Interoperability between e-procurement systems and other government databases

Summary

Interoperability refers to the ability of multiple and disparate organisations' databases to freely and securely exchange and reuse data between their respective systems.[1] In the context of procurement, interoperability is useful for linking e-procurement platforms to other public administration databases that already store information that is necessary in the phases of procurement procedures. Interoperability also minimises the time spent managing procurement documents by connecting e-procurement systems with official publication systems and contract registries, as well as internal documents and financial management systems.

Linking e-procurement platforms to public registries allows the e-procurement system to auto-fill different sections of a tender document using data contained in these registers. Public administration databases of interest include the MS' criminal records database, tax registry, business registry and court registry. For instance, linking the e-submission platform to the business registry enables the business identifier to be automatically retrieved and entered into the e-submission form. Doing so saves time for economic operators and contracting authorities, and reduces the risk of data-entry errors.

Furthermore, interoperability provides a way to quickly check whether the economic operator meets certain requirements to participate in a certain bid and is eligible to be awarded a contract. Connecting the e-procurement platform to the criminal record and tax registries allows the authorities to verify that the economic operator has actually paid taxes and does not have a criminal record. In this case, interoperability acts as a tool for applying selection and exclusion criteria to an economic operator. In some cases, interoperability allows the detection and correction of errors in data already contained in other government databases, thereby ensuring better consistency of information.

Interoperability therefore represents a means by which administrations can reduce administrative burden on economic operators and contracting authorities by saving time and effort, avoiding potential data-entry errors, and ultimately increasing the efficiency of e-tendering procedures.

Input

Cost – €€€
- High set-up cost
- Medium operation cost

Time – Over 12 months
- Time required to set up interoperability is around two years
- Time required to link an additional database to an e-procurement environment, including testing, launching and other agreements, can be from to two weeks to a few months
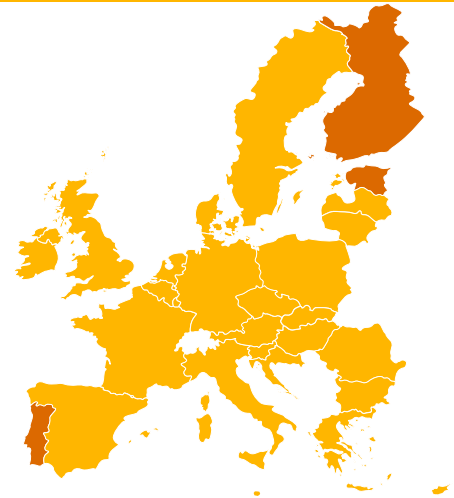
Complexity – High
- Background infrastructure set-up and availability of relevant e-services
- Constant revision and improvements
- Security servers
- Setting up a user-friendly interface

Good Practice Examples

- ✓ Estonia
- ✓ Portugal
- ✓ Finland

Impact

Reduce administrative burden

The very essence of interoperability is to bring efficiency to procurement procedures and save time. Thanks to the auto-fill functionality brought about by the interoperable system, less time needs to be spent filling out and submitting a procurement application. It also contributes to reducing the number of data-entry errors, ultimately reducing the number of appeals and associated paperwork.

Advance modernisation and digitisation

Interoperability facilitates the abandonment of paper procedures and certificates, and further fosters the development of government e-services and the uptake of full e-procurement procedures, thereby advancing the modernisation and digitisation of public procurement.

Strengthen anti-corruption efforts

Interoperability gives contracting authorities better ability to identify unqualified or excluded bidders, which is essential to ensure the integrity of the procurement system and to hold economic operators accountable for poor performance. This includes, for instance, automatically checking criminal records.

Key success factors and potential pitfalls

Consider EU initiatives when defining the interoperability vision

Introducing interoperability among various government systems is a process that needs to be well thought-out and planned in advance in order to make sure it fits the MS' context. Therefore, developing the right legal and institutional framework and a strategy for designing and implementing interoperability that is tailored to the MS' needs is a must. To make that process easier and to ensure that all the elements required to successfully become interoperable are not left aside, the European Commission has developed an European Interoperability Framework,[2] which presents a set of guidelines and recommendations to be adopted by MS to promote interoperability between various information systems, from national to local level.

Take your time

Becoming interoperable is not something that can be done quickly, and should be seen as a broad government reform. Most MS that have implemented it have proven that it is an incremental process that requires small steps in drafting or adjusting the legislation and policy set-up, as well as developing the proper and secure IT infrastructure. In addition, interoperability is a process that can always be improved, as even the most experienced MS are continuously setting new targets for themselves for the coming years.

Overcome data-sharing barriers

An efficient interoperable e-procurement system means firstly that other government institutions agree to share their data, and secondly that these institutions use the same data standards in order for this data to be successfully exchanged and reused.

Related Good Practices

- Public contract registry
- Transparency platforms
- National database of public procurement audit errors and irregularities

Case Studies (1)

Estonia – Interoperability of the e-procurement environment with the state portal*

Estonia is widely considered one of the world's most advanced and experienced countries regarding digital society developments. Indeed, Estonia fully took advantage of the opportunities offered by the rapid rise of the Internet and created a 100% e-Government offering a range of e-services aimed at facilitating the life and work of Estonian citizens and businesses. 99% of state services are now provided online.[3]

The Estonian conceptual model of e-services was designed in 1998 and accomplished in 2001 thanks to X-road, the data-exchange layer for information systems. X-road is a technical and organisational environment that enables secure data exchange between state databases, on the one hand, and institutions and individuals, on the other hand. Moreover, X-road organises individuals' access to the data that is stored and processed in state databases.[4] The use of X-road has been made mandatory by the Estonian Government through the Public Information Acts[5] and the Government's Data Exchange Layer of Information Systems resolution.[6] In addition, X-Road helped design the conceptual model of the European Interoperability Framework.[7]

Since 2007, Estonia's e-procurement environment[8] has also been interoperable via X-road. It is primarily linked to the national criminal records database, the national business register, the national tax registry, the register of economic activities and Tallinn local tax registry.[9] The e-procurement environment offers an innovative workspace for contracting authorities and economic operators, as it consists of both a procurement information portal and an e-procurement platform, enabling the full e-procurement cycle to run within the same portal. The bidder's registration number can be used to make inquiries to other state databases, such as checking a bidder's tax payments, operating licences, status, authorised persons, annual accounts or criminal record.

Among the main benefits brought by interoperability in Estonia is the promotion of the '*once and once-only*' principle, lower costs for contracting authorities and suppliers, 100% uptake of e-procurement practice for e-notification, e-access and e-submission, and increased transparency and traceability. The Estonian Government is planning to add new links allowing users, for instance, to check the average wages paid in a certain field of activity in order to exclude bids that are abnormally low. Furthermore, it is planned that a dynamic purchasing system and an e-catalogue will be established by 2018.

Portugal – Interoperability of BASE portal with e-procurement platforms*

E-procurement in Portugal is highly developed and has a high level of adoption thanks to concerted efforts since 2008 by the Portuguese Government to develop a comprehensive national e-procurement infrastructure. The 2008 Portuguese Public Contracts Code (PCC) established the framework for all procurements to be conducted using electronic means.

E-procurement in Portugal diverges from its EU peers because its system relies exclusively on privately run e-procurement platforms, which compete against each other to offer e-procurement services to contracting authorities. Currently, there are five e-procurement platforms certified by the National Security Office (GNS). These platforms are linked to a central public contracts registry portal called BASE.[10]

The BASE contract registry was launched on 30 July 2008 and is managed by the Institute of Public Markets, Real Estate and Construction (IMPIC). It acts as a single point of access for public procurements, and centralises and records information on procurement procedures carried out via the different e-procurement platforms and on the performance of contracts. As BASE is linked to each licensed e-procurement platform, it receives information from the pre-award and post-award phases of the contracts. The information collected and published on the portal therefore includes calls for tenders, tender applications, receipts and evaluations of tenders, and information on the performance of contracts.

The main benefits of the interoperability between the BASE portal and the five e-procurement platforms include:

- More effective, efficient and transparent procedures;
- Access to any procedure, at any time, and from anywhere;
- A record of purchasing behaviour, which makes it easy to predict future expenses and costs; and
- Streamlined public administration procedures.

Portugal is planning to increase interoperability amongst its public administration information systems by creating a national platform of public suppliers. This platform will be developed by IMPIC, and will use the interoperability available at the Agency for Modernisation of Administration (AMA) and other public services. It will serve to record more supplier attributes, as it will be linked to the tax authority, social security and justice registers. Moreover, supplier information will be further available in a central registry of procurement documents, thus respecting the 'once and once-only principle.' Expected benefits from increased interoperability in Portugal include the auto-fill functionality of procurement applications via e-procurement platforms, verifying bidders' information, and compliance checks to ensure that winners meet eligibility requirements.

*Feasibility study on implementing interoperability between e-procurement systems and other government databases - available on the e-library of public procurement good practices.

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[1] Estonian Ministry of Economic Affairs and Communications, "Interoperability of the State Information System" (2001)
[2] The New European Interoperability Framework will be published in March 2017, see: https://ec.europa.eu/isa2/news/new-european-interoperability-framework-coming-soon_en
[3] E-Governance Academy, "e-Estonia: e-Governance in Practice guide" (2016) see: http://ega.ee/publication/e-estonia-e-governance-in-practice/
[4] Estonian Ministry of Economic Affairs and Communications, "Interoperability of the State Information System" (2001)
[5] "Public Information Act" (2000), see: https://www.riigiteataja.ee/akt/13256729
[6] "Data Communication Layer for information systems" (2008), see: https://www.riigiteataja.ee/akt/12956835
[7] Source: Research and Consultation Company Gartner report "Preparation for Update European Interoperability Framework 2.0 – Final Report", see: http://ec.europa.eu/idabc/servlets/Doc3665.pdf?id=31505
[8] See: https://riigihanked.riik.ee/lr1/web/guest
[9] Interview with Estonia, 2016
[10] See: http://www.base.gov.pt/Base/en/ElectronicPlatforms/LicensedElectronicPlatforms