NETWORK
FOR
INTEGRITY

Developing digital tools to promote transparency in public life

December 2020

Foreword

On 9 December 2016, 14 national public institutions gathered in Paris on the International anticorruption day and created the Network for Integrity. While all these institutions operate in different national contexts and use a variety of tools to fulfil their mission, they agreed to join efforts to develop an international culture of integrity, transparency and ethics in public life.

A lot has changed for member institutions over the last four years and the year 2020 has forced organisations across the world to reinvent their practices, assess progress made and prepare for an uncertain future. The ongoing global sanitary crisis has forced institutions to apply new work methods and has favoured the use of new technologies.

This publication on digital tools and open data to promote transparency in pubic life is an inspiring example of what international cooperation has to offer : by collecting best practices and identifying common challenges, this report shows how members of the Network have managed to harness the ever-growing power of technology to promote a culture of integrity in their countries.

As the High Authority is handing over the Presidency of the Network to the Romanian National Integrity Agency (ANI), I am proud to see that we can help each other in fostering integrity. I hope that this publication will provide readers with the information and insights they need to understand how digital tools and open data are shaping the way institutions enforce integrity frameworks across the world.

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EXECUTIVE SUMMARY

The Network for Integrity was launched in December 2016 and brings together 14 institutions from around the world engaged in promoting integrity, transparency, and ethics of public officials. This publication contributes to the exchange of information and best practices among its members. It highlights instruments and strategies that have been designed and implemented by members with regard to collection, management, verification and publication of data related to public officials' integrity and to lobbying registers. This work confirms that there is no universal generic software that can be used by countries to manage financial disclosure schemes, tools to regulate lobbying or public decision-making processes.

The first section of the report looks at the types of tools that countries use to collect information about public integrity, focusing on members' experiences in transitioning from a paper to an online system. As illustrated in Côte d'Ivoire and Senegal, paper forms remain a widespread means to collect data on public officials' assets and interests. This section documents the potential resistances to digital declaration systems, as well as the increasing trend in creating secured online applications or platforms to directly collect data. Guidelines published by international organizations provide elements for a safe data system.

The second section of the publication pays attention to data management and verification tools. Some countries like Ireland engage in strategies to improve declarations compliance and automate certain sanctions. Standardisation and the use of artificial intelligence can help improve the quality of the data, as in the case of France. The data can then be used to detect breaches to integrity, flagging inconsistencies, and anticipating risks of conflict of interest, like in the Romanian Prevent system. Croatia or Moldova also crosscheck data between different public databases to flag discrepancies in the declarations.

The third section of the report presents publication and open data strategies. Publishing data can foster public trust and improve the quality of the integrity framework. This section underlines the balance to be found in any disclosure policy between transparency and privacy concerns. A variety of publication policies coexist depending on the type of declarant. How long and when declarations should be published – before or after any control for example – also widely differ from one country to another. While France conducts checks before publishing declarations from some high level public officials, Georgia and Romania publish them immediately. Through those strategies of disclosure, civil society is expected to engage with the data and hold institutions accountable. In Ukraine, for example, the whole electronic procurement system was developed by the government in partnership with NGOs.

LIST OF BOXES

LIST OF ABBREVIATIONS

ACRC	Korean Anti-Corruption & Civil Rights Commission
ADEL	French web-based application for asset and interest declarations
AGORA	French web application for declaring lobbying activities
AI	Artificial Intelligence
ANI	Romanian National Integrity Agency
API	Application Programming Interface
CSB	Georgian Civil Service Bureau
CSV	Comma-Separated Values
EUR	Euro
GEL	Georgian Lari
GRECO	Group of States against Corruption
HABG	Ivorian High Authority for Good Governance
HATVP	French High Authority for Transparency in Public Life
HTML	Hypertext Mark-up Language
ID	Identity Document
IT	Information Technology
JSON	JavaScript Object Notation
NACP	Ukrainian National Agency on Corruption Prevention
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
OFNAC	Senegalese National Office for the Fight against Fraud and Corruption
PDF	Portable Document Format
PREVENT	Romanian ex-ante control mechanism
SIPO	Irish Standards in Public Office Commission
SRS	Latvian State Revenue Service
StAR	Stolen Asset Recovery Initiative
UAH	Ukrainian hryvnia
ULYSSE	French web-based tool for managing asset and interest declarations

INTRODUCTION

The Network for Integrity was launched in December 2016 and brings together 14 institutions from around the world engaged in promoting integrity, transparency, and ethics of public officials. It aims at facilitating the exchange of information and best practices among its members.

The 14 member institutions of the Network include the Commission on Ethics of High Ranking Officials (Armenia), replaced by the Corruption Prevention Commission, the Commission for the Resolution of Conflicts of Interests (Croatia), the High Authority for Transparency in Public Life (France), the Civil Service Bureau (Georgia), the General Secretariat Against Corruption (Greece), the High Authority for Good Governance (Côte d'Ivoire), the Corruption Prevention and Combating Bureau (Latvia), the National Institute of Transparency, Access to Information and Protection of Personal Data (Mexico), the High-level Anticorruption Commission (Peru), the Anticorruption and Civil Rights Commission (Republic of Korea), the National Anticorruption Centre (Republic of Moldova), the National Integrity Agency (Romania), the National Office against Fraud and Corruption (Senegal), and the National Agency on Corruption Prevention (Ukraine).

In November 2018, they were also joined by two observers, which take part in the Network's discussions: the Standards in Public Office Commission (Ireland) and the Institute for Access to Public Information (El Salvador).

The French High Authority for transparency in public life (HATVP) has chaired the Network since December 2018. This publication is the result of discussions initiated at the 2018 Organisation for Economic Cooperation and Development (OECD) global anticorruption and integrity forum. Under France's leadership, members agreed to form a working group bringing together Côte d'Ivoire, Georgia, France, and Romania to publish a paper focusing on practical issues and best practices with regard to digital tools in the promotion of public integrity.

The HATVP collected members' contributions on specific issues and drafted the present document using additional sources, including reports from international and civil society organisations (e.g. OECD, World Bank, U4 Anti-corruption Resource Centre, Open Government Partnership, Council of Europe, and Transparency International).

This publication is a set of case studies from members' experience in the use of digital tools and open data in the public integrity sphere. It does not cover all projects, tools or innovative ideas in this domain but rather highlights key findings from members' contributions. It aims at emphasising the value of adopting transparent approaches and open data for integrity in the public sector.

The publication highlights instruments and strategies that have been designed and implemented with regard to collection, management, verification and publication of data related to integrity in the public sector, and especially (but not exclusively) of public officials. As defined by the OECD, the notion of public integrity refers to "the consistent alignment of,

and adherence to, shared ethical values, principles and norms for upholding and prioritising the public interest over private interests in the public sector."[1]

As mentioned in several publications on similar topics, there is no universal generic software that can be used by countries to manage asset declaration schemes, tools to regulate lobbying or public decision-making processes[2]. Most enforcing agencies have developed their own instruments, depending on their technical means and resources, but also on their own missions and objectives.

This publication does not aim at recommending a one-size-fits-all solution but at highlighting challenges and results of tools that have already been created and implemented. With that in mind, it covers the use of collection tools (I), data management and verification tools (II) and the type of disclosure and open data strategies (III) developed by enforcing agencies.

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[1] OECD (2017). *Recommendation of the council on public integrity.* Paris, France. Retrieved from : http://www.oecd.org/gov/ethics/OECD-Recommendation-Public-Integrity.pdf
[2] Chêne, M. (2015). *The use of technology for managing income and asset declarations.* Bergen, Norway, U4 Anti-corruption Resource Centre. Retrieved from : bit.ly/3q49b3T

I. Collections Tools

In order to control and promote integrity in the public sector, data are increasingly collected and analysed by government agencies and external oversight bodies. According to World Bank research, more than 160 countries around the world have now introduced financial disclosure schemes to foster public integrity[3]. New trends emerge with the introduction of information technologies in implementing such missions. This section looks specifically at the types of tools that countries use to collect information (1) and members' experiences in transitioning from a paper to an online system (2).

1. TYPES OF TOOLS

While paper-based (1.1) and mixed systems (1.2) are still used to collect information on public officials, an increasing number of oversight agencies now collect information online (1.3). This is especially true for lobbying information.

1.1 Paper-based systems

One of the main trends highlighted by the World Bank publication in 2017 was that about 69 percent of interest and asset disclosure systems were based upon hand-written forms, of which 33 percent were mixed systems with both hand-written declarations and typed forms[4]. Disclosure through paper forms thus remains a widespread means to collect data on public officials, especially regarding their assets and interests, as illustrated by Côte d'Ivoire and Senegal (see box 1).

> ### BOX ❶ The Ivorian and Senegalese disclosure systems
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> In Côte d'Ivoire, the High Authority for Good Governance (HABG) collects asset declarations filed using paper forms, in three versions[5]. A wide range of public officials – the President of the Republic, heads of public institutions, ministers, members of Parliament, mayors, regional elected officials, magistrates, high-ranking civil servants and members of the HABG – are covered by this regime and must submit these documents in person, either directly on the premises of the HABG or in local government offices. At the regional and local levels, such paper forms can be submitted to focal points to ease the process for local elected officials.

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[3] Rossi, I., Pop, L., Berger, T. (2017). *Getting the Full Picture on Public Officials: A How-to Guide for Effective Financial Disclosure.* Washington, Stolen Asset Recovery Initiative. Retrieved from : https://star.worldbank.org/sites/star/files/getting-the-full-picture-on-public-officials-how-to-guide.pdf

[4] Ibid.

[5] HABG (accessed 17 July 2020). *Modalités pratiques de la déclaration de patrimoine.* bit.ly/3qvY97v

> Between 2015 and August 31st 2020, the overall compliance rate of the 6 991 declarants was around 79 percent. However, important variations exist between magistrates (compliance rate close to 96 percent) or members of the Government (83 percent) and local elected officials (39 percent)[6].
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> In Senegal, a more targeted scope of high-ranking public officials, including the President of the National Assembly, questors, the Prime minister and members of the Government, the President of the Economic, Social and Environmental Council, fund administrators, authorising officers for revenue and expenditure, and certain public accountants, have to submit declarations. A single form was created by the National Office for the Fight against Fraud and Corruption (OFNAC), which may be filled in by hand or electronically, printed, initialled, signed, and submitted in person against receipt or by post through registered letter to OFNAC.
>
> In 2016, 454 out of the 800 public officials falling within OFNAC's scope had declared and submitted their assets on such paper forms[7].

Yet, a growing trend of partial or complete digitalisation of these processes is under way. According to a 2019 Stolen Asset Recovery Initiative paper, an increasing number of countries in various regions have digitised their asset disclosure systems, including: Argentina, Bhutan, Chile, Costa Rica, Croatia, Estonia, France, Georgia, Indonesia, Republic of Korea, Kyrgyz Republic, Latvia, Lithuania, Mexico, Moldova, Mongolia, Rwanda, Serbia, Slovenia, Uganda, Ukraine, and the United States[8].

1.2 Mixed systems

Mixed regimes allow for partial digitalisation of the collection process. This is the case of Ireland, Greece, Moldova, Mexico and Romania. In some instances, declarants can fill out a form online but still need to sign it by hand. In others, hand-written forms can be scanned and sent by email. Online applications can also coexist with a parallel paper-based system for declarants who cannot access the online forms.

In Romania, the National Integrity Agency (ANI) controls declarations of assets and interests from a very wide range of public officials, including the President of Romania, members of Parliament, judges, diplomatic and consular personnel, local elected officials and some public agents, totalling approximately 300 000 declarants.

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[6] HABG (accessed 23 July 2020). *Tableau de synthèse générale des déclarations de prise de fonction ou de début de mandat de 2015 au 30/06/2020.* Retrieved from : https://www.habg.ci/actualite.php?ID=145
[7] OFNAC (2018), *Rapport d'activités 2016.* Dakar, Senegal. Retrieved from : bit.ly/3fP36n8
[8] Kotlyar, D., Pop, L. (2019) *E-filing Asset Declarations : Benefits and Challenges.* Washington, Stolen Asset Recovery Initiative. Retrieved from : bit.ly/37k8QkQb

To address the growing number of declarations received in hard copies - around 400-500 thousands declarations yearly and 1.4 million declarations in electoral years - ANI introduced electronic forms (e-forms), as part of a project funded by the European Union.

Declarations now contain a bar-code that facilitates data extraction. However, declarations still have to be hand-signed and no legislative provision allows for the automation of the entire process yet. With the implementation of e-forms, less than 10 percent of the declarations received by ANI are still filled in by hand, and a new legislative proposal plans to introduce electronic signature in the future.

While paper-based systems still exist, there is an increasing trend in creating secured online applications or platforms to directly collect data relating to public officials' integrity. In Mexico, for example, paper forms are now an exception (see box 2 below).

BOX 2 The Mexican assets and interests disclosure system

As provided for by the General Law on administrative duties, all 1.7 million civil servants in Mexico must file a declaration of assets and interests. They used to fulfil this obligation on paper but since 2002, Mexico has implemented online disclosures with its Declaranet system, which allows civil servants to fill out, sign and submit their declarations online.

Public servants were reluctant, at first, to abandon paper forms. The government then designed and provided an online instruction portal, tutorial sessions, a dedicated hotline, and set up training centres to support filers in the declaration process[9]. Even if a vast majority of declarations are submitted through the online portal, the law as adopted in 2016 provides that declarations can still be filed on paper for municipalities that do not have the technical means to declare electronically[10].

1.3 Online systems

At the other end of the spectrum, an increasing number of countries such as Armenia, France, Georgia and Ukraine, have chosen to adopt a fully digitalised disclosure system to collect public officials' asset and interest declarations (see box 3).

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[9] World Bank (2012). *Public office, Private interests : Accountability through Income and asset disclosure.* Washington, Stolen Asset Recovery Series. Retrieved from : https://bit.ly/3ls48qa
[10] General Congress of the United Mexican States (2016). *Ley general de responsabilidades administrativas. Art 34.* bit.ly/2VmQWZ4

> **BOX ❸ Introducing an online mandatory system :**
> **The cases of Georgia and France**
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> In Georgia, public officials - including the President of the Republic, members of Parliament, ministers, judges, high-ranking civil servants - submit asset declarations to the Civil Service Bureau (CSB). They used paper forms until 2010 but now have to submit declarations through the Online Asset Declaration System on a dedicated website[11]. The CSB receives about 6 000 electronic declarations annually, which are published nearly instantaneously into a searchable database that can be downloaded for free[12].
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> In France, the High Authority for transparency in public life (HATVP) receives assets and interests declarations from approximately 15 800 public officials. Initially, declarations were only submitted in paper format, and needed to be scanned and anonymised before their publication on the HATVP website. An online declaration system was created in 2015, but was only voluntary at the beginning. More than 50 percent of declarations were submitted electronically.
>
> Online declaration was made mandatory in 2016 in order to facilitate and simplify the declaration process and to publish, in the longer run, more readable, structured and freely reusable data. Interactive features on the online platform provide explanations at each step of the declaration procedure, and give public officials the opportunity to update former declarations. They can also contact a dedicated hotline (phone or email) when they have questions[13].

Along with these examples of online financial disclosure systems, members of the Network that have adopted mandatory lobbying registers (e.g. France, Ireland, and Peru) all use a fully electronic system. Lobbyists in these countries have to declare their activities online and the systems do not allow paper declarations.

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[11] The website can be consulted here : www.declaration.gov.ge
[12] Drafted based on the information provided on https://www.opengovpartnership.org/theme/asset-disclosure and a CSB intervention in a Network for Integrity workshop organised in Paris in March 2018
[13] HATVP website : bit.ly/37qKA0o

2. FROM PAPER TO DIGITAL DECLARATION SYSTEMS

Collecting and storing data under paper-based systems can represent many challenges (2.1) that can be overcome with online declaration systems. However, implementing electronic tools can be tedious (2.2).

2.1 Collecting data in paper format

In Côte d'Ivoire, declarations are collected in paper format only. For several years now, the HABG has discussed the possibility to digitalise the declaration system to simplify the procedure. The COVID-19 pandemic might accelerate this process but authorities in the past have put forward data security concerns and possible information leakage on social media. Internet access can also represent a barrier to the implementation of online declaration systems. In Côte d'Ivoire and Senegal, for instance, less than half of the population uses the internet[14].

Many other challenges may emerge in the transition to an online disclosure system. Designing and creating the system may imply substantial costs in the short run. It also requires training and pedagogical efforts within the institution and additional capacities in terms of skills and human resources.

Yet, even in the short term a paper-based system may not be ideal. Paper forms require ever-increasing secure storage space and additional vaults as the number of collected declarations increases over the years. Staff must receive, open, sort and organise the paper declarations, which can leave little time to advise filers and analyse the content of declarations. Paper forms are very often handwritten, which requires staff to decipher the handwriting of public officials, increasing time and efforts devoted to the formal screening of declarations.

2.2 Implementing online declaration systems

If transitioning to an online declaration system is associated with a wide range of benefits in terms of convenience for users, data quality, transparency and opportunities (see sections II and III), the dematerialisation process may raise legal and practical issues in its creation and implementation phases.

First, building an online disclosure system requires designing skills and tools. Challenges may emerge from strategic choices with regard to using in-house skills, resources and instruments or externalising the design and creation of the electronic declaration system.

As an example, the French HATVP chose to design and develop its online declaration application in 2015 with internal human and technical resources. Conversely, in Ukraine, the development of the online disclosure software in 2016 was led by a quality assurance

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[14] World Bank Data Bank (2020), *Individuals using the internet (% of population)* : bit.ly/3lnYg1a

firm, with financial support from the Danish authorities and several international organisations.

Second, beyond the financial, technical and human means needed, the legal and regulatory framework might be an incentive or impediment to the development of digital tools to disclose assets and interests. Members of the Network for Integrity have diverse experiences in this regard. The 2015 Ukrainian legislation introduced online disclosure to replace the paper-based system established in 2011, while the French and Romanian authorities designed such tools without any incentive in the law.

Finally, data security can be a major challenge in designing and implementing electronic declarations tools. The World Bank, for example, identified several elements of a safe data system[15] :

○ Data integrity : by adding a "stamp" or digital signature on a declaration, the system can ensure that the data was not altered after its submission.

○ Data security : disk encryption, software-based mechanisms to detect malicious programs, data masking and backups can help better secure information from unauthorised disclosure or loss.

○ Data protection : by tracking all processing operations with data in the system and keeping detailed logs, electronic systems can be used to ensure that information is processed lawfully and in compliance with other personal data protection principles and rights of the declarants.

In France, multiple safety measures are implemented to protect public officials' private data on the web-based application for asset and interest declarations (ADEL):

○ Declarants have to prove their identity when registering, by providing identity documents, by confirming personal information already present in their file, or through a phone call.

○ Declarations remain on the online declaration server for a maximum of seven days while public officials are filling them out. This server uses symmetric encryption to secure the data.

○ Once a declaration is filed, it is removed from the first server and stocked on a secure HATVP server. A detection mechanism prevents intrusions and the internal information system cannot be accessed remotely.

○ Declarations are protected by asymmetric encryption when they are sent to the HATVP, which means intercepting a declaration would not allow ill-intentioned individuals to access the data without the HATVP's private key.

Once they are received by the HATVP, only a few staff members can consult the declarations. Accessing the internal web-based tool for the management of the declarations submitted (ULYSSE) requires an individual certificate, and users are divided into groups with different levels of access corresponding to their role at the HATVP. Every access to the data on this application is traced and recorded.

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[15] Kotlyar, D., Pop, L. (2019) *E-filing Asset Declarations : Benefits and Challenges.*

II. Data management and verification tools

Building on a digital declaration system, a variety of tools can be developed to obtain quality data (1), detect breaches to integrity and prevent conflicts of interests (2).

1. ENSURING DATA QUALITY

The digitalisation of declarations helps avoid errors in the data collection procedure but does not represent the end of the process. Non-compliance, human mistakes and misinterpretation of guidelines can still exist in an online system. Member countries have developed a variety of strategies to obtain higher compliance rates (1.1) and better quality data (1.2).

1.1. Tracking compliance

Unlike paper-based systems, digital declaration schemes do not need human intervention to track compliance : a computer-based system can track the date and time of the declaration and spot delays in the submission of interests and asset declarations, or the absence of declaration. The system can then automatically send reminders or trigger sanctions for non-compliance, as is the case in Ireland, for example (see box 4).

BOX ❹ The Irish lobbying register

Since 2015, the Irish Regulation of Lobbying Act requires lobbyists to declare their activities three times a year on an online platform. 1 909 lobbyists were registered in 2019[16]. The declarations must specify the subject matter, intended goals, persons lobbied, frequency of communication and method of their lobbying activities in the specified period. This system allows for direct communication between lobbyists and the Standards in Public Office Commission (SIPO) through an online message service and for the automation of certain sanctions. For instance, fines for the submission of late returns are automatic, and unpaid fines lead to new proceedings.

In addition, the tool is used to perform checks on the content of the declarations. Recurring errors were identified in the first reports issued on the platform, which prompted some changes to language used in the system and supporting guidelines. Challenges for SIPO include communicating their expectations to filers, providing support, and identifying registrants who have registered but are not legally obliged to do so.

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[16] Standards in Public Office Commission (2020). *Regulation of Lobbying in 2019 : Annual Report.* Dublin, Ireland. bit.ly/2HRYm3o

Similarly, in Georgia, the CSB ensures the highest possible levels of compliance by sending reminders to public officials. The agency also provides a hotline and an online chat service to answer questions about asset declaration processes. Automatic reminders, which include a standardised message as well as the relevant deadline, are sent to public officials the week before the deadline via email or text message. In addition to these automatic reminders, employees of the Asset Declaration Department of the CSB call public officials individually to remind them about the deadline if necessary. Failure to submit an asset declaration within the time limit is subject to a GEL 1 000 (EUR 280) fine. However, with the use of automatic and human reminders, less than one percent of all declarants fail to meet the deadline.

1.2 Standardising the data

Beyond the necessity to ensure that public officials and lobbyists comply with their obligations, the quality of the data provided is a concern for which digital tools can play a major role: by standardising the data, member institutions set the ground for advanced analysis and control.

A first way to standardise the collected information is to use drop-down menus which, on top of making the process easier for the declarant, avoid typos and ensure that answers will match enforcing agencies' expectations in terms of format and level of detail. When all possible answers cannot be captured by a drop-down list, online forms can display hints, examples and definitions to clarify expectations. Tutorials can also be embedded in the system to guide declarants through each step.

After making sure that guidelines and pre-defined answers are available, institutions often put in place real-time validation processes to check the data as it is entered. Missing information or incorrect syntax can then prevent filers from submitting their declaration. In Ukraine, for instance, "the system automatically detects whether complete and valid data was entered in the form in accordance with the detailed validation rules approved for each field : the system would not allow submission of the form if some mandatory fields were empty or include data in an incorrect format."[17]

In France, the HATVP has been using artificial intelligence to analyse data reported by lobbyists (see box 5).

BOX ❺ Using algorithms to improve the quality of lobbying data in France

In France, lobbyists must fill out a declaration for each item" for which they carried out lobbying actions the previous year. HATVP staff analysed each of the 6 000 items declared the first year and measured their quality using a scale ranging from 0 to 4, depending on the preciseness of the declaration regarding three elements :

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[17] Kotlyar, D., Pop, L. (2019) *E-filing Asset Declarations : Benefits and Challenges.*

1) the exact issue addressed in the lobbying action 2) its intended results or purpose and 3) the specific public decision targeted. The results turned out to be unsatisfactory, with more than half of the items not fulfilling any of the basic criteria.

The HATVP developed an algorithm trained to identify unsatisfactory items based on these three elements. The algorithm automatically identifies poorly declared items, and pop-up windows warn declarants in real time as they fill out their declaration. This allowed the conformity rate to increase from 44 percent in 2017 to 61 percent in 2018. Next steps include launching a recursive learning functionality in order to correct the algorithm's learning bias and improve the quality of the information declared.

2. ANALYSING DATA TO DETECT BREACHES TO INTEGRITY

Once the data is complete and standardised, control institutions can use it to start working on what is often their core mission: detecting breaches to integrity. Institutions usually use digital tools to detect anomalies (2.1) and compare information with other sources (2.2).

2.1 Detecting risks or anomalies

Staff in enforcement agencies use a variety of skills to detect potential conflicts of interests, inconsistencies in the data that could suggest intentional misrepresentation of a public official's wealth, or fraud. If human intervention seems essential in the analysis of intricate situations and the interpretation of facts, digital tools can help automate part of the analysis and select cases for in-depth review. In Georgia, for example, the CSB's electronic declaration system randomly selected 310 asset declarations for verification in 2019[18].

In Ukraine, the e-declaration system covers about one million public sector employees, including civil servants, judges, prosecutors, military service personnel, members of local councils and officials working for public companies. The system includes a module for the automated verification of data in the declarations submitted, which checks data for inconsistencies within one declaration and can compare a declaration with the previous one from the same declarant in order to identify deviations and other red flags[19].

In Romania, the Prevent system helps detect conflicts of interests in public procurement (box 6).

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[18] Gogidze, L., Gzirishvili, T. Sikharulidze, M. (2019). *Independent Reporting Mechanism : Georgia End-of-Term Report 2016–2018*. Washington, Open Government Partnership. bit.ly/3qd6vkl
[19] Kotlyar, D., Pop, L. (2019) *E-filing Asset Declarations : Benefits and Challenges.*

BOX ❻ The Romanian PREVENT system[20]

The PREVENT System is an ex-ante control mechanism that looks into situations likely to generate conflicts of interests in public procurement procedures. The system applies to all public authorities that use Romania's Public Procurement Electronic System. For each procurement procedure, the awarding authority must fill out an integrity form, with information related to a) the procurement procedure, decision makers within the public authority, consultants and experts involved in the process b) bidders and c) the procedures in place to avoid conflict of interest situations.

The system analyses data from integrity forms, and performs cross-checks with databases from the National Trade Register and the National Register of Personal Records. It can automatically identify potential links between public decision-makers in the contracting institution and bidders.

When potential conflicts of interests are detected, the PREVENT System sends an "Integrity warning" to both ANI and the contracting authority. The contracting authority has the obligation to take measures to address the integrity risk (e.g. replacing a member in an evaluation committee, excluding a bidder), and the National Agency for Public Procurement verifies that the necessary measures have been implemented.

Between 20 June 2017 and 31 March 2020, 47 571 procurement procedures, including 6 565 linked to European funds, have been reviewed by the PREVENT system. Integrity inspectors from ANI issued 123 integrity warnings for potential conflicts of interests in public procurement procedures representing more than 273 million euros.

In around 96 percent of cases where an integrity warning was issued, contracting authorities have taken necessary measures to prevent conflicts of interests. For the remaining cases, ANI initiated a formal procedure to assess the conflict of interests, as provided by Law 176/2010 on integrity in exercising public offices and dignities[21].

For institutions with limited budgets, automating basic checks to spot red flags that may require in-depth analysis from staff can be a way to allocate time resources more efficiently, especially when all declarations cannot be analysed. In these situations, prioritising areas through risk mapping can lead to better results than random selections of cases.

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[20] ANI website (accessed 20 July 2020) https://www.integritate.eu/prevent.aspx
[21] *Law 176/2010 on integrity in exercising public offices and dignities.* (2010) : bit.ly/3qnv0eX

When developing online tools, public authorities should keep in mind that algorithms and computer programmes can be biased and must be closely monitored by staff, whose discernment often cannot be replaced by automatic decisions. As underlined by the OECD, "as countries consider the role that AI can play in replacing the decision-making activities of public servants, it is necessary to understand how governments might audit their decision-making processes and analyse the outcomes, which affect citizens' lives. Consequently, it is important that countries take steps to make their decision-making algorithms transparent."[22]

Additionally, an automatic approach may not always be suitable for complex tasks such as the detection and resolution of conflict of interest situations. A proportional approach should be used to find the right balance between the intensity of the ethical risks identified and the severity of the sanctions required in each unique situation. This in-depth analysis of the stakes may always require human judgement to ensure a fair decision.

2.2 Comparing data from declarations with other sources

When public administrations manage different databases, crosschecking information to find discrepancies becomes possible. Most members of the Network compare information provided in public officials' declarations of assets and interests with external data sources (e.g. property registers and company registers). Ensuring interoperability between systems is critical to this crosschecking exercise, and giving control institutions direct access to some databases from other public bodies helps them fulfil their mission.

In Croatia, an IT programme automatically compares data contained in public officials' declarations of assets to other public databases. The programme then flags apparent discrepancies, which require further review to assess whether apparent mismatches provide a ground for violation of the provisions of the Act on the Prevention of Conflict of Interest. Transitioning from databases that were not fully compatible and required manual processing to an integrated system required significant effort from the Commission for the Prevention of Conflicts of Interest which includes 3 500 officials within its scope[23].

In Moldova, the National Integrity Agency collects declarations from public servants, judges, members of the parliament, ministers and heads of territorial units, and examines approximately 2 800 declarations each year. The 2016 Law on the National Integrity Authority provides that "the entities holding a state register and other information required for the efficient fulfilment of the Authority's functions, irrespective of their legal form of organisation, shall grant the Authority free access hereto using the interoperability platform created by the Government".

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[22] OECD (2019). *The Path to Becoming a Data-Driven Public Sector*. Paris, France.
https://doi.org/10.1787/059814a7-en
[23] GRECO (2020). *Fifth Evaluation Round, Evaluation report on Croatia*. Retrieved from : bit.ly/3lxq0kh

In Latvia, the data system is equipped with algorithms to compare tax return information with available data from the State Revenue Service. If discrepancies are not detected, the information is automatically published. If discrepancies appear, information is manually processed and verified before publication.

In Georgia, an electronic system automatically checks that the information provided by declarants in their asset declarations matches the content of databases managed by public institutions (see box 7).

BOX ❼ Comparing declarations with public databases in Georgia

The Georgian CSB is able to compare information provided in asset declarations with databases of :

a) The Public Service Development Agency, under the Ministry of Justice, which allows the identification of a public official and their family members by name, last name, personal 11-digit number, date of birth, and address[24]

b) The National Agency of Public Registry, under the Ministry of Justice, which includes information on public officials and their family members' immovable property and participation in enterprises as shareholder or board member

c) The Notary Chamber, under the Ministry of Justice, which includes agreements and contracts concluded by the public official or their family members within the declaring period

d) The Service Agency of the Ministry of Internal Affairs, which provides information about the means of transport and weapons registered in the name of a public official or their family members

e) The Revenue Service under the Ministry of Finance, which provides information about the expenditures undertaken by taxpayers as well as financial benefits/ incomes received by the public official or their family members as declared in annual income declarations

f) The State Procurement Agency, which provides information about enterprises connected with the public official, their close relatives or their family members in the calendar year during which the declaration was submitted

The integration of databases represented a real challenge for which the CSB worked in close cooperation with all relevant stakeholders. However, not all the information is integrated.

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[24] The Law on Conflict of Interest and Corruption in Public Institutions defines "Family member" as "a person's spouse, minor child or stepchild, as well as a person permanently residing with them". Law available here

The CSB does not have direct or automatic access to financial institutions and has to rely on declarants to provide information on bank accounts and transactions, including the name of the bank and/or credit institution, the type of account, balance on the account and any income and/or expenditure within a reporting period amounting to more than GEL 1 500 (EUR 420).

The low level of reliability for this information remains a major challenge for the institution.

In this context, cooperation with other administrations is essential as it can considerably increase the efficiency of the control. In the case of France, the HATVP has had direct access to four tax administration databases since 2016. Comparing data from the tax administration with information included in asset declarations allowed the HATVP to significantly decrease the time needed to control asset declarations.

However, as is the case with the Georgian CSB, the HATVP is advocating for more direct access to other databases, including information held by banks, financial institutions and insurance companies[25].

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[25] High Authority for Transparency in Public Life (2020). Rapport d'activité 2019. Paris, France.

III. Publication and open data strategies

Data not only brings value for institutions as they carry out their duties, but can contribute to a wider movement towards a more transparent public sector. Publishing data collected by oversight institutions (1) can help foster public trust and improve the quality of the integrity framework (2).

1. MAKING DECLARATIONS PUBLICLY AVAILABLE

Oversight institutions need to find a balance between transparency (1.1) and privacy concerns (1.2) when disclosing public officials' asset and interest declarations.

1.1 Disclosure policies

Out of the 160 countries that have introduced mandatory financial disclosures for public officials, the extent to which these declarations are made available to the public varies widely across regions. While 97 percent of OECD high-income countries required mandatory public disclosure of information in asset declarations in 2016, this rate was only 70 percent for countries in Europe and Central Asia and less than 30 percent for countries in the Middle East and North Africa[26]. Public availability may take various forms, including online open data disclosures, publication in the official gazette, sending a copy of a document upon request, or visiting an agency to access the information in person.

Publishing declarations is a step towards transparency and allows civil society organisations, journalists and citizens to scrutinise the information submitted by declarants. In some cases, the public can even help spot potential discrepancies in the data or raise questions about potential conflicts of interests that are sometimes difficult to detect. Examples of undetected infractions show that control institutions are not perfect, and transparency around the information received is a way to fit in a broader accountability system where each actor is part of a culture of integrity.

In the case of paper declarations, availability to the public is difficult. On-site consultation can be organised, but this system largely restricts access to the information. Scanning paper declarations and uploading them on a website is an alternative. In Romania, ANI outsources this phase to a contractor, which processes, scans, uploads and archives asset and interest disclosures. The delay between reception of a document and availability on the online public portal varies from 48 hours to a maximum of two weeks.

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[26] Kotlyar, D., Pop, L. (2016). *Asset Declarations : A Threat to Privacy or a Powerful Anti-Corruption Tool ?* Washington, the World Bank. bit.ly/3mrdZxJ

Conversely, the technical possibility to publish all declarations does not imply that full publication is always the best option. In a majority of countries, not all declarations are available online and different levels of publicity coexist for different categories of public officials. In some cases, countries choose not to disclose any of these declarations. This is the case of Côte d'Ivoire, where the content of all asset declarations is confidential. However, citizens can consult a list of public officials who are subject to asset declarations, and the HABG publishes on its website monthly summaries of asset declarations as well as maps displaying declarations by region.

In France, levels of disclosure vary. Declarations of assets and interests of ministers are available in-full online, while asset declarations of members of parliament can only be consulted on site. For mayors and some other local elected officials, only interest declarations are available online. Declarations of cabinet members in central and local government, high-ranking civil servants and members of independent administrative authorities are not publicly available.

All in all, a balance must be found between the importance of informing citizens and the protection of public officials' private life. Latvia offers an interesting example in that sense (see box 8).

BOX ❽ The Latvian system for the publication of declarations [27]

All public officials in Latvia, with some exceptions, must submit asset declarations, which include information about their financial situation such as income, owned vehicles, real-estate, issued loans, shares and stocks.

The State Revenue Service (SRS) is competent for the declarations' submission, completion, control and publication. Declarations of public officials working in State security institutions are not submitted to the SRS, but rather to the Constitution Protection Bureau, and are not published.

The SRS receives approximately 68 400 declarations of public officials annually, and the publishable parts of all submitted declarations are published in the publicly available database of the SRS.
Anyone may access the declarations. This allows the public to follow changes in the financial situation of public officials, and to be involved in the detection of possible violations.

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[27] Information provided by the Latvian State Revenue Service

In Mexico, all public servants' financial declarations are available in a PDF format on the Declaranet website. Anyone can search for specific individuals and download selected declarations. All the information is public, except for private data protected by the Constitution[28].

Another common challenge in countries' disclosure choice is whether declarations should be audited before publication or published immediately upon reception. This might depend on how fast and effective controls can be run.

The French HATVP, for example, conducts checks before publishing ministers' and members of Parliament's declarations. Checking information before publication allows for exchanges with declarants so that errors made in good faith can be corrected. On the contrary, countries such as Romania or Georgia publish declarations before they are analysed.

Lastly, countries make different decisions regarding how long declarations remain public. In France, the HATVP removes from its website public officials' declarations as soon as their mandate or functions end[29]. In Moldova, the National Integrity Authority ensures permanent online access to the declarations of assets and personal interests for a duration of 15 years following the date of submission, even if public officials have left their duties. In Romania, declarations remain on the online portal for three years after the end of a public official's mandate or functions.

1.2 Privacy challenges

For declarations that are published, an additional issue lays in the protection of private or sensitive data. If transparency around the content of these declarations is deemed necessary, personal security and privacy reasons still make it essential to protect private data such as addresses, bank account numbers, ID numbers, etc. While scanned declarations can be edited to hide private information, digital systems can automatically hide specific fields, making it easier for control institutions to publish declarations in a timely manner.

Most countries decide to hide sensitive information when publishing data. In Latvia, a data system uses algorithms to automatically separate public and non-public information in tax returns and publish the information in the appropriate sections. Similarly, the Moldovan Automated Information System "e-Integrity" automatically hides parts of the data, such as identification numbers, permanent address, phone numbers, cadastral numbers of immovable assets and bank account numbers. This allows the Moldovan ANI to publish the declarations on the online portal practically immediately after their submission, within the 15-day period established by law.

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[28] General Congress of the United Mexican States (2016). *Ley general de responsabilidades administrativas.* Article 36
http://www.diputados.gob.mx/LeyesBiblio/pdf/LGRA_130420.pdf
[29] However, when the declaration is filed after the end of the functions, it remains accessible online for a duration of six months following the end of the functions.

As highlighted by a recent World Bank report, "electronic systems make it easy to manage different access regimes, by allowing full access to data in the declarations to authorised personnel of the enforcing agencies and limited access to the general public by aggregating or redacting certain data"[30].

2. PROMOTING OPEN DATA AND REUSE

Once published, the information needs to be available in an open data format in order to maximise its reusability (2.1) and citizens' engagement (2.2).

2.1 Data format and interoperability

According to the Open Definition, open data is defined by the ability for anyone to freely access, use, modify, and share it for any purpose[31]. When applied to asset and interest declarations, the use of open licenses, machine-readable data formats and the proactive publication of data on government websites free of charge are game-changers in the search for transparency.

In the case of scanned PDF documents, possibilities of re-use are very limited since the documents are not machine-readable. On the contrary, a CSV or JSON file can be read by a computer, which opens new possibilities in terms of data analysis and visualisation, as well as opportunities for associating different data sources, as illustrated by the French system (see box 9).

BOX 9 Open data and the French declaration system

In France, the law provides that the information contained in the directory of interest representatives is published in an « open format that can be freely used and read by an automated processing system[32]. » The HATVP provides a file in .JSON format comprising all of the information declared (history of updates included) for each lobbyist registered in the directory.

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[30] Kotlyar, D., Pop, L. (2019) *E-filing Asset Declarations : Benefits and Challenges.*
[31] Open Knowledge Foundation (2015). *The Open Definition.* http://opendefinition.org
[32] *Law of 11 October 2013 on transparency in public life.* bit.ly/2VjWzHt

The HATVP also provides various tables in .CSV format for specific uses and the website displays an explanatory note to help users understand how they can make the best use of the data provided. In 2020, the HATVP published the source code of AGORA, the web application for lobbyists to declare their activities, in compliance with its Open Government Partnership engagement[33]. Anyone can now access the code online and the license grants permission to copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the software without limitation[34].

In order to go one step further, a common request from civil society organisations is to facilitate the crosschecking of data between official electronic databases. In addition to proactively publishing data in an open format, countries can collaborate with other institutions to set common goals and standards for data, to ensure interoperability across public sector institutions, so that users, suppliers and the whole ecosystem can understand open government data once published[35].

Once civil society and users can understand and compare datasets, they can create knowledge and hold institutions accountable. As an example, in 2017, Transparency International Georgia compared asset declarations from members of Parliament to the national business registry in order to find non-reported business shares or positions[36].

2.2 Involving civil society and evaluating results

Publishing data under an open format is not sufficient for citizens to extract value from massive datasets : governments must find strategies to make the data easily understandable and usable.

In Georgia, all declarations are public and are immediately published on the CSB's official website. Since the CSB launched the online declaration system, new features were introduced to make the online platform more user-friendly. A detailed search function has been developed on the platform, which allows citizens to access specific information included in the declaration using keywords (name of the declarant, city, type of property, car brand…). Additionally, the CSB analyses a number of asset declarations and subsequently produces analytical reports that are proactively published at the end of each calendar year. Next steps for the CSB include making declarations available in open data format.

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[33] Open Government Partnership, France Action Plan 2018-2020
[34] The source code is available here : https://gitlab.com/hatvp-open/agora/-/tree/master
[35] OECD (2017). *Compendium of good practices on the use of open data for anti-corruption.* Paris, France. bit.ly/3qfU9Ig
[36] Transparency International Georgia (2017). *Business connections of MPs, Incompatible Activities and Undeclared Assets.* Tbilisi, Georgia. bit.ly/39ro9Li
[37] Kotlyar, D., Pop, L. (2019) *E-filing Asset Declarations : Benefits and Challenges.*

In Ukraine, the National Agency on Corruption Prevention (NACP) publishes all declarations on its website, and the information is available without registration. Users can search the data, use filters and access the content of declarations in HTML and PDF formats, as well as in machine-readable format (JSON) through a public API. Using this data, civil society was able to develop tools to track disclosures and connect data to other registers and data sources, such as the company register and the public procurement database.[37]

Another step towards citizen involvement is the organisation of events that bring together civil society and the wider user community to develop tools to promote integrity.

For example, in 2017, the French HATVP invited users to share their expectations and proposals regarding the criteria for the provision of data (formats, accessibility, granularity, updates, etc.). This workshop aimed at federating a community of re-users around the HATVP data in order to facilitate their exploitation and appropriation by citizens. In 2018, a second workshop was dedicated to the reuse of data from the lobbying register. Journalists, developers, academics and public servants worked together to define types of data users, think about their specific needs, and find ways to make data understandable, useful and accessible to a wide range of citizens and organisations.

Empowering citizens and civil society is essential to build trust and promote accountability. Ukraine offers an interesting example of citizen involvement (see box 10).

BOX 10 Co-designing a procurement system with civil society :
The case of Ukraine

Since 2016, all public procurement units in Ukraine must use the electronic procurement system ProZorro that provides free online access to all documents related to any bid (from procurement plans to procurement contracts and information about their completion). All public tender information is available in Ukrainian and procurement announcements are published in English when they exceed a certain price threshold.

The project was funded and overseen by a group of international institutions and NGOs. This partnership between government agencies, educational partners, private enterprises, civil society and media participants allowed Ukraine to build a system which is recognised internationally and won the 2016 Open Government Award from the Open Government Partnership.

Annually, about UAH 600 billion (EUR 20 billion) worth of goods and services are transacted with the help of tenders. It is estimated that ProZorro may be responsible for up to 10 percent of the overall public spending savings due to increased competition transparency.

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[37] Kotlyar, D., Pop, L. (2019) *E-filing Asset Declarations : Benefits and Challenges.*

> Part of the team trained government entities throughout the country to use the fully digital platform for public procurement. All the training materials and courses have been made available on a separate educational portal, which also features a library of samples and templates[38].

Citizens and civil society organisations may also contribute directly to collecting information on public officials. In South Korea for example, citizens can signal corruption or abuse of power by a public official through an online portal called e-people. The service is provided in 14 languages, and allows the Anti-Corruption & Civil Rights Commission to collect information that leads to investigations. As a result of the 61 346 corruption reports received between 2002 and 2019, 4 452 people were prosecuted, 2 029 were disciplined and 820 billion won (600 million euros) were recovered[39]. Similarly, Senegalese authorities collect denunciations from the public via email or phone, and the Ivorian online government portal, "Miliê" allows citizens to submit complaints for corruption or other integrity violations.

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[38] Marusov, A. A*nti-Corruption Policy Of Ukraine : First Successes And Growing Resistance. 2016.* https://prozorro.gov.ua/
[39] Anti-Corruption & Civil Rights Commission (2020). *2019 ACRC Annual Report.* Sejong, Republic of Korea. bit.ly/2JpkvGN

CONCLUSION

Digital tools have transformed the way members of the Network promote public trust in their countries. With the digitalisation of public officials' financial declarations, the use of electronic tools to track compliance, analyse ever-growing volumes of data and compare them with multiple sources, control institutions have increased their capacity to detect risks and enforce integrity rules. Disclosing data while protecting public officials' private life has become possible, and the publication of declarations of assets and interests shows the way towards a more transparent model that empowers civil society.

Behind these general trends, diverse national contexts call for customised solutions. Access to technologies and communication tools, availability of skills, technical and human resources, and country-specific citizen expectations shape governments' response to the need for increased public integrity.

When drawing conclusions from the examples displayed in this report, one should keep in mind that corruption and integrity are complex issues where one-size-fits-all approaches cannot always fix deeply-rooted problems. Digital tools can bring substantial benefits to institutions in terms of efficiency, but are part of a broader cost/benefit analysis that may lead other institutions to choose solutions that are not technology-based.

Similarly, open data does not represent the beginning and the end of anti-corruption strategies. In 2017, Transparency International argued that even if a statistically significant correlation existed between the Corruption Perceptions Index[40] and the Open Data Barometer[41], the potential of open data had not been leveraged sufficiently in the fight against corruption[42]. Bearing their limits in mind, integrity actors should be able to harness the power of digital tools to contribute to a more ethical society.

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[40] The Corruption Perceptions Index (CPI) scores and ranks countries/territories based on how corrupt a country's public sector is perceived to be by experts and business executives. This composite index was developed by Transparency International and combines 13 surveys and assessments of corruption, collected by a variety of institutions. https://www.transparency.org/en/cpi
[41] The Open Data Barometer is a global measure of how governments are publishing and using open data for accountability, innovation and social impact. https://opendatabarometer.org/?_year=2017&indicator=ODB
[42] Transparency International (2017). *Connecting the dots : building the case for open data to fight corruption.* bit.ly/3qhPBRN

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December 2020