

Rapid Quality Infrastructure Market Potential Assessment for Ukraine

Executive summary of the scoping study on QI services for green and digitalized value chains

Project: Quality Standards for Increased Trade in the Eastern Partnership, PN: 2021.2236.4

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1 PRELIMINARY REMARKS

The European Union (EU) is working with Eastern Partnership Agreement (EaP) countries (Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova, and Ukraine) to promote environmental and climate resilience and digital transformation. In this context, PTB is implementing the project "Quality Standards for Increased Trade in the Eastern Partnership, PN: 2021.2236.4. This project aims to build the quality infrastructure (QI) necessary for a sustainable and digital transformation.

This study describes the potential of the QI of Ukraine to make a significant contribution to green and digital transformation. The QI services are crucial for an economy based on the division of labour to function efficiently and effectively. Standards, measurement, and testing ensure trust between economic actors and smooth production and distribution flow. Sustainable production methods require appropriate evidence to prevent greenwashing. The digitalisation of the economy and the QI services is also necessary here. Ultimately, QI enables EaP countries to participate in international trade and to develop their economies sustainably. The study analyses existing publications and policy documents on the country's economy, development, and quality infrastructure and interviews conducted in Autumn 2022. The research is guided by the Calidena Guide and Toolbox (www.calidena.ptb.de).

2 NATIONAL ECONOMY AND QUALITY INFRASTRUCTURE ASSESSMENT

Europe's second largest country, Ukraine is a land of wide, fertile agricultural plains, with large pockets of heavy industry in the east. It is a lower-middle-income country, ranking 131 from 216 with 4830 US Dollar per capita in 2021 by World Bank. Manufacturing is a leading branch of national economy accounts for 22,8% of Gross Domestic Product (GDP), followed by Mining (12,6%), Agriculture (10,6%), Trade (6,7%), Transportation and logistics (5,6%) and Construction (2,7%).

The Ukrainian National Economic Strategy until 2030 (NES-2030) defines strategic steps for the priority development of the above mentioned and some other sectors, taking into account the important cross-cutting areas – digitalization, Green Deal, entrepreneurship development as well as balanced regional development.

Ukraine’s commitments/obligations to EU Association Agreement, Deep and Comprehensive Free Trade Agreement (DCFTA) as well as country’s accession to the World Trade Organization (WTO) have motivated a comprehensive re-assessment of its national QI and launched the process of its transformation from the overemphasized technical regulations (or mandatory standards) and domination by highly-centralized government institutions to the voluntary nature of national standards and decentralisation of national QI operating as a network of public and private institutions.

Currently Ukraine’s QI ranks 32 out of 184 countries’ economies as per Global Quality Infrastructure Index 2021 by GQ II Report. Despite quite successful progress in improvement of the legal and institutional frameworks, Ukraine still exhibits a number of non-compliances in specific areas to be improved in order to generating added value to QI customers.

All QI bodies of Ukraine are well familiar with the strategic and operational goals of green transformation and digitalisation, however, some areas of cooperation are misaligned with European Green Deal priorities or are not covered, such as the decarbonisation of transport, phasing out fossil fuels, transforming industry and agriculture and «greening» national budgets, although the war-torn Ukraine will face several challenges in catching up with the EU’s climate ambitions outlined in the European Green Deal.

3 QI MARKET POTENTIALS PROVIDING SERVICES FOR GREEN VALUE CHAINS

Based on the assessment of the national economy, including the government's policy development priorities and development cooperation priorities and interviews with key stakeholders, the consultants identified wooden furniture, organic fruit and vegetables, sunflower oil, raw milk and thermoblocks (construction materials) as value chains that meet the following criteria:

- High importance for the country's gross domestic product and employment
- High significance for the country's foreign (export and import) or domestic trade
- Prioritisation by national development planning. Political support.
- High priority for the green transformation and digitalisation
- Increased need for action around safety, health, environmental protection, and quality.
- Existing support through development policy programmes and projects (GIZ and others)
- Interest from critical actors in the value chain to participate.

The selection of VCs is summarized in a table format as below:

Selection criteria/Commodities	Construction		Agriculture	Food industry	Agriculture	Processing
	Thermoblocks	Construction, Automotive, ITC LV Cables				
Belonging to the national development priority branch/sector	2	3	3	3	3	2
Relevance to Ukraine's EGD obligations and/or digitalisation programmes	3	3	3	2	2	1
Export potential	2	3	3	3	1	3
Participation of SMEs in the chain	3	3	3	3	3	3

Conscious need for quality assurance/improvement	3	3	3	3	3	3
Motivation of stakeholders for dedicating time and resources	3	3	3	3	3	3
Support by development policy programmes and projects (GIZ and others)	2	1	3	3	3	3
Total (max 21 points)	18	19	21	20	18	18

Thermo-blocks for construction: The country's construction materials market showed an increase of 14.9% in 2021 compared previous year. The demand for sector related commodities is projected to grow more intensively, driven by the need to reconstruct/build the new residential/non-residential and infrastructure objects ruined as a result of Russian aggression.

Currently Ukraine exports, ceramic tiles, porcelain stoneware, ordinary brick, face brick, clinker, porous large-format blocks, hand-moulded bricks, concrete, reinforced concrete. National construction companies are increasingly more using construction materials from Ukrainian manufacturers, which are of good quality and less expensive than imported.

In 2021 the construction sector officially employed almost 0,7 mln working age population of Ukraine. Its contribution to Ukraine's GDP accounted for 2,7% in 2021 (at current prices).

Improving the energy efficiency of buildings is among major development priorities in Ukraine. It would help Ukraine align with several key EU laws currently under reform, notably the Energy Efficiency and Energy Performance of Buildings directives.

Although construction standards for new buildings have been tightened recently, energy efficiency standards remain below European levels, even for new buildings. On 13 November 2021, Law of Ukraine "On Energy Efficiency" No. 1818-IX came into force. Its provisions cover construction sector and production of the construction materials.

Recycling construction materials is becoming more important as well, as construction and demolition generate significant waste. There are two main consequences for the producers of materials: 1) the need to develop products that can be recycled after demolition; and 2) the use of recycled materials as the starting point for new products.

Major gaps between supply and demand of QI services:

- The QI organisations are still seen by businesses more as organizations with fiscal functions;
- New standards and information on international developments in standardization are disseminated too slowly;
- Like most sectors, the building-material industry is facing digital disruptions across the full value chain. There is a high potential for the relevant QI bodies to contribute not only to the product's quality, but also to the functional excellence across all operations, commercial, and general and administrative units;
- Advanced analytics, digital tools, and digital technologies can together help increase margins, reduce costs, and improve customer satisfaction with better service and quality;
- The building information modelling (BIM) systems, e.g. refer to the specific digital disruptor for this sector. By creating a shared knowledge network and communication tool for all stakeholders involved in a construction project, BIM has the potential to enable prefabrication, more standardized products, and easier changes, without common construction-site mistakes.

Organic Fruit and Vegetables: The organic sector development is one of the priority directions for the economy of Ukraine.

The National Economic Strategy (NES)-2030 sets the goal for 3% of land under organic production and increase exports of organic products to 1 billion US dollars by 2030. Before the Russian invasion, on December 31, 2021, Ukraine had been removed of the list of high-risk-countries for organic imports into the European Union.

The Law of Ukraine “On production and turnover of organic agricultural products and raw materials” came into force in 2014. In 2019 it was replaced by the Law of Ukraine “On the main principles and requirements towards Organic Production, Circulation and Labelling of Organic Products” with amendments made in 2021. The major provisions of this legal act, including are not enforced yet, although the law has been formally adopted.

In total there are 19 service providers designated by EC (Annex 2 to the EC Regulation 2021/2325) for provision of the above services to the Ukrainian organic farmers and food processing companies. Organic Standards LLC (accredited by IOAS), is the only Ukrainian company, included in the official list of recognized certification bodies in European Union and in Switzerland.

NAAU has a potential as accrediting certification bodies for certification of organic commodities.

Major gaps in the QI for the value chain:

- Lack of competent experts on assuring quality standards during the production of the organic agriculture outputs;
- Lack of national experts combining expertise both in organic fruit and vegetables certification, food safety and organic farming;
- The digitalisation of export procedures related to the compliance of organic agriculture outputs to the EU food safety standards and environmental norms should be among priorities;
- The currently applied standards relate primarily to products and basic processes, but there are no further-reaching standards, e.g. on management systems and packaging materials;
- Certified transport and logistics eco-systems (hubs+) for storage and reloading of organic products is absent;
- Small scale organic producers are faced with the challenge of not only adhering to quality criteria but also of providing evidence to confirm the eligibility of their products for the EU marketplace;
- A producer’s ability to ensure full traceability of products requires further improvements and increased role of NQI institutions;

Sunflower oil: Ukraine accounts for 33% of global sunflower oil production and is leading in the international supplies with 50% of global sunflower oil exports.

Despite hundreds of small and mid-scale crushers there’s a comparatively high concentration both in sunflower oil production and exports. The top 5 largest companies account for almost 32% of the crude sunflower oil.

Concentration in the refined sunflower oil segment is clearly higher. The top five companies accounting for almost 63% of the overall national production in 2021. Kernel-Trade ranking the highest with over 22% of all sunflower export in 2021, followed by Suntrade (8,6%), Cargill (6,5%), ADM Trading Ukraine (3,7%), D&I Evolution (3,3%), i.e. the top 5 accounting for almost 45% of the commodity’s exports.

Unlike the European food quality system in which responsibility for risk assessment (science based) and for risk management (policy regulated) are kept separate Ukrainian Food Safety legislation does not provide such condition, making risk analysis process in Ukraine not transparent. The State Service for Food Safety and Consumer Protection is subordinated to the Ministry of Agrarian Policy of Ukraine, thus creating the situation when service that regulates the production of food products apply the official control.

Ukraine has appealed for help to keep its food safety/quality control system running during the Russian invasion and called for less strict trade measures to boost exports. The infrastructure of the State Food Safety and Consumer Protection Service of Ukraine (SSFSCP), its institutions and laboratories have been partially damaged and the country appealed for international assistance to replace destroyed veterinary and phyto-sanitary labs. Other QI related entities remain fully operational despite Russian aggression.

Major gaps between supply and demand of QI services:

- Low awareness of businesses on NQI contribution to the competitiveness/currently the expectation of businesses from NQI organizations are limited to “provide the paper I need”;
- Strategic dialogue as well as participation of the private sector in Ukraine’s NQI decision-making system is low;
- The lack of availability of international standards in Ukrainian. New standards and information on international developments in standardization are disseminated too slowly;
- NQI services are not in the form of steering or guiding but mainly controlling (existing NQI services are mostly concentrated on controlling end products or services for compliance);
- Level of digitalisation of the QI services could be further improved.

Raw Milk: Dairy industry is one of the key components of the Ukrainian agricultural sector. It gives employment to more than 80 thousand people, out of which almost 36 thousand are involved in the raw milk production.

The share of the dairy sector is 3.1% in the structure of gross agricultural production, and 11% in the structure of livestock production. Ukrainian dairy farms are split into either large industrialised businesses or small traditional family units.

With increased access to technology, the Ukrainian dairy industry continues to improve and in the future a higher percentage of cows are to be gradually housed on the industrial farms.

There’s no exports of raw milk from Ukraine, but the external trade of dairy products was growing till Russian invasion.

The requirements for the quality and safety of milk are regulated by the state standard DSTU 3662-97 “Cow’s whole milk: Requirements for procurement”.

A risk-oriented system of measures to control the production quality and safety as well as its introduction of raw milk into circulation, based on the availability of reliable data on indicators of conformity of raw milk, has not yet been implemented in Ukraine.

The Dairy Module IT application (digital platform for Raw milk control programme) hosted by SSFU SCP is operational <https://dm.foodcontrol.gov.ua/> (limited access to only SSUFSCP staff members).

The quality of milk in Ukraine remains poor due to the violation of sanitary and hygienic standards in the content of cows, which leads to high bacterial contamination of milk; lack of breeding, poor quality of livestock cows and feed, resulting in low nutritional value of milk; high proportion of human labour in the production process.

There’s still a lack of primary processing of milk and conditions for its cooling, violation of requirements for the storage of milk, lack of possibility of immediate transportation of milk to milk processing enterprises.

The state control over the quality of milk and compliance with the requirements during its production is not sufficient.

Major gaps between supply and demand of QI services:

- Low level of the risk assessment and risk-based inspection;
- Insufficient support in the development of standardized checklists for official control of raw milk production and collection (as well as for dairy products);
- Support in the organization of proficiency testing and ring trials for laboratories required;

- Limited scope of accreditation for laboratories to expand the network of laboratories participating in the Raw Milk Control Program;
- Insufficient methodological support for laboratories, which are participating in the ring trials on the improvement of their activity based on recommendation of the international provider;
- There's need for capacities development and continuous support for the implementation and monitoring of the Raw Milk Control Program through regular exchange with main stakeholders;
- Low level of awareness raising activities among milk producers related to quality and safety of raw milk, including on progress and advantages to the raw milk producers and consumers from the implementation of the National Raw Milk Control Program Based on the Dairy Module;
- Digitalization of State Service of Ukraine on Food Safety and Consumer Protection is ongoing, but obviously has to be better facilitated;
- Testing and measurements on sites are not always reliable;
- State laboratories of State Service of Ukraine on Food Safety and Consumer Protection need further technical support with a focus on reference laboratories and their capacities;

Solid Wood Furniture: The Ukrainian wood sector is well-diversified, covering hundreds of commodities, including solid wood furniture, it refers to the most dynamic industries in Ukraine.

The related TCs for standardization of the National Standardization Body are responsible for the development /drafting of standards. The draft is then ratified by the national standards organizations. All stakeholders interested in the draft standard are entitled to participate. Stakeholders are composed of experts in a specific field representing national committees, industry, professional associations, government, trade unions as well as other stakeholders and national standardization bodies. Relevant TCs for the Ukrainian wood sector include: TC 18 Forest Resources, TC 218 Timber/ISO, TC 151 Furniture.

Main gaps in the QI related to the VC:

- Lack of trust of EU importers in the reliability of Ukrainian certificates;
- Lack of cooperation (and trust) between business sector (associations and companies) and Ukrainian QI institutions;
- Limited availability of EU standards in the Ukrainian language;
- Limited competencies of testing organization staff for conducting tests according to EU requirements and standards;
- Inappropriate testing infrastructure of testing organizations for processed wood products, incl. furniture;
- Limited awareness of the producing companies for quality and standard compliance;
- Limited close partnerships with foreign QI institutions;

The PTB Project and the CALIDENA exercise could contribute to country's economic development in general, as well as to the NQI in general and to the recommended value chain in particular through:

- expansion of the currently applied standards from products and basic processes to further reaching aspects, e.g. management systems and packaging materials;
- establishment of certified transport and logistics eco-systems (hubs+) for storage and reloading of organic products is absent;
- support the conscious and demand based collaboration between small scale producers and relevant NQI to assure the compliance to the quality criteria and eligibility of their products for the EU marketplace;

- assistance to NQI bodies in establishing trust and dialogue, including improvements in QI visibility patterns and communication with businesses;
- assistance to the NQI institutions not only in contributing to the product's quality but also to the functional excellence across all operations, commercial, and general and administrative units, using advanced analytics, digital tools and digital technologies to increase margins, reduce costs, and improve customer satisfaction with better service and quality;
- assistance to the national QI institutions in becoming the focal points in integration of the quality mentality and culture to the entrepreneurial vision;

Low Voltage Cables: Specifically, for Ukraine, the growth of cables market will be intensively assured by the construction sector, renovations of infrastructure and elimination of other damages caused by Russian war. Volatility of the raw material prices applied in cable manufacturing, rubber, PVC grains, fluorine plastics, copper increases the production costs, restraining the market growth. The demand from IT and telecommunication sector will mainly come from the data cables and other users of cables for transmitting the information. The aerospace, automotive and defence segments are contributing to the demand growth due to wide range of individual and commercial car fleets, military and civic air fleets, military ground vehicles and other applications.

Cable manufacturing in Ukraine refers to comparatively highly developed sectors, providing jobs for more than 60000 working age population of Ukraine. Labour-intensive wiring harness production, which uses LVE cable is one of the main activities for cable producers located in the Ukraine.

In fact, all types of modern cable products are domestically manufactured, whereas the LV Cables are dominating in the spectrum of cable commodities.

Considerable part of cables export statistics, up to 70 % in various estimates, refers to wire harness products for automotive industry, which are manufactured in Ukraine within tolling scheme operations. The wire harnesses producers in Ukraine do not interact with national QI institutions, applying the standards of designated end users in compliance to safety and quality requirements of the respective industries and countries

Main gaps in the QI related to the VC:

- The capacities of NQI, in particular of TC 131 for provision of quality assurance and safety requirements compliancy services require further development, especially regarding increased contribution to the development of the new/modern commodities;
- The relevant QI bodies still rarely contribute to raising competitiveness of the commodities produced by businesses through inputs to the product's quality and functional excellence across technological stages, as well as improvement suggestions to commercial and administrative units;
- Application of modern analytical digital tools and technologies can together help increasing the margins, reduce costs, and improve end-users' satisfaction with better service and quality;
- The communication/dialogue between NQI and cable market stakeholders has a potential for becoming more praxis oriented, through creating a shared knowledge network and communication tool for all stakeholders involved;
- No functioning of the important/basic components of the NQI: The accredited laboratories for testing the cable commodities in line to selected standards (e.g. ДСТУ EN 50399, ДСТУ EN 60754-2) are seriously damaged by Russian aggressors in 2022. Some of labs are located in the cities which are temporarily occupied by Russians (e.g. in Rubizhne and Berdyansk);
- Ruined/no longer available equipment for conformity assessment and determination of level/class of the working characteristic of the cable commodities due to the damages caused by Russian aggression and as such the national cable manufactures are no longer able to confirm the compliance of the commodities to the requirements of the Law of Ukraine «On provision of construction materials to the market”;

Besides addressing the above gaps PTB Project and the CALIDENA exercise could contribute to country's economic development in general, as well as to the NQI in general and to the recommended value chain in particular through:

- Assess the need for missing equipment for QA of cable products, namely: for gas tests during electrocables' combustion (in line with ДСТУ EN 60754-2 provisions); for determination of heat release and smoke creation indicators of cables (ДСТУ EN 50399); for cables' fire resistance to assure the networks/circuits functionality in case of fire (ДСТУ EN 50200) and support the Ukrainian NQI bodies in finding investors, grants for provision of the equipment and respective capacity building;
- The support is needed in guiding (raising capacities) of cable suppliers on practical application of the Law of Ukraine «On provision of construction materials to the market» and “locating” the cable commodities in the Unified Digital System for Construction Materials as well as for sector's stakeholders' preparation for acting in frames of the coming agreement of an ACAA with the EU.

4 RECOMMENDED COMMODITY GROUP:

The Low Voltage Cables could be considered as a recommended commodity considering its importance for the Ukraine's economy, especially in the post war period, its compliance to the priorities of country's development strategy as well as considering the commodity group is among current priority sectors of Ukraine's ACAA with EU.

5 ADDITIONAL NOTES:

- Following the official position of Ministry of Economy of Ukraine is its official letter the preference was given one of the commodities within sectors currently defined as priorities for ratifying the ACAA with EU.
- During the validation discussion, some of the QI stakeholders opted for thermoblocks, as it is relevant for the country's reconstruction process, and for wood industry (solid wood furniture) as follow-up of a recently implemented SDC funded project?