



European Platform Undeclared Work



Toolkit on Risk Assessments for more efficient  
inspections as a means to  
tackle **Undeclared Work**

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Created in 2016, the European Platform tackling undeclared work enhances cooperation between EU countries. This EU-level forum allows different actors, including social partners and enforcement authorities, such as labour inspectorates, tax and social security authorities, to exchange information and good practices; learn from each other and together; develop knowledge and evidence.

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# List of Abbreviations

|                |                                                                                                  |
|----------------|--------------------------------------------------------------------------------------------------|
| AEAT.....      | Agencia Tributaria/Tax Agency (Spain)                                                            |
| BPMS.....      | Business Process Management System                                                               |
| CSD.....       | Center for the Study of Democracy (Bulgaria)                                                     |
| Dimona.....    | Déclaration Immédiate/Onmiddellijke Aangifte (Belgium)                                           |
| DSN.....       | Déclaration Sociale Nominative/Nominal Social Declaration (France)                               |
| ELA.....       | European Labour Authority                                                                        |
| ERGANI.....    | System for registration of working hours of employees (used in Greece, Cyprus and Belgium)       |
| ESCORT.....    | Software, part of the risk assessment systems of Greece, Ireland and Sweden                      |
| FOGASA.....    | Fondo de Garantia Salarial/Wage Guarantee Fund (Spain)                                           |
| GDPR.....      | General Data Protection Regulation                                                               |
| GPLA.....      | Gemeinsame Prüfung Lohnabhängiger Abgaben/Joint examination of all wage-related levies (Austria) |
| HLF.....       | Anti-Fraud Tool (Herramienta de lucha contra el fraude)                                          |
| HMRC.....      | Her Majesty Revenue and Customs (UK)                                                             |
| IMI.....       | Internal Market Information System                                                               |
| INSS.....      | Instituto Nacional do Seguro Social/National Institute for Social Security (Spain)               |
| INTEGRA.....   | A system for evaluation of effectiveness of inspections                                          |
| ISM.....       | Instituto Social de la Marina                                                                    |
| ITSS.....      | Instituto Trabajo y Seguro Sociedad                                                              |
| KPIs.....      | Key Performance Indicators                                                                       |
| LIMOSA.....    | Landenoverschrijdend Informatiesysteem Migratie Onderzoek Sociaal Administratief (Belgium)       |
| MITRAMISS..... | Ministry of Labour, Migration and Social Security (Spain)                                        |
| MSs.....       | Member States                                                                                    |
| NGOs.....      | Non-Governmental Organisations                                                                   |
| NSSO.....      | National Social Security Office (Belgium)                                                        |
| OASIS.....     | Social Inspection Services Anti-Fraud Organization (Belgium)                                     |
| OECD.....      | Organisation for Economic Cooperation and Development                                            |
| PAYE.....      | Pay As You Earn tool (UK)                                                                        |
| RED.ES.....    | A public body which aim is to digitise public services (Spain)                                   |
| ROI.....       | Return on Investment                                                                             |
| SEPE.....      | Servicio Público de Empleo Estatal/Public State Employment Service (Spain)                       |
| SRS.....       | State Revenue Service                                                                            |
| TGSS.....      | Tesorería General de la Seguridad Social/General Treasury of Social Security (Spain)             |
| UDW.....       | Undeclared work                                                                                  |
| VAT.....       | Value Added Tax                                                                                  |

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# 1. INTRODUCTION

## 1.1. What is the toolkit about and how was it developed?

The aim of the present toolkit is to propose a process-oriented approach for risk assessment, enabling EU Member States to improve their current risk assessment implementation through examples of practices presented. Risk assessment is increasingly used by labour inspectorates within the EU. Access to a risk assessment system with developed data mining, data analytics<sup>1</sup> and data matching tools enable more effective preventative, enforcement and educational approaches towards tackling undeclared work. These systems allow labour inspectorates to move from randomly selected inspections towards risk-based selections. Using such systems also enables clearer targeted enforcement approaches, cost effectiveness and the implementation of education and prevention.

Developing a risk assessment system for clearer targeted inspections requires careful and systematic planning. This toolkit provides a step-by-step guide for establishing and evaluating a functioning system. It is based on the results and sharing of good practice of a Thematic Review Workshop on 'Risk Assessments for more Efficient Inspection' held in Madrid, Spain, 14-15 June 2018. It builds on the previously developed 'Data Mining for more Efficient Enforcement'<sup>2</sup> toolkit. This toolkit does not propose a 'one-size-fits-all' solution for use by all inspectorates, but rather a set of systematic steps to help authorities to develop a tailored approach to tackle undeclared work to suit their institutional and economic context.

### The objectives of this toolkit are to:

- ▶ Set out a concrete step-by-step approach towards developing a risk assessment system for better inspections in tackling UDW, by describing the full process of preparation, development, implementation and assessing the work of the system;
- ▶ Highlight critical issues and challenges that might occur at each step of the process;
- ▶ Provide examples of good practices from Member States which have implemented and functioning systems.

In that regard, the current toolkit does not discuss 'risk' in general (i.e. it does not include operational risk

management issues internal to the organisation), but rather focuses on the specific issue of better targeted inspections for tackling undeclared work (UDW). At this stage, it does not provide standard classifications or solutions, applicable in all EU Member States, but rather examples of processes, systems and red flags that can be adapted to each country's specificities.

This toolkit follows the logic of the risk assessment process:

- ▶ The first section begins by outlining the main steps of the process. It represents the mutual experiences of the labour inspectorates and the challenges they have faced developing risk assessment systems and tips on how to overcome them.
- ▶ The next section focuses on the prerequisites to building a risk assessment system. It underlines the importance of institutional cooperation, developing IT systems and addressing issues around staff resources.
- ▶ It then lists indicators and red flags highlighted during the Thematic Review Workshop and examines in more detail what sources of information and systems can be used to gather information.
- ▶ The third section advises how to identify and involve key actors in developing a risk assessment system; their roles and responsibilities. The toolkit also focuses on: important tools and technical support; barriers to developing the systems; and the entire process labour authorities should consider in the early stages of developing a risk assessment system.
- ▶ The final section covers how to evaluate the risk assessment process to ensure continuous improvement.

## 1.2. Definitions

For the purposes of this toolkit, the following definitions apply:

- ▶ **Undeclared work:** any paid, lawful activities that are not declared to public authorities, considering differences in the regulatory systems of the Member States.
- ▶ **Risk assessment system:** a system generally a set of red flags and a software solution, that

1 Data analytics includes both exploratory data analysis, which aims to find patterns and relationships in data, and confirmatory data analysis, which applies statistical techniques to determine whether hypotheses about a data set are true or false

2 <https://ec.europa.eu/social/BlobServlet?docId=18826&langId=en>

identifies the threat that a company or an employee may be involved in UDW or other labour law violations.

- ▶ **Risk assessment process:** the conceptual sequence of tasks that enables the labour inspectorate to perform risk assessment, by engaging senior staff, risk specialists, data mining experts, inspectors, etc. The risk assessment process includes the preparatory and evaluation stages, while it is executed through the risk assessment system. The assessments help to identify the inherent business risks and provide measures, processes and controls to reduce the impact of these risks to business operations.
- ▶ **Data mining:** a set of automated techniques used to extract buried or previously unknown pieces of information from large datasets. Using data mining, correlations or patterns among dozens of fields in large relational databases will be identified.
- ▶ **Data matching:** large-scale comparison of records or files collected or held for different purposes to identify matters of interest. With data matching, two or more sets of collected data (records) are compared.
- ▶ **Indicators:** The statistical categories of data (e.g. average salary in a company, turnover and profit amounts, average working time of an employee, type of labour contracts used, number of sub-contractors used, etc.).
- ▶ **Red flags:** conditions and criteria, pre-set into the risk assessment tool that point to the existence of UDW (e.g. below average salary for the sector/profession, 0-25 % profit rate realised by a company following 2-3 years of activity, 25-50 % of all employees on part-time contracts, part-time contracts for less than 4 hours per week, use of more than 3-5 sub-contractors, more than 10 % staff turnover per month, firms/sectors predominantly cited in the received complaints/signals for UDW, etc.).

### 1.3. Who is the toolkit for?

The toolkit is aimed to support all relevant authorities responsible for tackling UDW within a Member State. This includes:

- ▶ Labour inspectorates and inspectors;
- ▶ National tax, revenue and social security authorities;
- ▶ Policy-makers.

The methodologies described in the toolkit can also be of use to:

- ▶ The European Commission;
- ▶ Social partners (e.g. trade unions, employers' associations, NGOs), experts and practitioners.

### 1.4. Facts and figures: The current state of risk assessment systems and their use in the EU

- ▶ Most Member States are currently facing similar challenges in developing risk assessment systems. The labour authorities in Member States developing these systems are all limited by a lack of databases and indicators to detect cases of undeclared work. Generally, the databases available are limited to data sources from the labour inspectorates and tax authorities and rarely use data from other public authorities.
- ▶ Rather than adopting a strategic approach, most Member States are pragmatic. While a strategic objective must be evidence-based, any gaps in information should be filled by gathering data, analysis and recommendations from other sources (including social partners) to help decide which forms of undeclared work need to be tackled (e.g. envelope wages, bogus self-employment, etc.). Some risk assessment systems also analyse UDW only at sectoral level, without considering the type of UDW that may occur as a cross-cutting issue.

Prior to the Thematic Review Workshop in Madrid, a pre-event questionnaire was completed by participants from different labour authorities. The results show that currently only a few Member States have developed highly effective risk assessment systems and that labour authorities face challenges including:

- ▶ Outdated information systems for collecting data;
- ▶ Insufficient budgets for new and fit for purpose information systems;
- ▶ Ensuring compliance with privacy requirements;
- ▶ Poor connection between the different information systems that inspectors have access to;
- ▶ A lack of interoperability between the information systems such as tax authorities, social security organisation, etc. making the exchange, cross checking and processing of data into risk analysis systems difficult;
- ▶ Setting meaningful red flags.



It is clear from the Thematic Review Workshop and feedback that most EU Member States would benefit from better cooperation and mutual learning between their national tax and labour authorities. Some Member State administrations do not have the necessary methodological knowledge, or access to private consultancy expertise, and rely on their own limited experience. There is therefore the need to synchronise risk assessment processes (e.g. by having common guidelines or compliance requirements) and risk assessment systems (e.g. by having standard classification for similar risks, EU-wide social security numbers, etc.) and to create an EU model for risk assessment and management. A standardised approach towards risk assessment in all EU Member States would simplify the exchange of knowledge and maximise the usage of good practices.

**Tip:** It is important to share experiences across public administrations both within and between Member States so that everyone receives early notification of emerging trends, particularly from practical, 'on the ground' experience. Countries need to learn from and apply good practices from other countries.



## 2. THE RISK ASSESSMENT PROCESS: BUILDING AN EFFICIENT SYSTEM

### 2.1. Stages of the risk assessment process

Developing a risk assessment system consists of three main consecutive phases, as defined by this toolkit. The initiation and planning phase covers all the early strategic steps, which define the purpose and goals of the system. It also includes the steps to generate the necessary political and institutional support and budget.

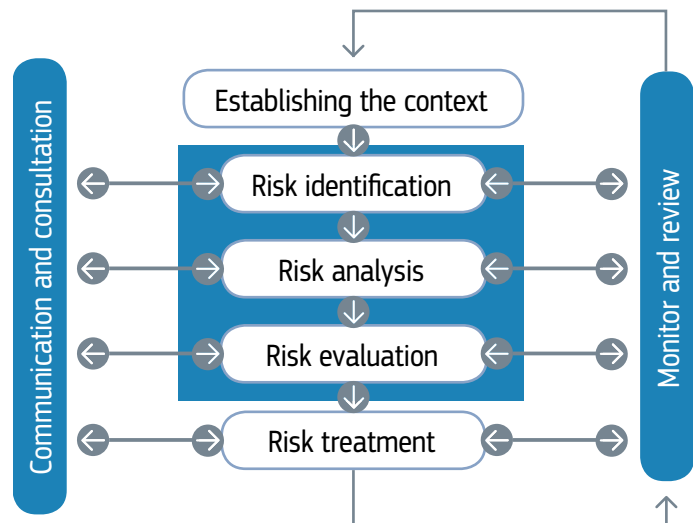
The design and implementation phase focuses on the key technical stages to develop the system. First, it covers the essential actions to access, manage and protect the data needed for the system. It then lists the necessary steps to select appropriate tools and develop algorithms for indicators and red flags. This phase is finished once the selected tools and databases are tested. The final phase is the evaluation phase, which assesses if all components (tool, algorithms, indicators, red flags) are functioning and will result in successful detection.

**Tip:** The risk assessment process is complex and its implementation should ideally follow a mature and well-recognised standard for risk management. Public authorities are therefore advised to consider using ISO 31000<sup>3</sup> as a reference and adapting it to their specific needs.



The process of performing any risk assessment and management activity in general (regardless of the sphere to which it is applied), involves a number of key stages, as described in ISO 31000 (see Figure 1).

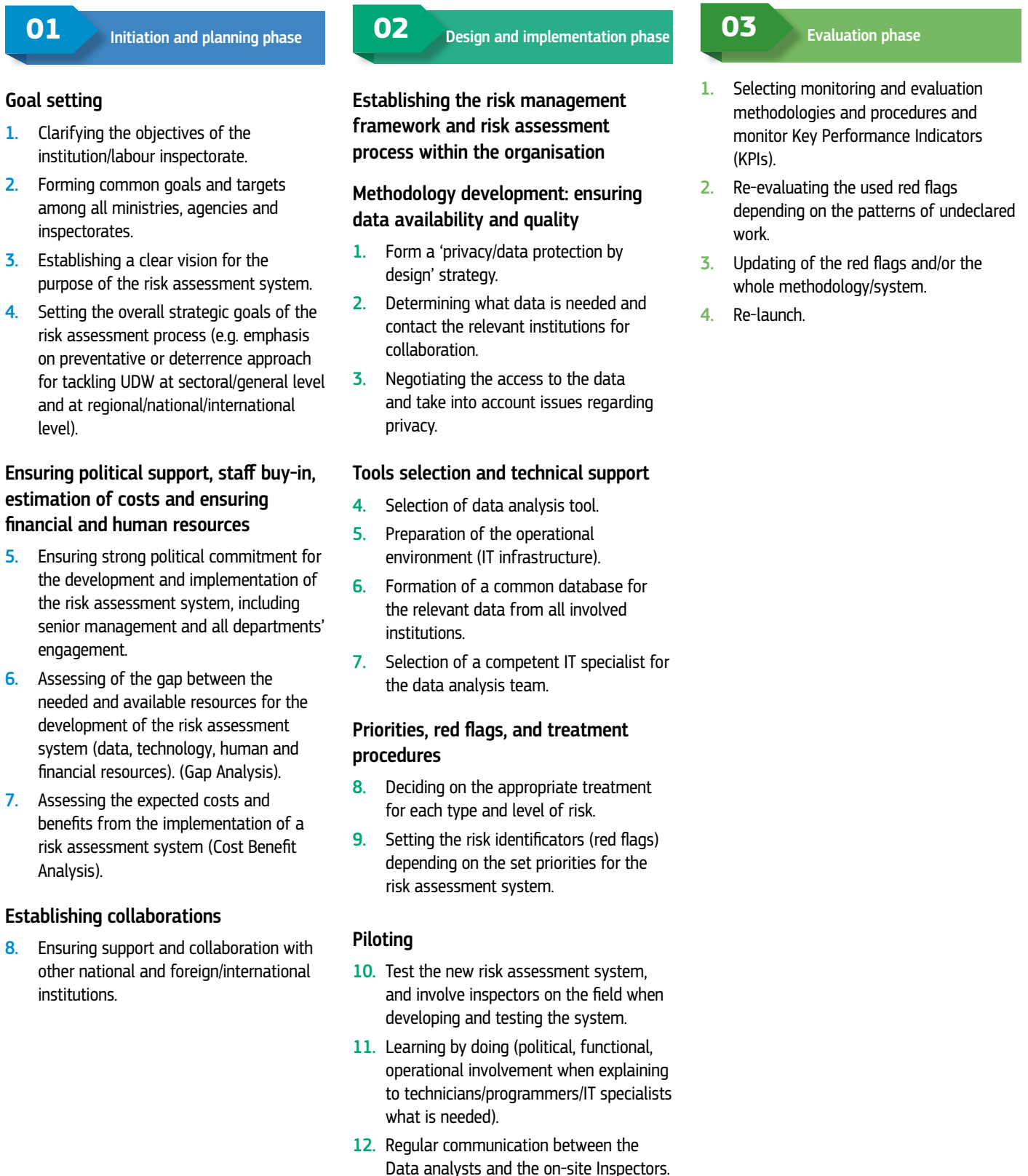
Figure 1. The risk management process according to ISO 31000



Source: ISO 31000:2009, ISO 31000:2011 and ISO 31000:2017.

This generalised process logic can be used as a starting point, and a valuable source of reference, before proceeding with the development of risk assessment procedures and systems specifically aimed at better targeted inspections and tackling UDW. An example of the main stages of the risk assessment process in the context of UDW inspections is presented in the next figure. The two cross-cutting steps “Communication and consultation” and “Monitor and review” are discussed in sections 3 and 4. The role of social partners and institutional stakeholders is covered in section 3.

Figure 2. Stages of the risk assessment process for the identification of risky companies/employers and for better targeted inspections tackling UDW





## 2.2. What is needed to build a risk assessment system? Methodology development

Developing a risk assessment methodology should rely heavily on the desired strategic focus of the system (type of UDW, sector, etc.), and on the availability and access to data. During the Thematic Review Workshop, participants distinguished different types of indicators to be used:

- ▶ Policy-driven or inspection-driven (based on problems identified 'on the ground');
- ▶ Sector-focused;
- ▶ Confidential or non-confidential;
- ▶ Based on existing data (databases, feedback from inspectors, signals/complaints, etc.) or based on newly created data.

**Tip:** Developing risk assessment systems requires significant time and resources. Sufficient staff and financial resources need to be allocated to the task. Piloting and small-scale testing is recommended to estimate the positive results (income for the state revenue, increase of declared labour contracts, number of declared hours and/or wages). This return on investment estimate could help to secure the support and necessary resources from the decision-makers. Depending on the data available, four approaches can be taken.<sup>4</sup>

 **Use of own databases.** For example, the Romanian Labour Inspectorate has used its own database since 2006, which holds around two billion records with information on contractual agreements. It does now need to add into the system data from the Ministry of Finance and the Registry of Companies, which will enable better risk analysis and develop data mining capacity.

 **Information requests to other authorities.** In this model, the social security authorities and/or the labour inspectorates ask the tax authorities for information case by case, often through personal contacts. Spain provides an example of such a case of one-time collaboration between the tax and social security authorities. After bogus self-employment became a problem in 2012 (in certain organisations, more than 90 % of workers were registered as self-employed, while the wage payer remained the same), the Spanish Tax Office provided a list of all workers who did not deduct from their taxes the allowances of genuine self-employed

status. This information was compared to the social security paid and the bogus self-employed were discovered.



**Data warehouses.** Tax, labour and social security authorities and inspectorates have access to the same data, ideally supplemented by data from other relevant public bodies. This happens rarely, since it requires collaboration at the highest levels and technical compatibility. Good examples of the use of data warehouses include Latvia and Spain. There are also high expectations of the French DSN (Nominal Social Declaration/Déclaration Sociale Nominative) tool, introduced in 2015-2016, which aims to consolidate various social security information provided by employers and reduce the number of declarations submitted to welfare agencies. Direct access to the DSN will allow the labour inspectorate to: quickly check for instances of illegal work; more quickly advance a complex investigation; analyse efficiency, progress and identify the most appropriate treatment of each case.



**Use of business models to determine turnover and salary levels (plausibility checks).** This approach (applied mainly in Germany, Romania and Spain), is based on creating business models of the typical operations of selected key risk sectors (e.g. restaurants). The authorities observe the normal business hours, costs of operations (e.g. delivered food products per week) and estimate the average/expected wages, number of employees, turnover and profit, compared to those reported. They also check case-by-case for other discrepancies (e.g. if a restaurant with 200 tables/places only has two waiters or if the owners of a firm declaring small profits have a high standard of living). The business model for a company of specific size (5, 10, 100 employees) is also compared with the data from social security and bookkeeping. For the identified risk cases, a check is performed. This methodology can determine if missing reports of working hours can be justified by co-working family members, if there is bogus self-employment and if undeclared workers are used, whose payments are not offset against profit in the financial accounts (payment from unreported incomes, booked as private deposits). Using this case-by-case approach on the ground, the authorities can also identify specific schemes for hiding income,

wages and turnover – e.g. not registering sales by using the so-called ‘training’ key in the cash register or deleting sales through an additional programme. In Spain, the Ministry of Labour, Migrations and Social Security and the labour inspectors draft business rules, work with experts to set parameters, assess the effectiveness of the labour inspectors and detect new cases/schemes involving fraud. For example, fictitious companies are companies without any activity whose aim is to register ‘workers’ so they can obtain social security benefits or work permits for third country nationals. Such cases of fraud have almost completely disappeared thanks to this type analysis (although other, new hybrid forms of UDW and fictitious labour relationships have appeared). Business rules are very efficient at tackling certain forms of fraud. The business modelling process, however, can be time-consuming and requires more staff resources than data mining.

**Tip:** Develop databases, data warehouses, business models and risk analysis systems first at national then cross-border level.

### 2.3. Sources of information. Collaboration and synergies. Mechanisms to ensure data reliability

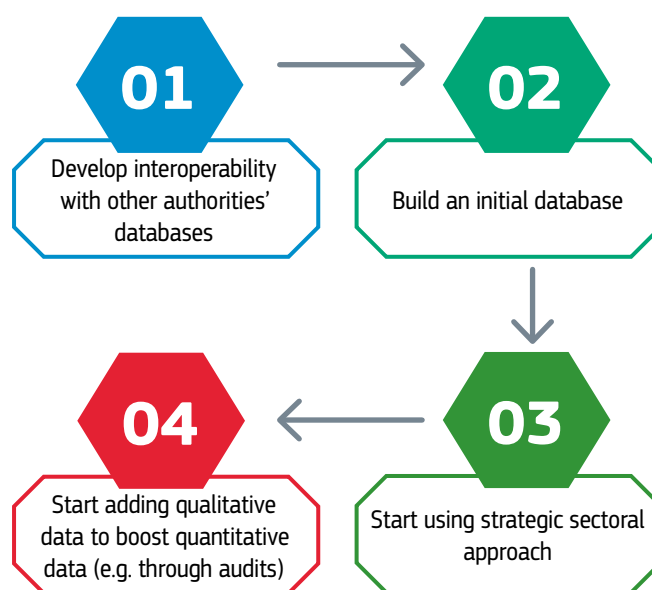
Potential sources of information could be: databases, registers, complaints received, inspectors and other experts working ‘on the ground’, the media, trade unions, non-governmental organisations, current or ex-employees, anonymous reports by citizens, penal prosecutions/administrative fines, as well as private (paid) databases.

**Tip:** For risk assessment systems to be effective, authorities should seek to establish exchange of information with as many internal, external and cross-border similar databases or systems as possible. A key prerequisite however is that authorities first check that the content in these external databases is comparable and compatible with their own to ensure interoperability.

It is recommended that labour authorities establish good working relations and rely on exchange or download of data, particularly with the tax authorities (information on revenues, and sector-specific characteristics). They are also advised to interlink the data with further outside sources, such as GPS tracking information of the fishing fleet, migration data, etc.

To operationalise and formalise these collaborations, the labor inspectorates can sign bilateral agreements or memoranda of understanding with other authorities or with social partners, which would further facilitate information exchange and interconnection of databases and registers. Please consult the Platform’s Practitioner’s Toolkit: Drafting, Implementing and Improving Bilateral Agreements and Memoranda of Understanding to Tackle Undeclared Work, 2017.<sup>5</sup>

Figure 3. Data gathering and databases development process



Source: CSD/ICF.

There are several considerations around the use of these sources:

- a. The complaints/reports (including those anonymised) on which inspectorates in many countries still primarily rely, provide good results (e.g. in Cyprus inspections following reports reveal UDW in 99 % of cases). However, the question arises whether these are the most problematic or priority cases. HMRC in the UK uses 50:50 share of complaints vs. risk assessment data to plan their activities, since there are low-complaint (or complaint silent) areas of business or geographic regions. Cyprus, on the other hand, relies on receiving complaints in 80 % of cases. Thus, reliance on receiving complaints might result in only targeting low risk areas or small-scale cases in terms of undeclared work.
- b. It is key to analyse the latest trends emerging ‘on the ground’. Sweden is a good example of receiving feedback from inspectors in the field. It relies on joint teams from labour, immigration, tax and customs

5 <https://ec.europa.eu/social/BlobServlet?docId=18827&langId=en>

authorities to meet and discuss which companies will be inspected, based on tips from inspectors, companies, trade unions, etc.

- c. The housing register can be used to check if multiple workers are living at the same address and so detect potential 'ghost'/non-existent workers.
- d. Labour authorities can also use data from private providers to discover letterbox companies. If budgets permit, authorities can buy data not available through administrative means to enrich the database.
- e. The final decision for a treatment should always be taken by the inspectorate or the responsible public authority. The users of the risk assessment results should bear in mind that some companies marked as 'risky' can be 'false positive cases', while other risk cases may remain undetected.

The two typical methods of obtaining data from another authority are:

- a. Based on national or cross-border collaborative/bilateral/multilateral agreements (which are still necessary to complement the use of the Internal Market Information System - IMI); and
- b. Information requests.

### Examples

The Labour and Social Security Inspectorate and the National Office tackling undeclared work in Spain has signed collaborative agreements as a basis for information exchange and joint activities with SEPE,<sup>6</sup> RED.ES,<sup>7</sup> TGSS,<sup>8</sup> INSS,<sup>9</sup> ISM,<sup>10</sup> AEAT,<sup>11</sup> FOGASA,<sup>12</sup> the bodies that collect social security payments, the Spanish Tax Office, the Civil Guard and Police. Joint inspections by the Police/Guardia Civil and ITSS are continuously being performed (e.g. in 2016, there were 16,761 joint investigations). As of June 2018, Spain is currently working on signing new,

much-needed collaboration agreements with state prosecutors and the justice system.<sup>13</sup>

In Croatia, company data is publicly available, so it can and is regularly used to inform labour authorities about specific cases. But other databases, e.g. of taxi companies' drivers, are not available to inspectorates. The Belgium expert noted that the LIMOSA declarations (for posted employed or self-employed people) could not be cross-checked with the country of origin authorities since there was no interoperability with local databases. An important prerequisite for such interoperability is the existence of common identifier and definitions. Accordingly, the Belgian authorities have begun to rely on SharePoint software to share information within Belgium. Cypriot authorities have also begun to implement SharePoint to exchange information between different authorities in the country.

Access to both national and other countries' databases can also be supported through joint projects such as the Red Flags! project, implemented by the International Research Institute on Social Fraud<sup>14</sup> and focusing on the digital tools to register, prevent and tackle cross-border social fraud.

A key step of the process is to verify the degree of reliability of the implemented risk assessment processes. The reliability and the success of the chosen organisational strategies largely depend on information access, sources and completeness of data and timely gathering of information related to aspects such as company and economic sector profiles, workers, previous inspection visits, imposed sanctions and interventions from other authorities, etc.<sup>15</sup>

### Example

In Spain, reliability of data is ensured by inspectors double-checking them against their findings. In Ireland, labour authorities rely heavily on other public services data e.g. Europol.

6 Servicio Público de Empleo Estatal (Public State Employment Service, Spain) - an autonomous institution, part of the Ministry of Labour Migration and Social Security. The institution is responsible for the management and control of unemployment benefits.

7 RED.ES is a public body responsible for the digitization of public services in Spain.

8 Tesorería General de la Seguridad Social (General Treasury of Social Security of Spain) - a public institution supervised by the Ministry of Labour, Migration and Social Security. It is responsible for the management and control of social security contributions and other financing resources of the Social Security System of Spain.

9 Instituto Nacional de la Seguridad Social (National Institute of Social Security).

10 Instituto Social de la Marina (Marine Social Institute) - a public institution supervised by the Ministry of Employment and Social Security. It is responsible for the health care for sea workers, as well as the registration of companies, registration of the hiring and removal of workers, collection and control of contributions (in collaboration with the General Treasury).

11 AEAT is the main institution in Spain responsible for tax collection in all regions (except the Basque and Navarre regions).

12 FOGASA (Fondo de Garantía Salarial/Wage Guarantee Fund) is part of the Ministry of Labour, Migration and Social Security. The responsibility of FOGASA is to guarantee that workers in employment relationship receive salaries, pending payments, and compensations for termination of the employment.

13 (European Platform Tackling Undeclared Work, 14-15 June 2018)

14 For more information see the website of the International Research Institute on Social Fraud: <https://www.uqent.be/re/cssr/iris/en/research>

15 (International Labour Organization 2013)

Lastly, when running risk assessment systems, it is important to account for those companies that are completely unregistered, meaning their workers are not included in the primary or initial labour authority database.

#### 2.4. Lists of indicators and red flags

It is crucial for the relevant authorities to prepare a list of red flags that are:

- ▶ Appropriate to their strategic objectives (correspond to the types of UDW that should be tackled with priority, considering the country specifics);
- ▶ Easy to measure (available, reliable and regularly updated statistical data/indicators), and;
- ▶ Do not generate issues around privacy and confidentiality.

Presented in figure 4 is a non-exhaustive list of possible indicators (categories of data) and red flags (specific conditions that could signal the existence of UDW). These can underpin the development of risk assessment methodologies, once adjusted to the country specifics and the strategic focus of the public authorities. In its final form, the red flags should clearly state the conditions for UDW risk (e.g. 50 % of all employees in a company are part-time employees), and the relevant weight of each individual red flag (i.e. if it carries the same weight as all other red flags or is higher/lower). Thus, when the red flag conditions are met, and their relevant weight applied, the IT solution used could provide the final ranking and highlight the cases recommended for further investigation, inspection and/or audit. During the process, labour authorities should consider any exceptions to the rules and mitigating circumstances. For example, students and those under 25 years-old typically work part-time, and this should not be considered a risk factor, or it should carry less weight. When considering part-timers as a risk group of workers, the data should be cross-checked with labour and labour-time databases by the identification number and name of the person, since it is possible he/she works four hours a day for two different employers.

Another consideration when performing risk assessment is the quality and relevance of complaints received. Complaints tend to be anonymous and come from workers and trade unions (often ex-workers and ex-business partners). It is not recommended that inspection follow every complaint. While complaints are useful to detect the latest trends in new or prevailing

evasion schemes, those which suggest risk (particularly if the firm is considered risky when combined with other red flags) can be followed up by comparing the complaint information (e.g. that a worker has not received a salary) with the official data from registers/databases (e.g. monthly declaration to the tax authority of salaries paid).

#### Use of technological solutions

Different Member States have put significant resources into developing an efficient risk assessment architecture. Many of the new measures are increasingly innovative and have the potential to be transferred to other countries and sectors.<sup>16</sup> In Belgium, for example, the Social Inspection Services Anti-Fraud Organization (OASIS) develops red flags to identify individual targets. OASIS monitors seemingly simple company and employee data (e.g. turnover, number of employees, registered personnel, wage levels, etc.) but can generate actionable indicators and detect abnormalities by looking for specific trends (e.g. increasing turnover with decreasing number of employees; reduction of registered staff above a certain threshold; large differences in total wage sums and numbers of employees; labour mobility, etc.).<sup>17</sup> In other cases, such as Austria, countries resort to introducing an integrated social security contributions and wage-taxes audit (Gemeinsame Prüfung lohnabhängiger Abgaben – GPLA), where an employer is being audited either by a competent social security institution or alternatively, by a related tax authority. This particular approach is complemented by a high level risk-analysis, cooperation and data exchange between the respective public organisations (or departments).<sup>18</sup>

In Portugal, inspection priorities are based on indicators delivered by an information system and cross-checked with information provided by social security and social partners. This approach produces actionable intelligence, which can later be incorporated into a more comprehensive risk assessment system. The results in Portugal identifying major UDW cases ranged from totally or partially undeclared work, the wrongful exploitation of fixed-term employment contracts to temporary work, etc.<sup>19</sup>

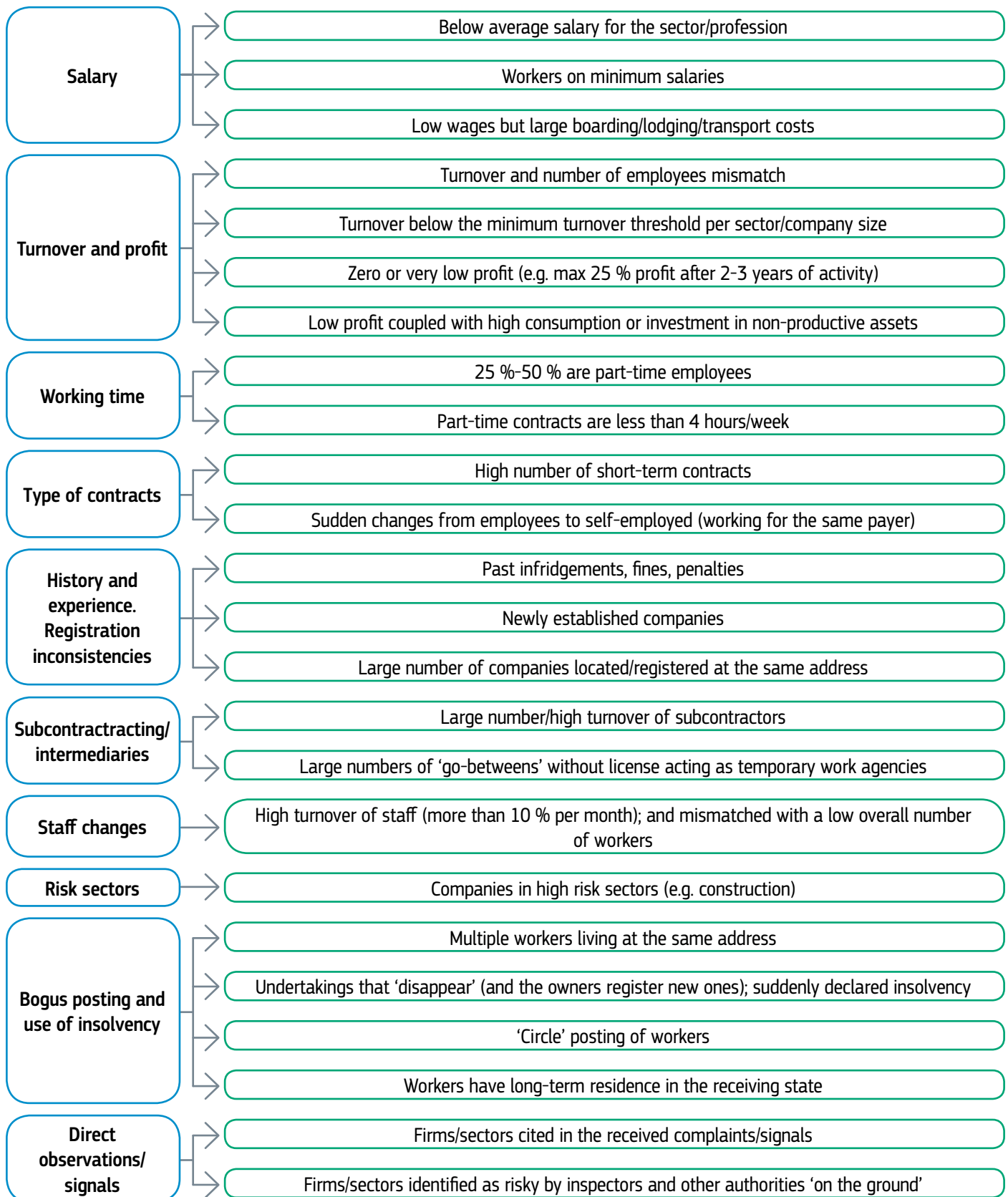
<sup>16</sup> (Eurofound 2013)

<sup>17</sup> (Eurofound 2009)

<sup>18</sup> (Eurofound, 2013)

<sup>19</sup> (International Labour Organization 2013)

Figure 4. Potential indicators and red flags for effective risk assessment



**Source:** CSD/ICF, based on presentations by workshop participants at the Thematic Review Workshop on 'Risk Assessments for more Efficient Inspection' (Madrid, Spain, 14-15 June 2018).



The fast-paced technological development of recent decades allows authorities to use advanced analytics and machine learning for risk assessment. Ireland, for example, continues to develop its approach by regularly updating existing IT infrastructure and real-time risk analysis systems (PAYE<sup>20</sup> and the VAT Real Time Risk systems are good examples). Moreover, Ireland is investigating new ways to remain up-to-date in the face of emerging trends and challenges. In 2016, the country piloted an analytical model, designed to detect non-compliance based on demographic characteristics and spending behaviour.<sup>21</sup>

A recent OECD study, however, demonstrates that most risk assessment systems still include a manual element, with some primarily or wholly manual. Tax and labour authorities also differ as to whether the risk assessment is performed centrally, by a designated unit or by the compliance team.<sup>22</sup> The technical side of the process includes two key stages:

- ▶ Integration of several databases/registers in a larger data warehouse system. Countries have already begun cooperating on the introduction of software systems in risk assessment. For example, Cyprus has asked Belgium to help them operate the ERGANI registration system, which Greece provided free to Cyprus. The system is expected to be launched in Cyprus at the end of 2018. Similarly, Romania has cooperated with Spain on the introduction of the INTEGRA system. Technically, Romania now has the prerequisites to perform a very narrow technological assessment, but must first learn how to use the e-systems for risk assessment purposes and secure political backing. As suggested by the Spanish Anti-Fraud Office, it is also important for inspectors 'on the ground' to use more integrated IT and communication systems (e.g. to have inspectors use a tablet-type device and access labour and security databases to obtain real-time information during inspections).
- ▶ Feeding this consolidated data into a data mining tool, which calculates the risk scores based on the programmed risk conditions (red flags). This data mining software can be open-source or commercial (paid) and adapted to the needs of the inspectorates. A list of popular commercial and open-source data-mining tools is available on the 2017 Platform's Practitioner Toolkit from the Thematic Workshop on 'Data Mining for More Efficient Enforcement'.<sup>23</sup>

Examples of registration systems, warehouses and software which can be utilised for risk-assessment:

**Dimona (Déclaration Immédiate/Onmiddellijke Aangifte):** a database which collects the working relationship between employees and employers within the National Office for Social Security in Belgium. Due to the developed e-Government programme in Belgium, social security applications allow near real-time data collection and hence, fast re-use for risk assessment by labour inspectorates.

**ERGANI:** a registration system used in Greece, Belgium and (expected by the end of 2018) in Cyprus. It works by registering the number of working hours of every employee (Cyprus, Belgium) into a database and then compares it with the available data from other databases.

**ESCORT:** a software, part of the risk assessment systems of Greece, Ireland and Sweden.

**INTEGRA:** a data and files collection system for evaluation of the effectiveness of inspections (used in Spain).

**PAYE:** the UK's 'Pay As You Earn' system is used to collect income tax and national insurance contributions from employers. Employers deduct taxes and social security contributions from employees' gross wages.

**REGES:** a database system which collects the working relationship between employees and employers in Romania.

**COLUMBO:** a Business Process Management System (BPMS), implemented for the management of the effectiveness of inspections in Romania, similar to INTEGRA in Spain.

Economic costs and considerations are similarly important. According to the Belgian expert, a country might need 10 years and millions of Euros to develop and launch a risk assessment system based on e-databases, while explaining the possible Return on Investment (ROI) of implementing the risk assessment system to decision makers is also most useful.

20 PAYE (or Pay As You Earn) is the main instrument, through which employees pay taxes. It ensures that the total annual tax amount, which an employee is required to contribute, is evenly collected on each pay day over the year (Revenue, Irish Tax and Customs 2018)

21 (Irish Tax and Customs Revenue 2016)

22 (OECD 2017)

23 (European Platform Tackling Undeclared Work, 14-15 June 2018)

## 2.5. Outputs of the performed risk assessment

It is important that the system is developed so that the information generated by the algorithms communicates clearly to the inspectors if a case is potentially irregular. The 'on the ground' inspectors will similarly only recognise the value of risk assessment if it offers them specific details of what they perceive in the field. The final outputs should be provided to them in a concise, clear and comprehensive form, e.g. including charts and geographical maps; narrative texts; lists and rankings of risk companies based on clear criteria which the inspectors themselves can alter and adjust as necessary; network analysis of related companies (accompanied by a network diagram of the internal connections and relations between companies and/or people), where applicable.

During the Thematic Review Workshop in Madrid and the Follow-up Visit in Brussels on 28 September 2018, several Member States demonstrated which risk is assigned to the analysed employers, employees or taxpayers.

### Example: Latvia

In Latvia, taxpayers are ranked based on Risk Points, where the risk ranking does not necessarily mean that specific tax payers are evading taxes, but rather that a particular case might require an audit.

In the risk assessment tool used by the State Labour Inspectorate of Lithuania the outputs are rank-based and created in a colour-coded, user-friendly manner. The tool ranks the cases into three zones: the green zone ('ignore'), the yellow zone ('monitor') and the red zone ('check').

Irrespective of the output method, the decision as to whether an inspection is needed should be made not by the system but by the inspectorate.

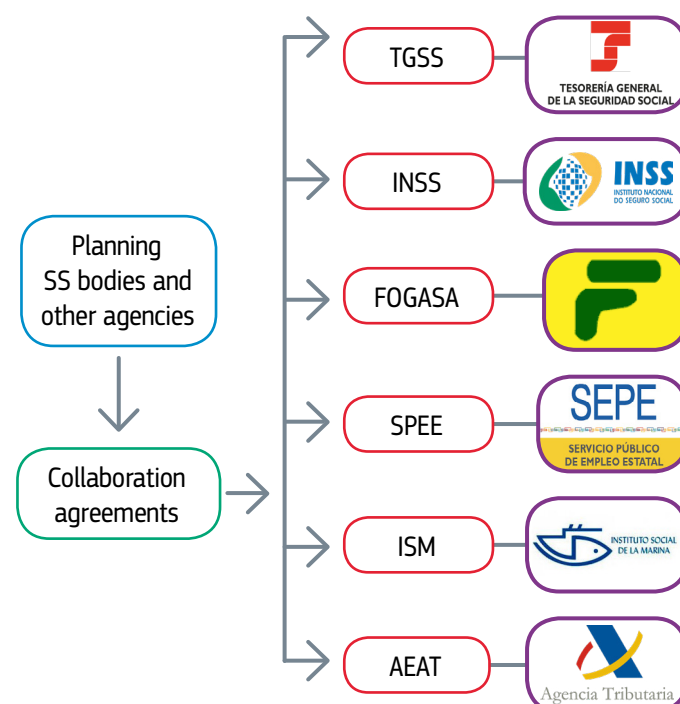
# 3. Realising and enhancing institutional capacity for risk assessment in enforcement bodies

This section covers the main actors involved in the process of developing risk assessment systems. It recognises the responsibilities and challenges facing the relevant bodies for the system to function. It also covers the process for tool selection and implementation and the relevant issues.

## 3.1. Main actors, roles and responsibilities when building the risk assessment system

The first important set of actors to consider when the goal is to implement and enhance the risk assessment systems are the senior management of the relevant institutions. Their key role is primarily to strategically embed risk assessment into the institutional culture. This means aligning the visions and goals set for the risk assessment tool with the institutional objectives and establishing the risk assessment process not as isolated but as core to the organisational reporting, decision-making and governance. This requires a culture shift for inspectors and other relevant staff to use and rely on the risk assessment system for tackling undeclared work. Another important role of senior management is to secure political support for the development and implementation of risk assessment systems. This means developing relationships with other relevant institutions and garnering agreements on institutional cooperation and data exchange. Senior management plays a vital role in developing a collective database and amalgamating the databases and information from all relevant institutions.

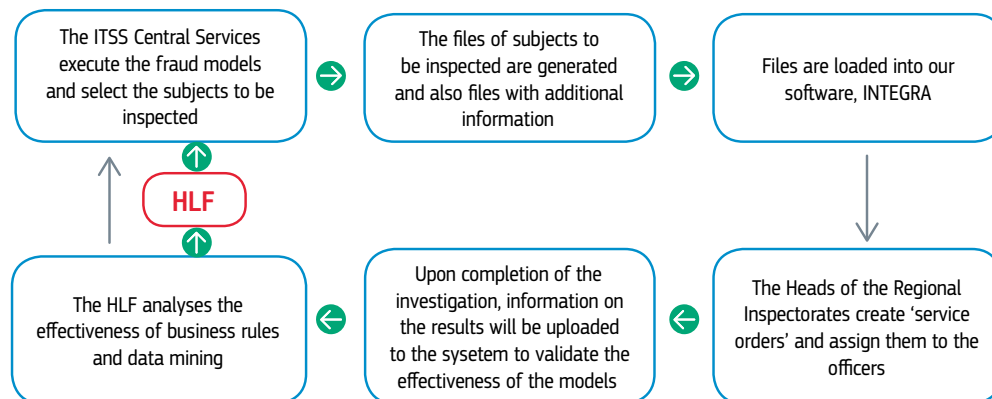
Figure 5. Example of the relation between the planning stage and formation of collaboration agreements



**Source:** Presentation of the Spanish National Office tackling Undeclared Work, Thematic Review Workshop on 'Risk Assessments for more Efficient Inspection', Madrid, Spain, 14-15 June 2018.

An important challenge of the development process is creating an effective risk assessment algorithm that can accurately predict if a company or person is compliant. This can be developed internally by IT specialists within the enforcement and/or the prosecution authorities or by using an external specialist commercial company. Business analysts play a key role in creating the data analysis tool (including social partners and trade associations) as do the inspectors, who can offer insights into which risk condition (e.g. sudden change by half a firm's employees to self-employed status) should be defined as a specific red flag to be used by the tool.<sup>24</sup> These observations by inspectors offer vital insight to help the system to adapt and develop.

Figure 6. Work process and improvement of the model of HLF (Herramienta de Lucha contra el Fraude - Anti-Fraud Tool)



Source: Presentation Spain from Thematic Review Workshop on 'Risk Assessments for more Efficient Inspection' (Madrid, Spain, 14-15 June 2018).

Risk assessment systems use personal data and a taskforce to protect this data within the database is essential. An example is the Commission for the Protection of Privacy (CPP) in Belgium, an independent body that protects the privacy of personal data processed by the risk assessment system. The CPP consists of several sector committees, responsible for the protection of data within a specific sector. For example, the 'Social Security and Health' committee protects the privacy of beneficiaries of the Belgian social security network and the exchange of health-related data.

The final segment is the 'in-the-field' inspectors. Their role is to conduct the inspections based on the results of the risk analysis. The inspectors should be told which red flags have been activated during the risk assessment. Following the inspections, the results are uploaded into the risk assessment system. Based on these results, the effectiveness of the algorithm in detecting fraudulent activities can be assessed. If the fraud model/algorithm is ineffective, it is improved based on the failed inspections.

In some risk assessment systems, for example in Belgium, companies that have previously been involved with UDW are ranked as vulnerable to future infringements compared to companies which have not. Again, for future inspections, inspectors will have information about the vulnerability of the company and previously used forms of undeclared work, offering clues as to what to inspect. The interaction between the data analyst and the inspector should therefore be an iterative process. To further improve inspections, it may be recommended that civil guards and the police accompany the inspectors (particularly when visiting employers known for acts of violence or obstructing inspectors).

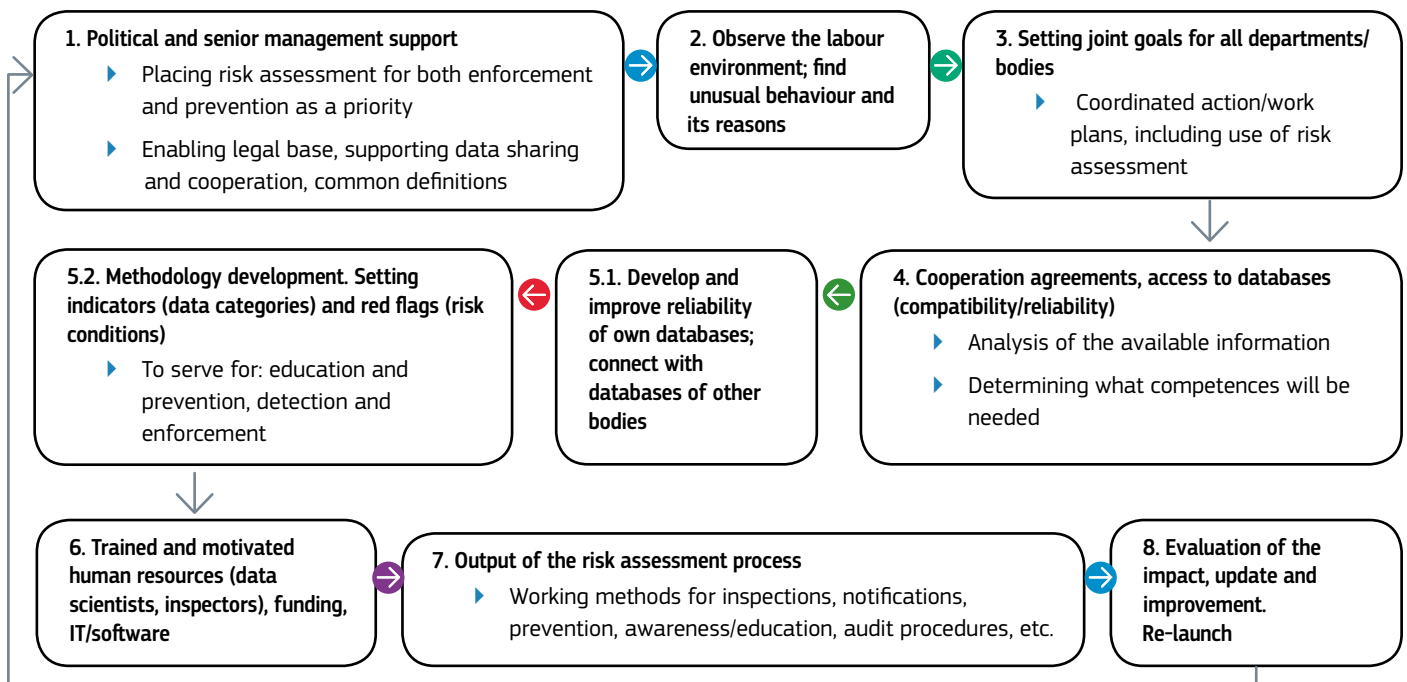
### 3.2. Tools and technical support for labour inspectors

Using data analysis tools helps maximise the benefits of inspections and minimises the cost. Various data mining and data matching tools<sup>25</sup> are currently available to be implemented into risk assessment systems. No specific tool is better than others, rather different software have their own pros and cons. Selecting the best tools relies on the available IT resources and expertise of the analysts. Enforcement bodies must understand the chosen tools and be aware of their features, advantages and limitations. Recognising these limitations is essential to the success of the system. It is worth noting that, currently, staff within most labour inspectorates have limited IT expertise which in turn limits the efficiency of the risk analysis system. One solution is for labour inspectorates to hire specialists who understand the data analysis tools, provide technical support and exchange information and insights with the inspectors 'in field', but this is costly. Regular communication between analysts and inspectors is vital because inspectors need to know the reasons for the inspections. More particularly, they need to know which red flag is activated during the analysis, to provide further background to the inspections.

The selection of the most appropriate risk assessment system also depends on whether the tools are free, open-source software or specially designed programmes and systems. The first has the benefit that more IT specialists will be available to perform the analytical work and it is cheaper to install. The benefit of specially designed systems is that they are specific to the purposes of risk assessment systems. For example, the Connect Tool (used in the UK) is specifically designed to measure behavioural patterns which might more accurately identify high-risk VAT traders. Another advantage is that the tool comes with skilled personnel, solving the challenge facing enforcement bodies of recruiting IT specialists.

25 <https://ec.europa.eu/social/main.jsp?catId=1299&intPageId=4875&langId=en>

Figure 7. The risk assessment process and its integration in the strategic planning



Source: CSD/ICF.

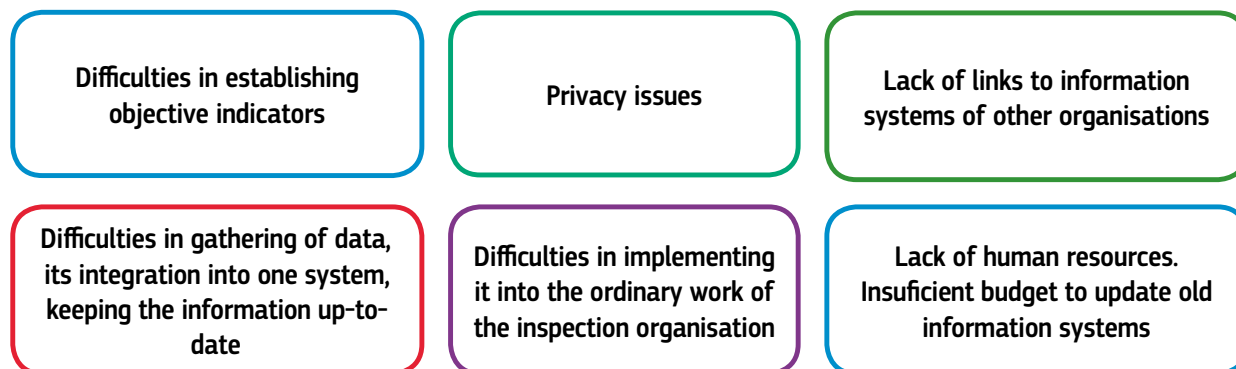
### 3.3. The role of social partners and institutional stakeholders

The successful planning, development and functioning of the risk assessment system relies on various social partners and institutional stakeholders being involved in the process. During the planning phase, political commitment from senior management in all relevant ministries, agencies and inspectorates is essential. For example, in Croatia, only through political support, were relevant institutions made aware of the development of the risk assessment system and the importance of their databases to its success. It is vital for labour inspectorates to communicate to the ministers and policy-makers the benefits of developing and implementing a risk assessment system to gain political backing and funding. Risk assessment systems should also be included in overall strategic planning to promote better cooperation between institutions. Improved cooperation can strengthen the risk assessment system through data-sharing, exchange of experience, sharing IT tools, training, etc. This process is also often implemented alongside the development or improvement of the e-government and e-services for citizens and businesses, a further argument for political support. Collaboration should also be established between the institution developing the risk assessment system and the labour inspectorates from other Member States.

Provincial governments, local municipalities, non-governmental organisations, social partners, academia representatives and individual researchers can also support the development of risk assessment systems, by highlighting specific patterns of undeclared work. Cooperation between them, labour authorities and also local civil officers/police helps generate more efficient pections.

The European Platform Tackling Undeclared Work (the Platform) and the future European Labour Authority can play an important role in sharing expertise for developing and improving risk assessment systems. It is essential that the actors responsible for developing such systems be informed about patterns of undeclared work, strategies for social security and tax evasion and other approaches occurring in other Member States to be able to adapt the red flags to detect UDW patterns in their own country. The Platform is an effective source of new information and insights. It organises seminars and workshops between key stakeholders of the different Member States including labour inspectorates, tax authorities social partners, etc. It also helps exchange information about the challenges and experiences in developing and maintaining such systems. The Platform produces studies, toolkits, discussion papers, event reports and other written resources. It is important that the senior management of the national labour inspectorates are informed through these resources.

Figure 8. Main barriers for the development of risk assessment systems



**Source:** Presentation from Thematic Review Workshop on 'Risk Assessments for more Efficient Inspection' (Madrid, Spain, 14-15 June 2018). Findings from pre-event questionnaire.

### 3.4. Main barriers for developing an appropriate risk assessment system in a public authority

Risk assessment systems are a cutting-edge approach for tackling undeclared work. Institutions face a variety of barriers, which limit their ability to implement these systems. During the pre-event questionnaire at the Thematic Review workshop on 'Risk Assessments for more Efficient Inspection' representatives from the labour authorities highlighted six main barriers to adopting a risk assessment system.

One of the most common issues facing newly adopting institutions is lack of access to information systems and databases of other relevant institutions. As noted in figure 3. and in section 3.1 and 3.3, partnerships and cooperation agreements are essential for accessing more databases. Another potential barrier is if indicators and algorithms cannot highlight fraudulent activities. It is vital that these are tested regularly and include the input from the 'in-field' inspectors. Regarding data privacy issues, as suggested in section 3.1, creating a Data Protection Task Force is essential. The main barrier that most inspectorates claim to be facing is the lack of human resources with relevant IT skills.

### 3.5. Good practice examples

Ensuring political support for the use of risk assessment systems, access to necessary data with sufficient detail and skilled human resources all impact the success of identifying potential UDW companies and workers and their efficient inspection.

Figure 9. Success factors

|                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ensure political support (financial and human resources) for using risk assessment systems                                                                                        |
| Establish a clear vision for the purpose of the risk assessment system                                                                                                            |
| Demonstrated success (to the policy-makers and society)                                                                                                                           |
| Organisational culture and structure, where the risk assessment process is not isolated but considered a core element of organisational reporting, decision-making and governance |
| Update the vision for the risk assessment system and the strategic goals over time                                                                                                |
| Pursue more collaborative agreements and national and foreign partnerships with other government agencies, business and social partners                                           |
| Experience and feedback from the ground (inspectors to act as the bottomline)                                                                                                     |
| Protection of personal data/ensuring privacy                                                                                                                                      |
| Experienced human resources with appropriate IT skills                                                                                                                            |
| Training of inspectors                                                                                                                                                            |
| Available software tools. Human and technological capabilities and integrator to bring them all together                                                                          |
| Access to appropriate data                                                                                                                                                        |
| Common definitions across administrations, and common legal base                                                                                                                  |
| Update the red flags according to changes in the patterns of undeclared work                                                                                                      |
| EU dimension: common identification numbers (e.g. VAT, Social Security Number)                                                                                                    |

**Source:** pre-event questionnaire and discussion at the Thematic Review Workshop on 'Risk Assessments for more Efficient Inspection' (Madrid, Spain, 14-15 June 2018). Findings from pre-event questionnaire.

**Tip:** Legislation should support data sharing - whilst complying with data protection issues - and concentrate efforts where most needed (e.g. no need for obligation to check all anonymous signals). National legislation is also necessary to enable police officers/civil guards to accompany inspectors.



#### Example: Spain. Tackling UDW and social security fraud<sup>26</sup>

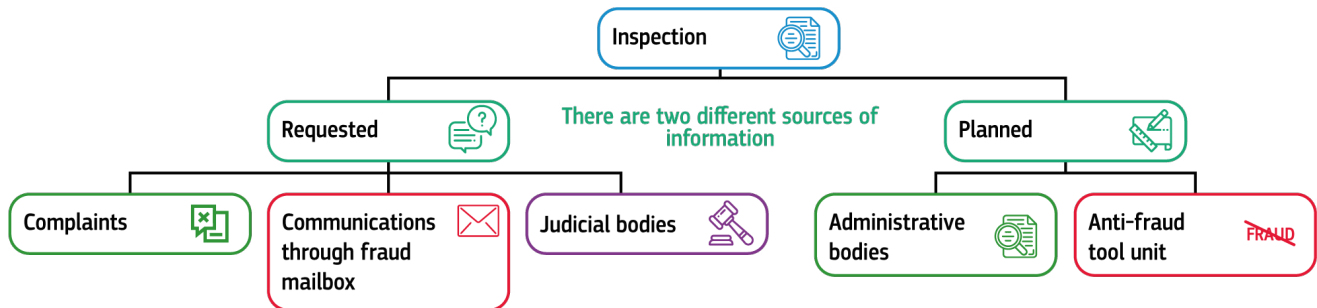
Between 2010 and 2012, Spain was significantly affected by the economic crisis, one of the results being a significant increase in UDW. Since 2012, a comprehensive plan to tackle UDW and social security fraud has been developed and is currently being implemented. This plan is based on three pillars:

- 1) Stronger institutional structure (new law on the

labour and social security inspection signed in 2015; independent agency to conduct the fight against UDW; increase coordination with regional administrations/ regional governments coordinate with each other; greater participation of social partners); 2) Better cooperation (regional, national institutions and other organisations and stakeholders); and 3) Intensive use of technology to analyse information sources and detect fraud, but also to understand social and labour reality and trends. Some of the priorities of the plan include: a) Prevention and detection of cases of unemployment benefits paid to people not entitled to them, b) Detection and control of social security bonuses and other employment benefits. This framework has been reinforced by the Master Plan on Decent Work 2018-2020 which was recently published. This Master Plan includes 75 measures to tackle UDW and labour and social security fraud.

<sup>26</sup> For more information see: (Ministerio de Empleo y Seguridad Social 2015) and (European Platform Undeclared Work 2017)

Figure 10. Structure of inspections in Spain



**Source:** Thematic Review Workshop on 'Risk Assessments for more Efficient Inspection' (Madrid, Spain, 14-15 June 2018). Findings from pre-event questionnaire.

The Spanish Anti-Fraud Tool (Herramienta de lucha contra el fraude) is a collection of IT tools used to tackle UDW and social security fraud.<sup>27</sup> It has been in use since 2015 and due to the ongoing re-evaluation of its effectiveness, the efficiency rate of inspections has regularly increased. This risk assessment system is based on solid infrastructure for data gathering and exchange. To enable data gathering, cooperation agreements are signed with TGSS, SEPE, AEAT, RED. ES, INSS, ISM, Secretaria General de Transporte, Registradores de Espana and others. The Anti-Fraud Tool collects data from the databases of the different institutions with which it has cooperation agreements. It also analyses data from the Labour and Social Security Inspectorate database, INTEGRA. The data mining process is performed by inspectors, IT staff and external consultants.

The system also relies on 'business rules', which are risk assessment indicators designed by the team of inspectors and sub-inspectors assigned to the 'Anti-Fraud Tool' Unit and Ministry and IT experts. Their involvement in conducting 'in field' inspections allows the effectiveness of each planned activity to be analysed. It also detects new trends of fraud. For example, in new geographical areas, activity in different sectors, appearance of new forms of undeclared work, and others. The involvement of inspectors also makes it possible to redirect inspection activities towards more critical cases.

The whole process of transition from data mining and data analysis towards inspections and evaluation is a six-step process:

- ▶ The ITSS (Inspección de Trabajo y Seguridad Social/Labour and Social Security Inspectorate) Central Services execute the fraud models and select the subjects to be inspected;
- ▶ The files of subjects to be inspected are generated and files with additional information;
- ▶ Files are loaded into the software, INTEGRA;

- ▶ The Heads of the Regional Inspectorates create 'service orders' (each investigation on a specific company is called a 'service order') and assign them to the officers;
- ▶ Upon completion of the investigation, results are uploaded to the system to validate the effectiveness of the models;
- ▶ The HLF analyses the effectiveness of business rules and data mining.

The risk assessment system undergoes an evaluation phase, which includes both quantitative and qualitative measures of success. Following an inspection, the results are uploaded into the INTEGRA system and the efficiency is then assessed.

#### Example: Latvia. ESCORT risk analysis system

The Latvian State Revenue Service (SRS) currently uses the ESCORT risk analysis system. This system focuses on analysing companies rather than employees. The process of selecting tax control measures begins with tax control planning and analysis division of the Tax Control Board, which sends the selected task to the Legal persons' analysis division who compare the data on the ESCORT system with data from the data warehouse and produce an Audit Plan. The tax control board includes four highly qualified specialists who provide the risk analysis process, maintain and operate risk analysis systems and formulate metadata. The formation of the metadata includes: following up all the data available on the database that is at the disposal of the SRS; inclusion of additional information into the database; defining, maintaining, correcting and improving the Risk Criteria (SQL and formalisation language); planning the Risk Analysis Tasks. The Tax inspectors at the Legal Persons' analysis division utilise the results from the risk analysis and evaluate the



taxpayers to select the appropriate tax administration measure.

The data used for the ESCORT risk assessment system are collected in one data warehouse. The main information sources used by the risk assessment system come initially from the SRS database, which includes data on taxpayers' registration information, information from tax returns, SRS tax administrating activities etc. This data warehouse also collects external data from other institutions. The external source is the State Labour Inspectorate which provides information about businesses previously detected with illegal or undeclared employees. It also collects data from the Office of Citizenship and Migration Affairs on issued licenses for specific sectors such as Construction or Transportation. Other sources include: vehicle registry data, information from market places (persons who rent trading facilities in markets), Central Statistical Bureau data on average salary within certain professions, Information from banks about instances of suspicious transactions.

The ESCORT system risk assessment works via knowledge-based risk rules. Different functions are used to formulate risk criteria. One example is «If – Then» logical operators. Another is the function slope (points are assigned for a certain value of 'step'). According to significance, similar risks, which are differently defined and with different degrees of risk, are combined into one 'area' - if a company operates in several 'areas' of risk, then only the risk with the highest number of points is counted in the total points. An example of a rule is RISK, which identifies if the number of

taxpayer's employees with salary less than the state average salary exceeds 50 % of the overall number of taxpayer's employees and the turnover of the taxpayer is bigger than X value. Risk variables which are used with the risk rules include, for example:

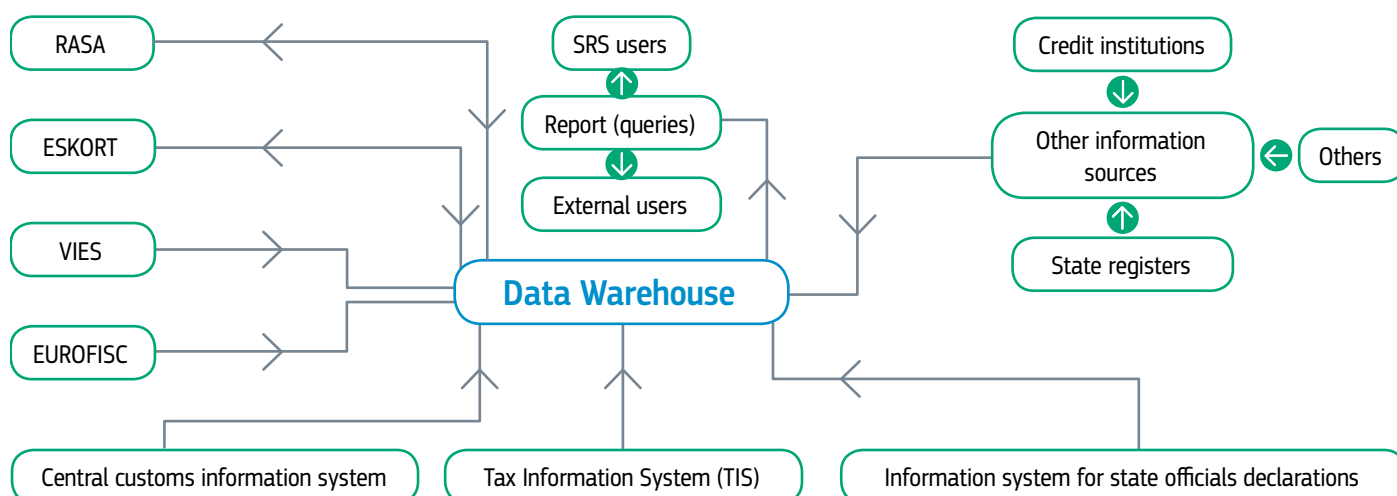
- ▶ Average salary;
- ▶ Hourly wage/tariff rate;
- ▶ Number of employees;
- ▶ Number of registered cash registers;
- ▶ Number of market places;
- ▶ Number of structural units;
- ▶ Information on performed control measures in the field of envelope wage;
- ▶ Information on detected offences during checks;
- ▶ Information on received complaints about envelope wage.

There are three forms of risk categorised by this system:

- ▶ Common risks;
- ▶ Comparative risks;
- ▶ Analytical risks.

These risks are evaluated based on a point assessment system, where the value of points depends on risk's relevance. Assigned points indicate potential risk of tax evasion. Once the assessment is completed, it is decided whether to conduct an audit.

Figure 11. Sources of data for the Latvian data warehouse



Source: Thematic Review Workshop on 'Risk Assessments for more Efficient Inspection' (Madrid, Spain, 14-15 June 2018).

# 4. EVALUATION, ENHANCEMENT AND SUSTAINABILITY OF RISK ASSESSMENT SYSTEMS

Once the risk assessment system is established, it is important to follow an evaluation process which will assess the system, its outcomes and whether it needs changes or improvements over time. The evaluation process enhances the system over time while the iterative process of solving occurring issues improves the sustainability of the system.

## 4.1. Selecting monitoring and evaluation methodologies and procedures. Adopting best practices from other fields/sectors

The evaluation phase is vital to the long-term effectiveness of the risk assessment system. It enables the relevant actors who use the system to assess its performance and, if issues occur, to make changes to the system. The evaluation phase begins during the development of the system and remains part of it, in order for the system to adapt in the future. An efficiency evaluation process for the whole institution can identify how a sifting process can be designed so that the authorities can dedicate greater resources to more strategic inspection visits. When an evaluation is made, it is important to bear in mind the original purpose of the system. Changes should not be limited to the technical parameters of the system itself but also include re-examining the overall purpose of the system. If the relevant authorities that use the system conclude that its goals are becoming irrelevant over time, they should change the risk assessment system and the red flag methodology in a way that better corresponds to the new reality, the newly emerging evasion schemes, and the overall strategic objectives and policy focus of the relevant public authority.

To evaluate the performance and effectiveness of the system, it is important to set concrete benchmark indicators, and monitor their success by collecting regular feedback from the main users. These indicators should be designed to allow the labour inspectorates to assess whether the system delivers its prescribed goals. Ideally, they should be 'SMART' (specific, measurable, attainable, relevant, time-based). These indicators can also highlight whether particular aspects of the system need changing (e.g. if the red flags are appropriate to detect the most prominent cases of UDW or if they

need an update). Monitoring and evaluation plans and methodologies can be adopted from other authorities and sectors, e.g. tax evasion risk assessments, health and safety risk assessments, etc.

## 4.2. Exemplary approaches to the setting of benchmarks and Key Performance Indicators (KPIs)

To continually improve the effectiveness and impact of an inspection plan based on risk analysis and data mining, the most appropriate KPI should be selected. KPIs should be agreed benchmarks among all stakeholders (i.e. inspectorates and public institutions, social partners and business representatives), which correctly reflect the strategic objectives and aims of the risk assessment system. Some examples of KPIs may include:

- ▶ Increased efficiency of inspections (has the risk assessment correctly pointed out the most prominent cases of UDW);
- ▶ Positive return on investment (based on cost-benefit analysis);
- ▶ Decreased overall occurrences of UDW (number/share by sector, type of UDW, company size, geographical region, etc.);
- ▶ Converted UDW into declared (number/share);
- ▶ Corrected behaviour regarding salaries, working time, use of the appropriate type of employment, etc.;
- ▶ Increased social security and tax collection (amount/share) or decreased social security (undue) benefits etc.

The cost-benefit analysis<sup>28</sup> particularly helps assess if the cost of the development and implementation of the system is more or less than the estimated benefits. For example, the Connect Tool, used by HMRC, initially cost GBP 90 million (EUR 102 million) for the development and implementation of the system, but subsequently the increased tax revenue was estimated around GBP 3 billion (EUR 3.4 billion) for the period 2010-2015, due to the implemented Connect Tool.<sup>29</sup>

<sup>28</sup> (Wispelaere and Pacolet 2017)

<sup>29</sup> (HM Revenue & Customs 2016)

Another approach which evaluates the effectiveness of the system is by measuring the number of inspections and their outcome. For example, the National Employment Office of Belgium publishes the annual outcomes generated by the system indicating number of audits, number of infractions and amount recovered.<sup>30</sup>

The evaluation phase should be undertaken with caution. It is important to note that inspection agencies that use a risk assessment system should not only concentrate on using increased tax revenues from inspections as the main indicator of the system's success, but also aim to reduce instances of UDW and turn undeclared work into declared.

Relying primarily on financial results or on the number of successful inspections could generate a potential issue: the positive results of these indicators might shift the purpose of the system towards maximising successful inspections, audits and returned taxes, rather than the overall aim of reducing UDW and increasing formal labour contracts correct declaration of total wages and working hours.

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30 (Wispelaere and Pacolet 2017)

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