European Construction Sector Observatory

Policy fact sheet

Latvia

Construction Information System

Thematic objective 4

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In a nutshell

Implementing body	The State Bureau of Construction Control (Būvniecības valsts kontroles birojs – BVKB)[1]
Key features & objectives	Digitalisation of all documentation required by the construction process to make the process more transparent, more efficient, faster and easier to access[2].
Implementation date	2017-2020 (33 months)
Targeted beneficiaries	Construction companies, public administrations
Targeted sub-sectors	All sub-sectors.
Budget (EUR)	EUR 1,700,000: - European Regional Development Fund (ERDF): EUR 1,445,000 (85%) - State funding: EUR 255,000 (15%)[3]
Good practice	★ ★ ★ ★ ☆
Transferability	★ ★ ★ ★ ☆

Digitalisation of the construction process is increasingly becoming recognised as a potential game changer for the construction sector in Latvia. In 2018, the Latvian Government introduced an amendment to the Construction Law to make all documentation required for the construction process fully digital through the introduction of the Construction Information System (Būvniecības Informācijas Sistēma[4] – BIS)[5].

In the last few years, the rapid growth of investment in the construction industry has greatly contributed to the economic growth in Latvia[6]. In 2018, Latvia's Gross Domestic Product (GDP) increased by 4.8% compared to 2017. That was the fastest annual growth rate over the last seven years. The construction sector contributed to 7.1% of GDP[7].

Digitalisation of the construction process opens the door to an array of new opportunities. It helps increasing productivity, enhancing building quality and improving safety, working conditions and environmental protection in Latvia.

As part of its assessment of digital readiness, the OECD identified a number of challenges that Latvia needs to address in order to fully benefit from the use of digital technologies. Uptake and adoption of digital technologies by firms is a key challenge, as is the need to reinforce the innovation ecosystem to better harness transformative technologies across the private and public sector[8].

Latvia has one of the highest shares of fibre optics in its fixed networks (over 60%), which offers individuals and businesses access to high speed, high-quality services that are essential to support data analytics, data-driven innovation and data-powered advances in production processes. Latvia also ranks in the top 10 OECD countries on mobile broadband penetration[9].

However, building and reinforcing trust in digital technologies remains an important challenge in Latvia that is key to address to support the adoption of new digital services. For example, only 10% of Latvian firms are engaged in sales via e-commerce in 2015, compared to an OECD average of 22%. Similarly, only 17% of Latvian enterprises have a formally defined security policy, compared to an EU average of 32%[10].

Implementation of the Construction Information System (BIS) project is ahead of schedule. Full digital processing of all construction documentation was launched in October 2019. From January 2020, digital coordination of the construction process through BIS becomes mandatory in Latvia.

Results achieved to date suggest that the project is on the way to fully achieve its objectives and that it has been well received by different national stakeholders. The project has a great potential for the construction industry in Latvia. Furthermore, this policy measure can be considered to be transferable to other EU countries, not least because the EU construction sector is less digitalised than other European sectors.

1.

General description

The Construction Information System project aims to develop a user-friendly information system to provide full digital management of the construction process (e.g. design, construction and operation)[11].

The development of the Construction Information System (BIS) aims to achieve three main objectives:

- Reduce the administrative burden of the construction process on individuals and legal entities. Electronic approval of construction documents is needed to reduce the necessary time for the implementation of construction plans. The ability to re-use data is also important to help improve the public administration service delivery process, and access to those services by individuals and economic operators;
- Promote the efficiency of public administration by reducing the need to duplicate information and paper traffic, and improving the interfaces of the BIS with the National Information Systems (NIS);
- Improve service availability and increase the re-use of public data by increasing public awareness of BIS and improving its usability. Ensure the public availability of construction merchant classification data, and expand the number of open data sets available and data analysis capabilities.

To achieve these three objectives, seven public administration processes require revision and redesign:

1. Construction merchant classification process;
2. Process of reviewing and approving construction plans and construction designs;
3. Construction process monitoring process;
4. Process of supervision of operation of structures;

5. Construction specialist data management process;
6. Energy efficiency management process of buildings;
7. Process of maintaining the main characterising information of structures and construction products[12].

In addition, a further eight public services within the project are intended to be introduced (new service) or redesigned (addition to existing service):

1. Application for classification of a construction merchant (new service);
2. Data from the Register of Construction Merchants (addition to existing service);
3. Electronic receipt of the conception of the building design and construction project (addition to existing service);
4. Reminders (new service);
5. Data on the state of operation of public buildings (new service);
6. Data from the Register of Energy Auditors of Accredited Companies in Latvia (new service);
7. Data from the Register of Conformity of Construction Products (new service);
8. Certification of Construction Specialist (addition to existing service)[13].

Moreover, the BIS will publish relevant data sets in the form of open data.

Apart from the technical implementation of the BIS, the project aims to conduct training and awareness raising activities across Latvia to raise awareness and facilitate the access to the platform.

By the project completion date (29 August 2020), the plan is to train 300 system users and administrators[14].

2.

Achieved or expected results

Although the project is still in its implementation phase, the results achieved to date suggest that with the launch of BIS in October 2020, the project is on track to fully achieve its objectives.

The main implementation body is the BVKB, and coordination activities have been supported by partner institutions that include the Ministry of Education and Science, State Regional Development Agency, Court Administration, State Land Service, Ministry of Economics, Latvian State Radio and Television Centre[15]. Overall, 2,805 people from 88 institutions have participated in the development of the BIS[16].

By 2018, six public registers had become permanently available on the BIS:

- Construction Merchants Register with 5,328 construction merchants registered;
- Construction Specialists Register with 7,645 construction specialists registered;
- Independent Experts Register, in the field of energy performance of buildings, with 191 experts registered;
- Energy Certification for Buildings Register with 7,143 certificates registered;
- Building Inspectors Register with 271 building inspectors registered;
- Residential Housing Managers Register with 706 managers registered[17].

At the time of launching the fully digital documentation process in October 2019, the BIS had managed to integrate all planned administration services and had introduced new services. In total, 31 e-services and integrated data systems of 15 public authorities are now available on the BIS[18].

The total number of construction cases has been steadily increasing since 2017[19]. As shown in Table 1, from 2017 to mid-2019, the total number of cases registered on the BIS increased by over 400%, up from 22,333 to 92,220.

Table 1: Total number of construction cases, 2017-2019

Year	Cases
2017	22,333
2018	60,242
2019	92,220

Source: LSM.lv Ziņu redakcija[20]

By mid-2019, the BIS had registered 20,146 users and 86,240 documents[21]. Since the launch of the fully digital process, the number of registered users has also been increasing[22].

All Latvian municipalities have concluded agreements on the use of BIS[23]. The Riga City Construction Board was the last one to join the BIS after a long negotiation, especially related to the transition process[24].

By the first half of 2018, BIS support had provided advice and support to nearly 1,000 users, in response to 747 email requests and 230 telephone calls[25]. Between August and September 2019, the BVKB conducted the BIS Customer Satisfaction Survey on the system's functionality. 59% of users expressed their satisfaction with the BIS and 63% were ready to start using e-services straight away[26].

By September 2019, 3,845 people had participated in various training activities on BIS functionality. By the end of 2019, 8,000 people are expected to have received training on how to use the BIS.

To further promote the usability of the BIS, the BVKB has organised regional seminars and webinars for designers, technical regulation publishers and builders on BIS functionality and benefits[27].

To increase the uptake rate of the BIS in Latvia and support the further development of the system, the BVKB and the Central Finance and Contract Agency (CFLA) have signed a new agreement, committing additional funding and effort to the project. The

agreement envisages the development of a new functionality to support decision-making in the building process and the use of electronic time records for construction monitoring. A BIS mobile application and the creation of utilisation records are also planned[28].

The 2nd round of BIS development will also be co-financed by the ERDF. Total project funding will amount to EUR 3,075,000 (ERDF funding of EUR 2,614,000 and national co-funding of EUR 461,000)[29].

3.

Perspectives and lessons learned

The long-term outcomes of the complete digitalisation of the Latvian construction process will be realised over the coming years. However, the existing evidence already suggests that the project has been well received by national stakeholders in the construction sector, despite the short-term transitional effects related to the uptake of digital technologies by default services in construction.

The complete digitalisation of the construction process requires a lot of time and effort, not least in terms of bringing users on board.

A representative of the State Construction Bureau points out that even if the number of the BIS users is constantly increasing, the uptake needs to be higher. One of the main challenges, according to the representative, is to encourage all technical rule publishers (owners of utilities networks) to sign contracts to use the system.

Digitalisation also requires additional human resources to manage the whole process. The Head of the Riga City Construction Board has expressed serious concerns about the management of technical aspects of the BIS, arguing that it may create a disproportionate administrative burden. For example, the Riga City Construction Board will require additional employees to manage the workload.

The introduction of the BIS is helping to speed up the delivery of many administrative services. Building permits, for example, can now be obtained much more quickly than previously.

According to the Chairman of the National Real Estate Developers Alliance (NNĪAA), this is a very positive development. It will help to create more favourable business conditions and will support greater international competitiveness. "The Doing Business index accurately identifies one of the causes of the backlog – the length of time it takes to obtain a building permit, property registration and engineering communications, and to connect"[30]. At the moment, "both Vilnius and Tallinn have already overtaken Riga in indicators such as modern office space or the availability of environmentally friendly housing"[31].

The BIS also helps making the Latvian construction process more transparent and efficient.

On the one hand, it offers a new way of managing work on construction sites. According to the Head of SJSC Latvian State Roads, whose company is one of the first users of the BIS, "the biggest advantage of this system is real-time operation and efficiency. The amount of documentation stored is reduced and nothing can be lost. An electronic construction journal puts everything in a timely fashion, with nothing to repair or improve. Everything is visible, transparent, reliable and in one place"[32]. Furthermore, the use of the BIS can prevent and avoid mistakes in design, planning and construction, such as in the case of the Zolitūde shopping centre, when the roof collapsed due to an error in its design in 2013[33].

On the other hand, the BIS will also help reduce the shadow economy in construction. Based on the latest estimates in 2017, the share of the shadow economy in the Latvian construction sector was 35.2%[34]. A major part of that share was attributed to undeclared 'envelope' wages (cash in hand) to avoid tax liabilities[35]. The BIS can potentially help to ensure greater transparency in working processes on construction sites, budgeting and working conditions for construction workers.

4.

Conclusion and recommendations

To date, the implementation of the BIS project and the results achieved have been very successful. Bearing in mind that the project is due for completion in 2020, the full digital processing of all documentation has already been launched (October 2019). However, the long-term outcomes, benefits and impact of the complete digitalisation of the construction process have yet to be fully realised. These will be the subject of further assessments in the years to come.

At present, one can conclude that the development and uptake of the BIS has the potential to deliver significant benefits to the construction industry in Latvia.

The BIS will significantly accelerate public administration processes that directly impact construction activity. By making it easier and quicker for construction companies to complete key administrative procedures, such as the building permit process, the BIS will help create a more favourable environment that should boost construction activity.

Other advantages of using the BIS will include significant efficiency gains for both public administrations managing the construction processes and construction companies using the system, as well as greater transparency across all relevant processes. Construction documentation can now, for example, be safely stored in one place. This will help construction projects to avoid documents' loss and ensure that all documentation and related processes are more accessible and transparent.

Reflecting on the whole process of the development of different digital services for the BIS, some improvements are necessary for similar projects in the future. Three recommendations are suggested:

* Regional Construction Boards should be more involved from the beginning of an initiative such

as the BIS project. This would help to incentivise higher uptake and use of the BIS;
* The length of the transition period should be extended from three to six months to ensure a smoother transition;
* Public consultations should be run prior to launching similar projects, to encourage input from smaller construction companies. These types of companies make up most of the users of a system such as the BIS. Their input and views are therefore essential to ensure that the system is fit for purpose.

Overall, the BIS is considered to be a '4-star good practice measure' on a scale of 1 (low) to 5 (high).

This score is based on the successful implementation of the project in advance of its expected completion date. The Latvian BIS is expected to deliver important and lasting improvements to construction processes, activity and competitiveness. The BIS has the potential to achieve a 5-star rating if the full benefits of the system are realised in the longer-term.

The BIS is rated as a '4-star transferable measure' on a scale of 1 (low) to 5 (high).

The basis of this score is similar to that given on 'good practice'. The success of implementation to date bodes well for its potential for replication in other countries that have not yet undertaken this type of modernisation. However, the true success (and therefore the potential international appeal) of the Latvian BIS will not be fully apparent until the system has been in use for a while.

Digitalisation helps increase competitiveness across all sectors. By comparison, the European construction sector digitalisation is behind other sectors, which makes this kind of measure particularly relevant and potentially interesting to replicate.

Endnotes

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