Europeanization the Digital Way: Trans-European IT Systems—The Case of EESSI

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Abstract This article explores the role of Information Technology (IT) in the Europeanization process, focusing on Trans-European IT systems. Despite the growing significance of IT in national policy implementation across Europe, the use of IT in the European Union (EU) remains relatively unexplored. Trans-European IT projects, such as the Electronic Exchange Social Security Information (EESSI), exemplify a unique form of Europeanization. This study delves into the complexities of the EESSI-case, shedding light on the challenges and outcomes of implementing a cross-border IT system with extensive functionalities. As a result, the analysis suggests that the Commission's perspective leaned toward perceiving EESSI primarily as an IT solution to enforce EU policy, potentially overshadowing its original purpose as a tool for facilitating necessary and useful data exchange aligned with domestic business practices at the Member State level.

Introduction

Surprisingly quite little literature on Europeanization is to be found on the contribution of Information Technology (IT). Where IT has become a major important element in policy implementation by national governments all around Europe, the way IT is used in the European Union (EU) to facilitate policy implementation is rather a black box. Nonetheless, also at the EU-level substantial and complex IT projects are executed. Some of these IT systems are somehow visible to the public, e.g., the Schengen Information System that is used in border-control shows its face when people enter or leave European airports. Others stay under "the radar," especially those systems that facilitate information exchange between the different Member States and do not involve interaction with European citizens. These so-called

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Trans-European IT systems[1] connect the back-offices of national governments in the EU and are in use for several purposes, like carrying out custom procedures, processing traffic fines, or validating driver's licenses.

Trans-European IT projects[2] can be seen as a way of Europeanization (Featherstone, 2003; Radaelli, 2003): the idea embraced at the EU level to develop an IT system facilitating data exchange between Member States for specific policy purposes, which comes to life through an IT project that is organized at the EU level and executed with full participation of the Member States, based upon an EU-driven design, technology, and strategy. In the end, the project must lead to implementation and use of the IT systems by the Member States and (hopefully) prove to suit its purpose.[3]

The Europeanization by Trans-European IT systems has some specific characteristics, as we would like to demonstrate here further:

- First, Europeanization stresses the importance of change, since it involves the domestic assimilation of EU policy and politics. This change has special significance in the light of IT, since the system designed and developed at the EU level should be in alignment with the "business" in the Member States. This is one of the important lessons of Information Management (IM) research of the last decades, encapsulated under the term "Business and IT alignment" (Henderson & Venkatraman, 1993). The "business" is a part of the domestic way of doing things, performed by numerous national or subnational institutions that have to implement and use the Trans-European IT system. The adoption of the system should be in alignment with the way of working of the Member States and more specifically the processes, organization, planning and IT frameworks of the institutions involved.
- Second, Europeanization involves different actors (organizations or individuals) participating in or influenced by the EU policy process. When it comes to organizations, the reference to the concept of Multi-Level Governance (MLG) is important. This concept refers to the networked governance relations between supranational, national, and subnational governments, and other non-state actors (Bache, 2012; Peters & Pierre, 2001). The MLG concept is useful in the context

[1] We use this term because it is also used by the Commission. However, an even better term in our understanding would be EU trans-border IT systems. Source: https://joinup.ec.europa.eu/sites/default/files/inline-files/EU35%20TES%20Trans-European%20Systems%20Study.pdf.

[2] In our definition the IT-system is about the designed technology artifacts and all the procedures for use, maintenance, etc. The IT project is about realizing and implementing the system, according to goals and a plan. Source: https://wikidiff.com/project/system.

[3] In the definition of Radaelli (2003, p. 30) "processes of (a) construction (b) diffusion and (c) institutionalization of formal and informal rules, procedures, policy paradigms, styles, 'ways of doing things' and shared beliefs and norms which are first defined and consolidated in the making of EU public policy and politics and then incorporated in the logic of domestic discourse, identities, political structures and public policies."

of Trans-European IT systems, since not only the European Commission[4] and national ministries are involved in these projects, but also other government and non-government actors, like IT providers. Often overlooked but of special importance regarding IT systems are executive government agencies. Since the early 1990s, with the introduction of managerialism in public sector, reforms have been taking place in public sector administration (Pollitt et al., 2007). One particular kind of reform included the restructuring of bureaucracies, resulting in the establishment of autonomous agencies. Due to their executive mission, these agencies are by definition IT intensive organizations. They are highly dependent on the use of IT in their operation and invest heavily in measures to guarantee continuity.

- Third, Europeanization is a two-way process: Member States upload their preferences to Brussels and then download them from different policy menus. When it comes to an IT system, the whole process of uploading business requirements and downloading an IT system has to meet specific conventions in terms of governance, strategy, and methodology. A Trans-European IT system demands at the EU level a business logic that fits all the organizations that have to connect to the system. Downloading, or implementing a Trans-European IT system for those organizations is most often not a stand-alone event but it requires an integration with back-office systems, adjustment of processes and instructions, and sometimes even organizational restructuring.
- Fourth, Europeanization can lead to different outcomes at the national level. Best case it leads to absorption or even transformation at the national level, worst case to inertia or retrenchment. With implementing IT, individual Member States with a critical attitude toward the system in the end are more or less forced to implement the system after the majority of other Member States have done this. Otherwise, they "disconnect" or "isolate" themselves from this part of the EU. So, inertia toward an IT system, in the long run, is not sustainable. This is all the more interesting, since the system has to be implemented by both digitally advanced and less-advanced countries. The latter often express hardly any opposition against the introduction of the system, since they usually gain by its new functionality or operate from a green field situation. The group of advanced countries have to integrate the new system in their existing IT architectures, experiencing all kind of problems, and often see the new system as less-advanced, according to their own standards.
- Fifth, Europeanization by a cross-border IT system is more than only EU-anization. It is not only about uploading business logic preferences and downloading the EU system, but it is also about new connections between Member States and their organizations. Because of the digital exchange of information,

[4] A Trans-European IT system does not necessarily be coordinated and managed by the Commission. There are also examples of Trans-European IT systems set up and managed by the Member States. An example is EUCARIS, the European CAR and driving license Information System. Source: https://joinup.ec.europa.eu/collection/egovernment/document/eucaris-european-car-and-driving-licence-information-system-eucaris-0.

the organizations involved need to have a cross-border understanding of how to interpret the system, what should be done in case of failures or exceptions, etc. This way the digital connection is often followed by and embedded in new physical or other connections between Member States.

In perceiving Trans-European IT Systems as a—special—way of Europeanization, we would like to discuss the case of EESSI: Electronic Exchange Social Security Information. EESSI is considered a complex Trans-European IT system, since it covers a wide range of functionalities, using technology partially managed by the Commission, partially by the Member States (Hamulák, 2018). In addition, the implementation of EESSI was not a walk in the park since the system went live 7 years later than originally planned and has been subject to a lot of criticism, especially from the side of more digitally advanced Member States. Although the EESSI-case is quite unique in its sort, it offers a rich starting point for reflection.

This case study is based on information gathered as participant in the EESSI-project. As national EESSI-program coordinator for the Netherlands, we engaged in meetings and discussion both at the EU and the Dutch national level during the period of 2018–2022. Our information is based on direct observations, EESSI-project documentation and conversations held with other participants in the project, including (former) representatives of the European Commission, other Member States, and the Dutch government. The writing of this chapter is to be considered as a reflection-on-action (Schön, 1983).[5]

From our position as a practitioner operating from a national perspective, it will not be a surprise that we take a bottom-up perspective in our reflection on EESSI. In doing so, we will reflect on both the strategy and the structure of the project.[6]

In the remainder of this chapter we present the EESSI-case study, our reflections, and some conclusions to the end.

[5] During this period, a log book was kept with notes and reflections on the program.

[6] With "strategy" we refer to the determination of long-term goals and objectives, the adoption of courses of action and associated allocation of resources required to achieve goals. With "structure"" we refer to the design of authorities and responsibilities, the way tasks are performed and information flows between actors involved. Source: https://www.researchgate.net/publication/313444758_THE_CONNECTION_BETWEEN_STRATEGY_AND_STRUCTURE/link/589b017392851c8bb68443e1/download.

EESSI

General

The free movement of persons is a fundamental right in Europe. Citizens of the EU and the European Free Trade Association (EFTA) countries can travel freely within the EU/EFTA area, take up employment, and establish residence in other Member States.

EESSI is legally mandated by the European Commission (EC), based on two regulations: Article 78(1) of Regulation (EC) 883/2004 provides that "Member States shall progressively use new technologies for the exchange, access and processing of the data required to apply this Regulation and the Implementing Regulation. The European Commission shall lend its support to activities of common interest as soon as the Member States have established such data-processing services. Furthermore, under Article 4 of Regulation (EC) 987/2009, the transmission of data between the institutions or the liaison bodies shall be carried out by electronic means, while the Administrative Commission (*the steering committee with representatives from the Member States—author—)* shall lay down the detailed arrangements for the exchange of documents and structured electronic documents" (EDPS, 2023).

The innocent reader may conclude from this legal mandate that the Member States were in the EESSI driver seat and that the Commission had a more or less facilitating and supporting role. As we will discuss later, nothing could be further from the truth. In practice it turned out the Commission held both hands firmly around the steering wheel, and the Member States had to follow the route that was outlined by the Commission.

The EESSI-system was designed to facilitate the electronic exchange of social security data between EU/EFTA countries,[7] enabling faster and more efficient processing of citizens' applications for benefits, pensions, and allowances. Other advantages include more accurate data exchange between national authorities and the secure handling of personal data. Additionally, EESSI is intended to serve as a foundation for improved statistical information on the implementation of social schemes across Europe (ILO, 2010).

The EESSI-system has a wide scope in functionality, since it covers all areas of social security coordination, such as accidents at work and occupational disease benefits, family benefits, pension benefits, recovery of benefits and contributions, sickness and healthcare benefits, unemployment benefits, etc. In terms of use, EESSI also has a wide scope since the system has to be implemented across 32 different countries,[8] involving a total of 10,000–15,000 institutions[9] and

[7] In this chapter all the countries participating in EESSI will be referred to as "Member States".

[8] Although the Brexit, the UK keeps participating in EESSI.

[9] These 10,000–15,000 institutions participate in the EESSI data exchange. A number of approximately 5000–6000 institutions are actually connected to the EESSI infrastructure, including vari-

100,000–200,000 clerks, who are the actual users of the system. EESSI is not accessible for EU citizens. It is purely designed for back-office data exchange.

Architecture

In terms of technology, EESSI comprises international (EU) and national (Member States) components. This mixture of central and decentral components working together needs to enable flawless and secure data exchange among all connected institutions.

The high-level IT architecture of EESSI can be outlined as follows (ELRC Conference, 2016) (Fig. 1).

In summary, the exchange of information takes place as follows: an institution sends a request for information to an Access Point (AP) within its own country through a National Application housed within the institution. This information is then routed from this AP through the Central Service Node to an AP in another country. This routing occurs via the sTesta network,[10] a hub and spoke topology, which connects the governments of Member States and is managed by the European Commission. From the latter AP, the request is delivered via the National Application in use by the institution to which it is addressed.

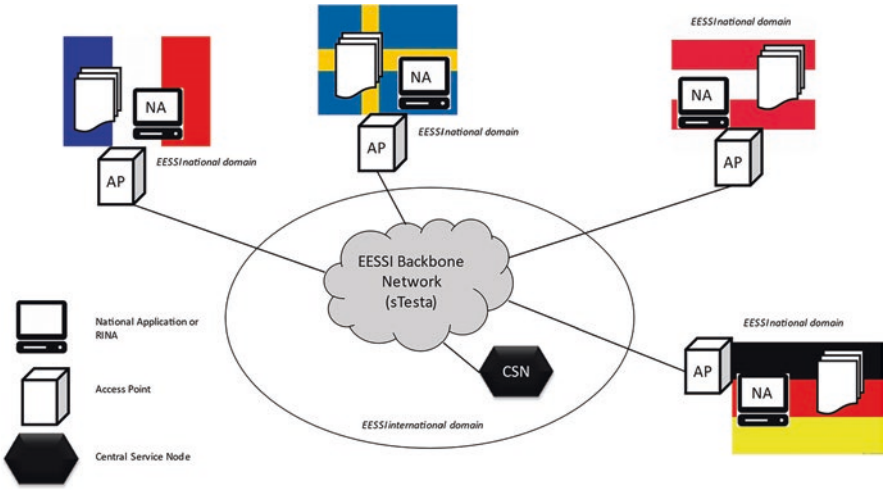

Fig. 1 High-level EESSI-architecture

ous institutes that act as liaison bodies.

[10] sTesta stands for secure Trans-European Services for Telematics between Administrations. These network services are managed by the European Commission. It is since more than 20 years a central infrastructure, separate from the Internet, used in many sensitive cross-border EU information services. Source : https://ec.europa.eu/isa2/solutions/testa_en/.

Many Member States and institutions use and manage the so-called RINA-software[11] as a National Application. This software is developed by the Commission but in a later stage of the project handed over to the Member States, a decision that stirred quite some discussion among the Member States. Some Member States, however, decided not to use RINA, but develop and use their own National Application. These National Applications had to go through a procedure of Conformance Testing before being allowed to connect to the central EESSI-system.

Next to this IT architecture it is important to outline the business architecture, consisting of 99 workflows, so-called business use case (BUCs). These BUCs can be processed through 300 structured electronic documents (SEDs) in 24 different languages. This business model mostly covers all the requirements laid down in the EC Regulations for the Coordination of the European Social Security. Although this business model is a crucial foundation in realizing the business needs of Member States organizations, the Commission has the final word when it comes to changes or adjustments in this model.

In this way the business model of EESSI was primarily based on a fulfillment of legal requirements, not necessarily the business logic and demands of the competent institutions at the national level. For this reason, several Member States considered this business model heavily "oversized," in the sense that a lot of BUCs had no relevance to them.[12] However, according to the EC implementation rules for EESSI, every Member State had to implement all the BUCs and the steps involved.

Governance

The EESSI governance has both an EU and a national dimension. At the EU dimension the European Commission and representatives of the Member States worked together in developing the EESSI-system and guiding its implementation. Directorate-General for Employment (DG Employment) had a central position, since it combined three crucial roles: Project Owner, Solution Provider, and Project Manager.

DG Employment engaged with Member States in the Administrative Commission (AC) on a strategic and steering level, and the Technical Commission (TC) on a directing level. The TC served as the "core" of the EESSI-program, where sometimes intense and heated discussions on the EESSI-system and its implementation took place between the Commission and Member States. The TC included representatives from ministries, implementing institutions, or national EESSI-programs of the Member States. The TC provided conclusions and recommendations for approval to the Administrative Commission (AC). Since DG Employment fulfilled

[11] RINA stands for Reference Implementation National Application.

[12] Estimates from some Member States were that 20% of the BUCs was sufficient to handle 90% of the EESSI data exchange.

the role of secretariat in both the TC and the AC, advice from the TC addressed to the AC was rarely criticized or rejected.

The AC involved policy representatives from the national ministries and focused on steering the main lines of the EESSI-program. EESSI was just one part of the AC's agenda, since its scope was the promotion of coordination in the field of social security in general. Occasionally, AC Working Parties were organized by the AC to delve further into the EESSI-program.

In addition to the AC and the TC, there were also occasionally high-level meetings, where the DG of DG Employment invited his counterparts of the national ministries to discuss EESSI matters, e.g., the handover of the RINA-software from the Commission to the Member States.

At the political level there was the EPSCO. The EPSCO Council brings together ministers responsible for Employment, Social Affairs, Health, and Consumer Policy from EU Member States. The status and progress of EESSI was a recurring topic on the EPSCO agenda. Although ministers occasionally made critical remarks about EESSI in EPSCO, this did not lead to extensive debates or additional decision-making. Also, from the EMPL Committee of the European Parliament no interventions took place on the EESSI implementation, although questions were directed to the Commission, like why such and such country was lagging behind in implementation and what measures could be taken to speed up the implementation?

The Member States were also formally represented by an Executive Board (EB). Contrary to its name, this body, composed of experienced participants from the Member States, also had little influence on the program's content and progress. In each TC-meeting, the EB was given the opportunity to express its views, which were then forwarded by the Chairmanship to DG Employment with thanks. DG Employment typically acknowledged these views but in general took little further action.

Next to the Executive Board, several other gremia were part of the EESSI-project, such as a Change Advisory Board, Security Expert Forum, Ad Hoc Groups (for business analysis), etc.

An overview of the EESSI governance in 2022 looked like this (Fig. 2):

At the national level, each country had its own national implementation program for EESSI. The challenge was to connect 32 different countries and 10,000–15,000 institutes in these countries, varying from small regional institutes run by a couple of employees to large national operating institutes with their own IT departments and IT strategies. Moreover, private institutes had to connect to EESSI.[13]

Some countries adopted a more centralized model in their national implementation program, working from a common approach and/or technical structure to connect implementing institutions. This approach seemed to be preferred when there were many small institutions to be connected or when a country was organized strongly regionally. Austria was an example of such approach.

[13] For example, in the Netherlands 50 private health insurance companies had to connect to EESSI. This was done by a liaison body connecting to the EESSI-architecture, and routing the messages to the private institutes.

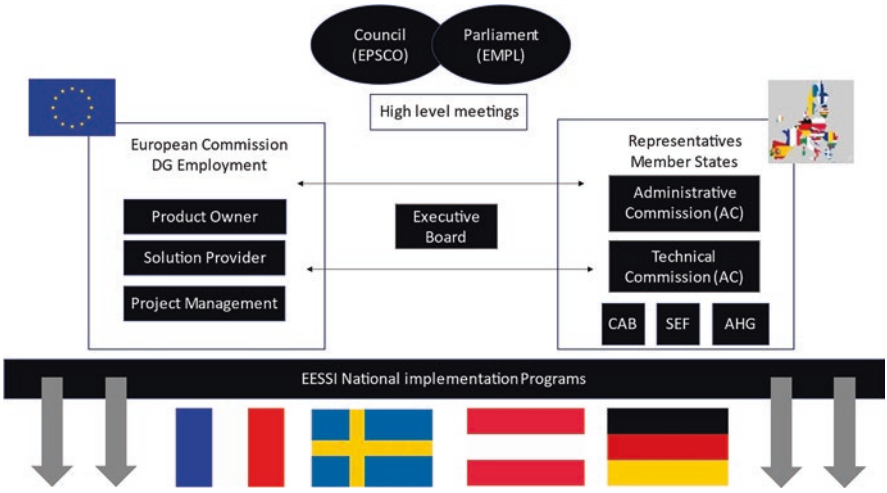

Fig. 2 EESSI Governance

On the other hand, some countries followed a more decentralized model, allowing implementing institutions relative freedom in their approach and/or technical structure for EESSI implementation. The Netherlands was an example of this latter approach, where there were four large national operating government agencies involved in the implementation of EESSI.

To facilitate the national implementation in an organizational way, Member States also had to appoint officials in mandatory functions, the so-called Single Point of Contact (SPOCs). These officials were national liaison for the EU on several topics.[14]

The Road to EESSI

The road to going live with the EESSI-system took considerably more time than initially anticipated. Below is an overview of the timeline of the project (Fig. 3):

Initially, there was a significant degree of an optimism regarding the implementation of the EESSI-system. The first implementation date was set for 2012, 2 years after the Regulations of 2010, which formed the basis for EESSI, came into force. The preparations began in 2007 with a feasibility study that yielded the system's architecture as a crucial result. An external vendor was awarded a contract for the development of the required software. DG Informatics developed the necessary infrastructure via the sTesta network.

[14] Governments had to install an EESSI Spoc (general national contact), IR Spoc (Institutional Repository), AP (Spoc) (Access Point), Security Spoc and Trainings Spoc.

2007-2008	2009-2010	2011-2012	2013-2014	2014-2017	2017-2019	2020-2022	2023-next
Preparation for the initial version of EESSI (architecture)	Development of the first version of EESSI	First attempt to connect Member States (unsuccessful)	Reflection period	SAFE pilot, resulting in Production Ready Release	National Implementation Programs in 32 Member States, (live July 2019)	Rina Handover	Finalizing and continuous improvement

Fig. 3 The road to EESSI

The plan was to install the system (network and software) in 2009–2010 and connect the Member States in the period of 2011–2012. However, this attempt failed. As one representative from a Dutch institute recalled, "the screen just went black."

2013–2014 was a reflection period. Furthermore, the entire business model was developed by defining all business use cases (BUCs) and structured electronic documents (SEDs) for all the domains of social security. Furthermore, a new external IT supplier was contracted.

In the subsequent years, efforts were made to identify improvements and alternative approaches. The Social Agencies for Europe (SAFE) program played a significant role in this regard, running from 2014 until 2017. Under Italian leadership, 13 countries worked on testing and further improving the EESSI-system. The result was acclaimed by the Commission as a "Production Ready Release."

A critical element of this Release was the Reference Implementation National Application (RINA), originally intended as an example for countries to develop their own National Applications and to handle low volumes of SEDs. Gradually, this RINA came to be seen by many countries as a production system, as it meant they did not have to develop their own National Application. This also suited the Commission, as Member States had fewer arguments to resist the implementation of EESSI. Later it became apparent that there was a (costly) drawback to this line of thinking.

Starting from 2017, the implementation could begin in the Member States, despite objections from some Member States that the release was not as production ready as expected. The criticism mainly targeted the decentralized RINA application, which was deemed not fit-for-purpose. These objections were disregarded, and in the period from 2017 to 2019, national efforts had to start by the Member States to implement the EESSI-system.

The target for all Member States was to be capable of handling all BUCs electronically by third July 2019, effectively ending paper-based exchanges. Being "EESSI-ready" for a particular BUC meant that the Member State concerned could both send and receive all messages in that BUC to and from other Member States. To emphasize the transition from paper to electronic, the term "transitional phase"

was used for the period 2017–2019, possibly helping to forget the earlier failed implementation attempt.

Consequently, national programs were launched in all Member States from 2017 to implement EESSI. Under these national programs, implementing institutions had to develop implementation strategies for EESSI. To facilitate these implementations, Member States could use funds from the Connecting Europe Facility program.[15]

By 3rd July 2019, only one (small) Member State had successfully implemented EESSI in its entirety. The other countries were connected to the system, but there was significant variation in the level of EESSI readiness among them. Even within countries, there could be substantial differences in EESSI readiness among institutions. For instance, in the Netherlands, some institutions prioritized EESSI implementation due to a strong business case in their subdomain. Others however were more hesitant, as the business case was less compelling for them, or since they had little confidence in the quality of the EESSI-system, in particular the RINA.

Although most countries were not yet ready with the EESSI implementation, progress had to continue. Therefore, DG Employment introduced an executive decision:[16] if 80% of the Member States were live with a specific BUC, the remaining countries had 6 months to follow suit. This decision determined the subsequent implementation schedule.[17]

In 2020, DG Employment made a significant announcement: it would cease managing the RINA by the end of 2021, primarily due to the high costs involved for the Commission. This decision surprised Member States for several reasons. First, because it was taken unilaterally without approval or consultation with the Member States. Second, the RINA Handover would inevitably result in higher costs for Member States, being of manifold of the cost the Commission was spending on RINA. Third, it would make the EESSI-system more complex in operation and maintenance, and the timing of the proposal—amidst the critical implementation phase—was rather unfortunate.

The RINA Handover also introduced another complicating factor: finding a private entity willing to manage the RINA on behalf of the interested countries and institutions. This required additional time and effort. This was finally realized by a Joint Procurement Agreement (JPA), with a majority of the countries participating. The JPA also resulted in a successful selection of an (Italian) private party.

[15] The Connecting Europe Facility (CEF) is a key EU funding instrument to promote growth, jobs, and competitiveness through targeted infrastructure investment at European level. It supports the development of high performing, sustainable and efficiently interconnected trans-European networks in the fields of transport, energy, and digital services. Source: https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/connecting-europe-facility_en.

[16] This was the so-called EESSI E7 Executive Decision. Source: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020D0306(01).

[17] The same decision stated also that all BUCs had to be implemented. The hope of some countries to be able to avoid implementing BUCs irrelevant to their context turned out to be idle.

With this last hurdle taken, Member States can finalize their national implementation and work on future improvement of the EESSI-system. The coming years it remains to be seen whether EESSI will indeed fulfill its promise of facilitating faster, more efficient, and error-free data exchange between institutions. Additionally, it will need to demonstrate its manageability and future viability, along with all its various components. In summary, the final verdict on EESSI is yet to be rendered.

Reflection on the EESSI-Case

We have not said too much that EESSI presents a rich basis for reflection. EESSI shows a particular way in which Europeanization can take place, not necessarily in the best possible way and with the best possible outcomes. Reflecting on EESSI is an exercise that can be done from several different angles and perspectives. From our position in the EESSI-project, as a national program coordinator, it feels best to stick to a bottom-up perspective, addressing the issues that were in particular relevant for Member States and their executive agencies. This is also in line with the call from scholars on Europeanization, who encourage a bottom-up or inside-out-approach (Radaelli, 2003).

In addition, a top-down perspective is relevant, to confront the bottom-up perspective, because we are sure that from the standpoint of the EC there will be other, complementary but possibly opposing positions on the EESSI-case. Also, we would like to repeat that our observations are made from the perspective of the Netherlands, a digitally advanced country that in a political sense supported the EU policies on social security coordination and welcomed the use of IT to modernize the cross-border data exchange. However, in the Netherlands there is also critical attitude toward IT projects, caused by various failures in the recent past and the political attention this has brought with it.

As said earlier, we will reflect on the strategy and the structure of EESSI.

EESSI Strategy

The design of the EESSI-system turned out to be a digital representation of legal requirements written down in two EU regulations. Translating these legal requirements to software code resulted in a one-size-fits-all system, which was quite "oversized," meaning Member States did not need all the BUCs to fulfill their business requirements. For agencies at the domestic level this resulted in mandatory efforts to implement a system which had partially no value to them, but nevertheless forced them to invest. Even worse, the quality of the RINA-software was a constant reason for discussion between the Commission and the Member States and frustrated the implementation to a certain degree. Discussion involved many IT topics, like functionality, security, performance, maintenance, etc., but also covered the IT strategy

of the Commission. Why was there no better testing of software before it was released to the Member States? Why were complaints of the Member States not taken into consideration, etc.?

One wonders if the representatives of the Policy and the IT unit of DG Employment were up for the task to implement a system of this magnitude and complexity. Policy implementation by the Commission is most times of a normative—as opposed to operational—nature, enabling the uniform implementation of legislative acts through the adoption of implementing rules (Szapiro, 2013). This underestimation of the implementation effort at hand may be due to the "French DNA"[18] of the EC which includes a number of centralist traits. From this perspective it is tempting to conclude that EESSI was seen by the Commission more as an IT solution to enforce an EU policy, rather than an IT system that needed to be aligned with the business at the domestic level. Although the origins of the system undoubtedly were rooted in good and sound intentions, namely to replace paper forms and modernize data exchange, in the course of time the system became an aim in itself, and not an instrument to facilitate exchange which is necessary and useful for the Member States.

Regarding the substitution of inefficient paper exchange by digital means, and the strategy used in the implementation of EESSI, one may also wonder if the actors involved at the time of the start of the project did not suffer from "a car is a faster horse" reasoning. This relates to the "myth of substitution",[19] stating that when a new technology emerges, the widespread hope is that it will perfectly substitute the technologies that are currently in use. However, this rarely turns out to be true, "because a socio-technological transition is taking place, including a change in a cluster of aligned elements: artefacts, knowledge, user practices, cultural meaning, infrastructure, maintenance and supply networks" (Geels, 2005). All these elements need to be addressed when it comes to implementation, and this requires a proper strategy. One can wonder if the EESSI strategy at the EU level was sophisticated and encompassing enough to address all these issues. In a sense the focus was very much on technology, and not so much on the sociology of the system.

Structure of EESSI

Regarding the structure of EESSI, one central element for discussion is the pivotal role of the EC. The role of the EC fits in a rather centralistic picture we already painted and encapsulates a troublesome combination of responsibilities since DG

[18] The European Commission derives from one of the five key institutions created in the supranational European Community system, following the proposal of Robert Schuman, French Foreign Minister, on 9 May 1950. Source: https://en.wikipedia.org/wiki/European_Commission.

[19] The Substitution Myth is the term created by cognitive scientists David Woods and Eric Hollnagel to describe the pervasive (and wrong) assumption that a robot can seamlessly substitute for a human. Source: https://www.roboticsthroughsciencefiction.com/substitution-myth.

Employment was both project owner, project manager, and IT provider for EESSI. This could mean, for example, that flaws in software quality were ignored to avoid delays in the project, as happened during the fit-for-purpose discussion. One can argue that EU policy implementation, especially when it involves implementation of IT systems, should be much more subject of scrutiny. This is a lesson many governments in Europe have learned the hard way, because IT projects often present persistent challenges. They are not on-time, not on-budget, and fail to deliver on their initial promise. As a result, national governments, sometimes prompted by parliamentary inquiries, have stepped up their game in IT governance, introducing national CIO's, roadmaps, architectures, and risk management methodologies. One wonders if this also might not be helpful for the EC.

By adopting a one-size-fits-all implementation strategy, the Commission put more emphasis on legislative compliance than on meeting business needs. In an MLG setting this is something that should be given serious thought, in particular by the EC, as the hierarchically highest authority in a legal constitutional sense in this case. We agree with Milio (2010) that MLG cannot only be perceived as a model for EU policy implementation in a descriptive way, but also in a prescriptive way. This means successful policy implementation requires the input of all the relevant players involved. In the case of EESSI specific attention should be given to the interest of large executive agencies, since they have a lot to win and to lose with the implementation of such a Trans-European IT System. It is not enough for them to be heard, but they also should be listened to. This means formal representation of these agencies needs to be organized.

Last but not least, we want to address an institutional aspect of the EESSI-structure. The EU wide adage, that the EU is about the "what" in the policy process, and the Member States about the "how," seems to be subject to inflation when we look at the introduction of EESSI. With a decisive say in the business logic of EESSI, plus the RINA-software until this stage, it is difficult for the EC to maintain the standpoint that it does not interfere with the organization and operation of national administrations. Also, in this perspective it seems necessary to reexamine the formal governance structure of Trans-European IT Systems, since the administrative sovereignty of the Member States is at stake here.

Conclusions

With the presentation of the EESSI-case we have illustrated the IT dimension of Europeanization. The EESSI-case also shows that, from a bottom-up perspective, there is room for improvement in the way IT is used in the implementation of EU policies. In particular the role of the EC should be reconsidered, next to the governance structure of these kind of programs, where the voice of the Member States and their agencies should be heard much more.

This said, we would like to address the concept of Europeanization in a normative way. Not only is Europeanization a process in which "ways of doing things" at

the domestic level become more European or EU-like. It is also a process that needs to meet certain requirements and follow specific conventions, when it is done in the digital way. Since Europeanization will increasingly be taking place with the use of IT the future years, it is time more scholars turn their attention to this subject.

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