheme.....	54
Fig. 3. Scheme of the Strategy Monitoring System	58

