

Implementing a Shared Inspection Management System

Insights from recent international experience



Businesses, non-governmental organizations, and health care providers in developing countries often face an array of inspections from various government agencies. Leading reformers have turned to shared technology solutions to better coordinate the timing, scope, and targeting of inspections. A recent study conducted by the World Bank Group examined the experiences of 12 jurisdictions with inspection management ICT solutions shared across multiple inspectorates.¹ The study results confirm that the use of a shared inspection management system (SIMS) can help facilitate reform efforts and expedite their expected benefits.

- Decreased administrative burden for businesses and entrepreneurs to comply with regulation;
- Increased quality and effectiveness of inspections leading to improved regulatory compliance;
- Improved internal efficiency and reduced administrative costs for governments; and
- Increased transparency of inspection operations for businesses and citizens leading to a decrease in corruption.

These benefits usually result from:

- Gathering and consolidating more consistent and comprehensive information on enterprises subject to inspection;
- Streamlining the inspection process to increase inspector efficiency;
- Formalizing policy and procedures to ensure consistency;
- Automating and supporting decision-making to reduce subjectivity in operations and maximize the use of resources;
- Sharing information across inspectorates to coordinate inspection scope, improve preparation and outcomes, as well as reduce the inspection burden of individual inspectorates; and
- Providing public access to relevant information leading to increased transparency and accountability.

Best practice today dictates that business inspections should be organized around the business enterprise; that is, the various inspectorates should ideally coordinate their activities to ensure that all relevant risks are properly addressed during a joint inspection process. However, experience shows that inspections tend to be uncoordinated, unplanned and carried out in silos, regardless of industry or jurisdiction. Typically inspecting organizations do not share much information or regularly communicate, which—combined with weak inspection standards and procedures, poor documentation of findings, and ineffective mechanisms in place to relay inspection results back to businesses—serves to exacerbate the situation.

While many of these deficiencies can be addressed through legal, regulatory, and process reforms, information technology

has a key role in improving efficiency, transparency, and accountability in business inspections.

Using technology to scale up business inspection reform

Inspection management systems are increasingly common in developed economies, although most are implemented within single agencies—and one agency often has several systems in place for several processes. A select number of jurisdictions have made efforts to implement inspection management solutions that are shared across multiple inspectorates, albeit with various levels of success. Online research and a series of in-depth interviews with government officials who participated in this study showed that a successful SIMS implementation yields:

- Improved targeting through a better identification and follow up of risks

TABLE 1 OVERVIEW OF SURVEYED SIMS INITIATIVES

Participating Jurisdiction	Level of Government	Primary Inspectorates or Industries	Commercial-off-the-Shelf (COTS) or Custom Solution	Risk-based Solution? (Y/N)
Bosnia and Herzegovina / Federation of Bosnia and Herzegovina	Political Entity	Central Inspectorate	COTS / Custom	Y (in development)
Bosnia and Herzegovina / Republika Srpska	Political Entity	Central Inspectorate	Custom	Y
British Columbia, Canada	Provincial	Meat Inspection	Custom	Y
Colombia	Municipal	Health, Environment, Police, Fire, Tax Collection, City Hall, Chamber of Commerce	Custom	Y
Croatia	Federal	Agricultural and Veterinary Inspection	COTS / Custom	Y (in development)
Mongolia	Federal	Central Inspectorate	To be determined	Y
Netherlands (Company Dossier)	Federal	Social Affairs and Employment, Food and Consumer Product Safety Authority	Custom	N
Netherlands (Continuous Control & Monitoring Supervision)	Federal	Meat Inspection	Custom	Y
Netherlands (Inspectionview)	Federal	All except Tax Inspection and Customs	Custom	N
Nova Scotia, Canada	Provincial	Food Safety, Provincial Tax, Environment, Occupational Health and Safety	COTS	Y
Redwood City, California, USA	Municipal	Building	COTS	N
United Kingdom (Retail Enforcement Pilot)	Federal	Retail Businesses	Custom	Y

Research shows that the introduction of an inspection management system, especially one shared across numerous inspectorates, helps formalize many of the good practices required to reform business inspection—in addition to the above-mentioned benefits.

Table 1 provides an overview of the SIMS initiatives examined in the study along with details of the inspection activities addressed and the technologies used.

Common features and functionality of shared inspection management solutions

Shared inspection management solutions range from simple database applications that track inspection results and provide back-office support to complex, web-based systems that automate decision support, manage business processes, and provide an online informational interface for enterprises subject to inspection. The surveyed jurisdictions used a wide variety of approaches to implementing a SIMS, but many of the solutions share a common set of features. While all solutions provide functionality for inspection planning, the detailed functionality and implementation differ based on the mandate and objectives of the various inspectorates. For example, in the Republika Srpska, Bosnia and Herzegovina, the inspection management system automatically determines the annual inspection priorities based on the types of facilities encountered.

- **Basic solutions** incorporate information about businesses and entrepreneurs, their characteristics (e.g. locations, size, industry, etc.) and previous inspection results to allow for simple planning of future inspection activities. These systems typically provide a full inspection history by business and location and use a checklist to obtain consistency across inspections. Solutions in this category may share information across several inspectorates; however, there is typically very limited automation or system-to-system integration.
- **Intermediate solutions** have functionality to trigger follow-up activities based on the outcome of an inspection and allow for automated integration of inspection practices across inspectorates. They are ideally integrated with government business registries or other sources of enterprise information to identify the location, sector and other key attributes of a business. Intermediate solutions may also include limited mobile inspection capabilities and support some level of automated inspection plan creation based on previous inspection results.
- **Advanced solutions** include a variety of other features and functions including:
 - **Risk-based inspection planning** allows for the scheduling and planning of inspections based on a risk assessment of the business that includes key information such as size of the business, previous inspection results, industry, geography, and data from other inspectorates or government information sources.

- **Automated or real-time integration with other information sources**, which generally fall under two broad categories: (i) registry information (e.g., business/company registration information, licences and permits); and (ii) risk information (e.g., business/company risk based on its activities and profile, results of inspections or reports from other inspectorates).
- **Comprehensive mobile inspection capabilities** include tools and technologies that give inspectors the ability to view schedules and inspection records as well as record inspection results while on-site. The study revealed that a number of jurisdictions leveraged mobile computing platforms to support inspectors in the field. The approaches varied from using notebooks, tablets and hand-held devices to full online access using web-based applications. Technology adoption by inspectors, however, proved to be a challenge in many jurisdictions as significant training was required. The age and technical background of the inspectors were typically contributing factors.
- **Performance management capabilities enabled through business analytics** is aligned with risk-based planning and provides capabilities for inspectorates to monitor the efficiency and output of their inspection program and individual inspectors.
- **Public portal capabilities** involves providing access to businesses and the general public to view inspection requirements and results, submit complaints, and appeal an inspection.

Challenges in implementing shared inspection management solutions

1. **Lack of a common database of business entities and location information.** Respondents reported that access to a 'single source' of reliable business/company information (e.g., a centralized business/company registry) was critical to the long-term success of a SIMS. The registry should have information on both branch and headquarters locations of businesses as either may be subject to inspection, as well as a common company

KEY IMPLEMENTATION CONSIDERATIONS

It is important to understand not only the drivers for change but also the individual requirements of each organization. There are often challenges associated with finding a solution that meets all inspectorates' needs while achieving some level of standardization. According to study participants, the ability to find balance between solution customization and inspection process standardization is critical to successful partnerships and contributes to the inspectorates' abilities to align with reform initiatives and realize the full benefits of the shared platform. For several study participants this balance proved difficult to achieve. Their inspection management solutions ended up highly customized; according to interviewees; more standardization would have helped improve system usability, maintain information quality and integrity, and more easily facilitate data sharing among inspectorates.

The following are key issues to be considered during implementation:

- **Specify the objectives of the shared inspection solution.** Ensure that all aspects of the implementation (legal reforms, governance, ICT solution, communications, change management, evaluation) align to meet the goals of the initiative.
- **Understand the legislative and political context governing the inspections.** Ensure that the solution is designed to support existing legislation and identify potential gaps in legislation or the political context itself, to enable shared inspection management (e.g., legislation pertaining to privacy and data sharing; willingness support for change).
- **Review the inspection processes involved.** Will the project implement the processes 'as-is' or capitalize on the opportunity to redesign processes and leverage technological possibilities? Consideration must also be given to the design of risk-based inspection planning practices.
- **Define the governance structure and financing sources.** In SIMS, the governance structures of both the project and the resulting technology platform are critical to ensure clear decision making and the achievement of key objectives. It is also critical to ensure adequate financial resources are devoted to maintain the system, once operational.
- **Address change management and communications in the implementation plan.** Ensure that all stakeholders are fully invested in the new solution.
- **Assess the organization's ICT capacity.** If internal capacity is inadequate, determine a strategy to build support and hosting capabilities through training of existing staff or identifying hosting alternatives within government or the private sector.
- **Identify the source of business and location information.** Determine if existing databases (e.g., business/corporate registry, tax administration, business licensing, existing inspection system) can be used and how enterprise information will be kept updated.
- **Conduct detailed solution planning and design.** Spend considerable time designing the system to ensure that the delivered system meets the needs of inspectorates.
- **Focus on project and solution deployment planning.** Determine the strategy for rolling out functionality to help ensure success (e.g., pilot with one inspectorate or a group of inspectors within a central inspectorate; first roll out basic features and then more advanced functionalities).

identification number shared across government. Without reliable enterprise information, there is significant risk that inspectorates will lack a full and error-free list of all of business locations subject to inspection. A common company identification number is also an important prerequisite for information sharing among inspectorates.

2. **Weak or unclear governance, leadership and vision.** While many initiatives easily gained short-term momentum, this was often difficult to maintain over the long term due to competing priorities and resource constraints. Many survey participants indicated that a more clearly articulated vision, stronger governance and senior leadership would have helped maintain the direction and pace of the SIMS implementation. Stronger governance can also resolve issues of data ownership, management, accuracy, and policies concerning data access and modification privileges. Shared data of poor quality can seriously compromise the integrity of inspection planning and risk analysis.
3. **Lack of business, financial, and technical infrastructure.** Developing country respondents reported that when jurisdictions designed and implemented the inspection solution without ensuring that the necessary business and technical infrastructure was in place, there were notable difficulties during implementation (e.g., a centralized business registry, adequate levels of inspection process reform, human resource support, ongoing financial support, and technical/business knowledge and support). Early planning for ongoing institutional and ICT capacity

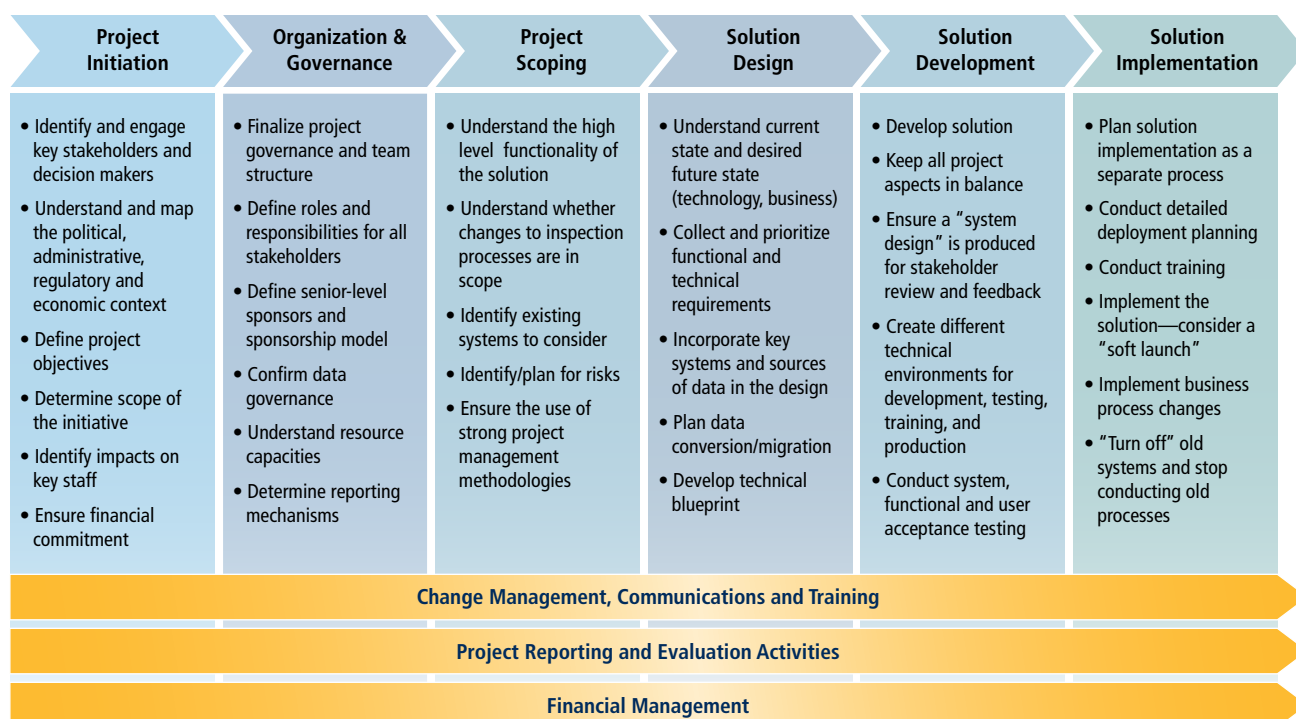
building is essential, as well as funds for ongoing operation of the system.

4. **Complexity of business processes and technology.** Many developed country jurisdictions believed that business process and technology complexity as well as a high degree of solution customization across inspectorates greatly inhibited the capabilities of the SIMS. In many cases this can be attributed to inadequate efforts at process standardization prior to automation, while in others the differing objectives of the inspection (e.g., financial verification versus public safety) prevented full realization of key benefits of the SIMS.
5. **Lack of communication and inspectorate engagement.** Stakeholder engagement is critical in order to demonstrate the benefits of a SIMS and gain support for the initiative. In the case of Colombia’s SIMS, more targeted engagement with the individual stakeholders across the country may have improved buy-in and solution adoption; less than 10 percent of the stakeholders were reported to be participating in the national system. Jurisdictions that mandate the participation of inspectorates in these initiatives tend to have more success in the area of stakeholder engagement.

Design and deployment

Figure 1 provides a high-level roadmap for the design and deployment of a SIMS. The survey revealed that the decision between a custom-built or a commercial off-the-shelf (COTS)

FIGURE 1: ROADMAP FOR SHARED INSPECTION MANAGEMENT SOLUTION DEPLOYMENT



Why Shared Inspection Management Systems? The Case of Kenya

A restaurant in Nairobi, Kenya can expect to be visited as many as 5–7 times per year by inspectors from up to 19 agencies in charge of reviewing building safety, food safety, occupational health and safety, environmental and water quality, and practices related to serving alcohol, to name a few. The restaurant will be visited by these inspectorates once or multiple times per year, in many cases unannounced and unplanned, placing significant strain on the business owner. Additionally, inspectors may not share the reason for or the outcome of the inspection. Inspection criteria and results often are not readily available to the restaurant owner and different inspectors may provide contradictory feedback regarding whether the establishment is in compliance with the rules or how to resolve any deficiencies identified.

Over 85 percent of businesses in Kenya can expect to be inspected in a given year, as compared to around 20 percent in European Union countries. This compliance burden takes time away from the primary focus—growing the business, remaining competitive, and contributing to the local economy. Unclear, subjective rules with limited accountability placed on the inspector can also quickly lead to corruption by creating a situation where it is simply easier to bribe the inspector than attempt to maintain compliance. In any case, the lack of information and guidance frequently means that the impact on compliance, health and safety is minimal—if any.

technology solution was largely based on the functionality required by stakeholder inspectorates. The majority of study participants opted for a custom-built solution, which provided maximum flexibility in design and future adaptation; however, it is important to note that in the instances where a COTS solution was selected, the technology still provided enough flexibility to configure the system to meet individual inspectorate requirements.

Conclusion

The results of this study highlight the most important business, technical, and institutional considerations when planning, designing, and implementing a SIMS. The jurisdictions highlighted throughout this note are among the leaders in inspections reform and represent a commitment to ongoing innovation as it relates to inspection practices.

Based on the information summarized throughout this note, it is clear that a SIMS, together with adequate supporting business and technical infrastructure, is an emerging best practice in government efforts to reduce the compliance burden on business.

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Notes

- ¹ In addition to the survey of SIMS projects, the research deliverables included: (i) a detailed implementation roadmap for project managers; (ii) a detailed checklist of information and functionality requirements reflecting current best practices; (iii) a model consultant terms of reference for the SIMS design; and (iv) a model request for proposal for the procurement and deployment of the SIMS application.

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