

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

# Value Chain: Construction Materials – Sandwich Panels (Georgia)



Sandwich panels produced by the Georgian manufacturer JSC Panex. Workshop participants visited the production site as part of the Calidena kick-off workshop. Photo: Suzana Lange

## Context and rationale for the selection of the value chain in Georgia

Self-supporting double skin metal faced insulating panels, commonly referred to as sandwich panels, were selected as the value chain in Georgia to which the Calidena process is currently applied.

Sandwich panels are modern construction materials with many benefits such as thermal insulation properties, cost-effectiveness, fast and easy installation and ease of cleaning. They are widely used in Georgia for industrial or commercial buildings. Currently, there are several Georgian manufacturers of sandwich panels, three of which are actively involved in the PTB Calidena process. The locally produced sandwich panels are marketed domestically as well as exported regionally (mainly to Armenia and Azerbaijan). A large proportion of the sandwich panels used in Georgia are imported.

Sandwich panels were chosen as a value chain for the Calidena process due to their widespread use in Georgia, link to green transformation as well as their potential for export as well as import substitution. If decided to export the product to the European Union, the Georgian sandwich panels would need to comply with the Regulation (EU) No 305/2011, known as the Construction Product Regulation (CPR), laying down harmonised conditions for the marketing of construction products, including safety and quality requirements in order to access the EU market. The same requirements will be extended to sandwich panels sold on Georgian market under the Georgian regulation (Government of Georgia adopted the Resolution N476 on "Approving Technical Regulation of Construction Products") in the nearest future.







## **Identified** gaps

A feasibility study, conducted as part of the project at the beginning of the Calidena process, identified several gaps in the value chain. The main one concerns a need for more laboratory testing facilities for sandwich panels, especially for fire resistance properties. Another gap relates to the standards that some of the existing testing services rely on. The sandwich panels are in some cases tested according to GOST standard, which does not address all EU requirements. Other issues include a need for awareness of metrological services and of the requirements of EN 14509 (self-supporting double skin metal faced insulating panels) and other related standards by the private sector. The lack of availability of the most relevant standards in the Georgian language was another identified gap. Installation practices were also mentioned by the value chain representatives as one of the important factors that needed to be addressed.

A kickoff-workshop was organised in Tbilisi on 20-22 February 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.



Participants in the Calidena kick-off workshop held on

20-22 February 2023 in Tbilisi, Georgia.

Photo: Suzana Lange

## Calidena activities

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

- Support for the translation of EN 14509 standard "Self-supporting double skin metal faced insulating panels – Factory made products – Specifications" into the Georgian language
- Awareness-raising workshops on EN 14509 requirements and the EU New Legislative Framework in the context of construction materials
- Awareness raising of the private sector about Quality Infrastructure in general and about the activities of QI Institutions (e.g. Georgian National Agency for Standards and Metrology/GeoSTM)
- Organisation of a visit of German sandwich panel experts to the manufacturing sites and construction sites in order to conduct an assessment of the current situation and provide further recommendations
- Providing networking possibilities for Georgian sandwich panel manufacturers locally with Georgian QI institutions as well as internationally with the European Association for Panels and Profiles (PPA-Europe) through the organisation of various events in Georgia as well as supporting their participation in the Annual Congress of PPA-Europe.
- Support for the participation of Georgian QI institutions in Caucasus Build Exhibition in April 2023 in order to promote their activities and assist in creating closer cooperation with the private sector, the panel discussion regarding QI for construction materials was also held
- Preparation of the private sector representatives for the implementation of Resolution N476 of the Government of Georgia on "Approving Technical Regulation for Construction Products"
- Preparation of a summary of the requirements regarding the fire resistance currently included in the national legislation (outside of Construction Product Technical Regulation) in order to provide the basis for discussion with the relevant government bodies
- Survey of the demand and supply for testing services for construction materials in general, including sandwich panels
- Organisation of a study tour for representatives from the sandwich panel value chain and QI service providers (potential laboratories, certification body, etc.) to the relevant organisations in Germany
- Transfering and upscaling experiences from the Calidena process for sandwich panels to other sectors in Georgia and to other Eastern Partnership countries by contributing lessons learned in workshops and publications





### **Expected outcomes**

The outcomes expected from the Calidena process on sandwich panels in Georgia include:

- Progress toward the development of some testing methods for sandwich panels, if feasible within the project
- Advances in QI services offered for the sandwich panels value chain
- Increased awareness and demand for QI services from the private sector (sandwich panel value chain)
- Creation of an enabling environment for collaboration between QI institutions and value chain representatives
- Progress toward compliance with EU/Georgian legislation requirements

#### Leading Organisations

Host: Georgian National Agency for Standards and Metrology (GeoSTM)

Co-host: Georgian Construction Materials Cluster (GCMC)

#### Links to Green Transformation

The construction sector can have significant environmental impacts ranging from resource depletion to waste generation, depending on the materials used and the manufacturing processes applied. As a result, life cycle assessment (LCA) and lifecycle costing are playing an increasingly important role in the sustainability assessment of buildings. The advantages offered by sandwich panels vary depending on multiple factors, including the filling material used between the metal sheets which is of relevance for the life cycle assessment. Overall, sandwich panels contribute to the energy efficiency of buildings due to their good insulation properties. Their relatively light weight, compared to other materials, could potentially reduce environmental damage. For example, they require less solid foundations, reducing the use of further construction materials.

#### Contacts

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## What is Calidena?

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 <u>Calidena website</u>.

## Calidena in the Eastern Partnership (EaP) countries

In 2022, a Calidena process was launched in each of the five partner counties 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.