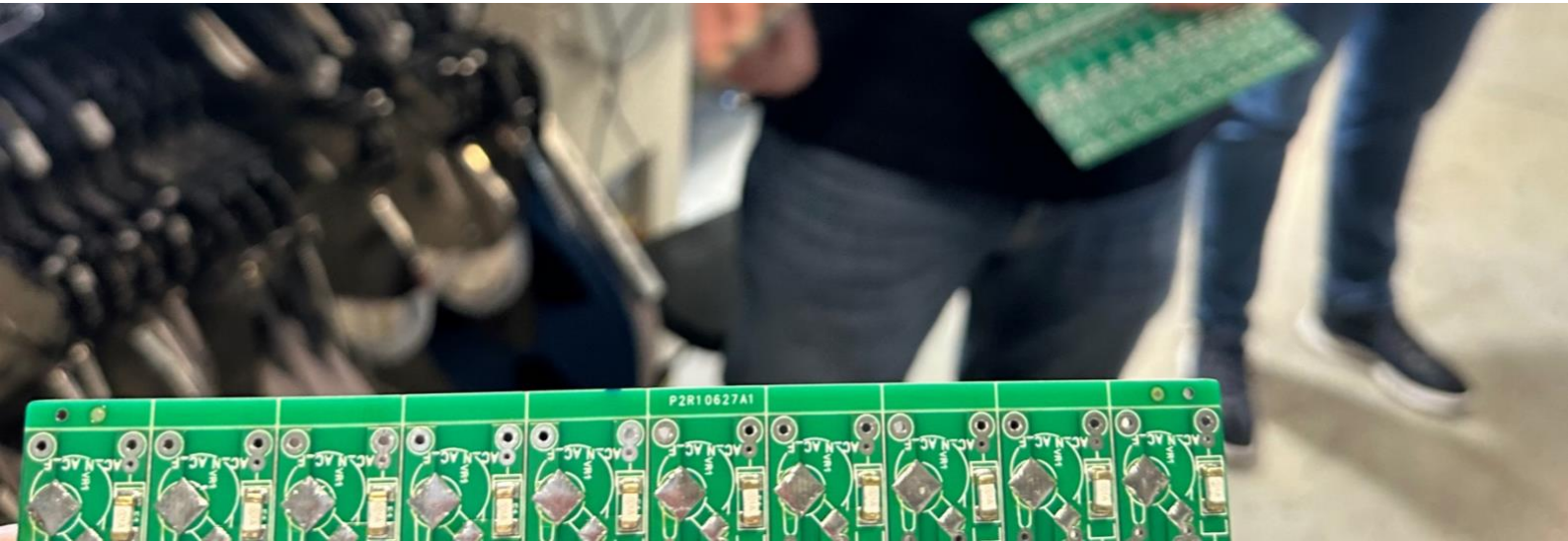


Calidena Process in the Project “Quality Standards for Increased Trade in the Eastern Partnership Countries”

Value Chain: Led Lighting (Moldova)



The production of LED lights. Photo: Ulrich Harmes-Liedtke

Context and rationale for the selection of LED lighting in Moldova

The Calidena process in Moldova focuses on the low-voltage electrical sector and – within that sector – specifically on the value chain of Light Emitting Diode (LED) products.

LED products have widespread applications such as in lighting, displays, signage, consumer electronics and medical devices. They hold multiple advantages over traditional counterparts due to their energy efficiency, longer life span and durability, higher brightness, lower heat emission, instant “on” and design flexibility.

Most LED products on the Moldovan market are cheap imports, mainly from China and Turkey. A limited subset of companies from Moldova contributes to the value chain for LEDs. Their role is primarily in assembling imported components and installing them in construction and infrastructure projects. The focus is mostly on domestic consumers and on more expensive and sophisticated LED solutions.

The LED value chain was selected because low-voltage products have been identified as a government priority. The electronics sector as a whole shows promising growth due to its heterogeneity.

Identified gaps

On the basis of a feasibility study conducted for the project and discussions during the kickoff workshop, several gaps in the LED value chain in Moldova were identified. On the demand side, producers lack clarity about the relevant standards, the differences between European and CIS standards, and which certificates will ultimately be recognized. On the QI services supply side, testing capacities for electronic products are very limited or nonexistent for certain parameters.

Calidena activities

A kickoff workshop was organised in Chişinău on 23-25 May 2023 and attended by representatives of the private sector (value chain representatives) and QI institutions. A draft action plan with activities was developed as a result of the workshop.

Activities under the Calidena process to address some of the identified gaps include:

- **Information/Awareness-raising:** preparation of guidance materials for companies on standards and participation in tenders; guidance materials for consumers; capacity building of ACEM as an informational hub and a service provider;
- **Standardization:** drafting of summaries of relevant legal framework and regulations; compiling lists and summaries of relevant standards and developing a comparison table between EN and GOST standards; promotion of more active participation in the standards committee;
- **Metrology/Conformity Assessment:** Conduct a feasibility study for ACEM lab; Carry out proficiency tests / lab comparisons in photometric;
- **Labeling:** Development of a proposal for energy efficiency labels;
- **Recycling:** Designation of collection points for LED products; identification of gaps and needs, and alignment with the principles and standards of the EU Waste from Electrical and Electronic Equipment (WEEE) Directive;
- **Recognition:** Verifying the validity of existing certificates provided by domestic and international bodies; Compiling a list of laboratories, including tests offered and prices.



Participants in the Calidena kickoff workshop in Moldova

Expected outcomes

The outcomes expected from the Calidena process on LED in Moldova include:

- Increased awareness and information provided to the private sector and consumers about the relevance of quality and safety;
- Improved coordination between QI institutions;
- Strengthened provision of selected QI services;
- Progress toward improving measurement and testing capacities;
- Improved material efficiency and reduction of LED lighting waste;
- Contribution to the joint learning in the EaP countries about the use of QI services for the electrotechnical industry.

Leading Organisations

Host: [Moldovan Ministry of Economic Development and Digitalization](#)

Co-host: [Association of companies in the electronic industry \(ACEM\)](#)

Links to Green Transformation

A widespread adoption of LED lighting supports sustainability and green transformation goals. LEDs are environmentally friendly as they do not contain hazardous materials, such as mercury, commonly found in traditional lighting technologies. They are also 100% recyclable, reducing waste and environmental impact. In the framework of the Calidena process, activities related to LED recycling are incorporated in the action plan, including advances toward designating LED collection points.

LEDs are highly energy efficient and use up to 80% less energy than traditional lighting technologies. This translates to lower energy costs and reduced carbon footprint. Another “green” advantage of LEDs is their significantly longer lifespan and greater durability. With some LED bulbs lasting up to 25 times longer, this results in lower maintenance costs and less frequent replacements, reducing further their environmental impact.

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What is Calidena?	Calidena in the Eastern Partnership (EaP) countries
Calidena is a participatory approach developed and applied by the Physikalisch-Technische Bundesanstalt (PTB) to stimulate quality in value chains. Its toolset can be used in cooperation projects that aim to strengthen the user orientation of the Quality Infrastructure (QI) of partner countries, and in value chain initiatives that aim at closing quality-related gaps. For more information on the Calidena process, visit the Calidena website .	In 2022, a Calidena process was launched in each of the five partner countries participating in the PTB project “Quality Standards for Increased Trade in the Eastern Partnership Countries.” A different value chain was selected for each EaP country depending on local circumstances and needs identified on the basis of a “QI market potential rapid assessment” study conducted in the framework of the EaP project.