

### Hemispheric Workshop

## How Ministers of Labor use IA to improve efficiency



#### INTRODUCTION





**Artificial intelligence** plays an increasingly significant role in daily life.

Given its widespread influence and broad range of applications, **governments have also embraced AI**. This technology helps to improve institutional efficiency, strengthen decision-making, and streamline the delivery of public services.

Within this context, and specifically in the field of **labor inspection**, it has been identified that the implementation of advanced systems can be applied in various areas, particularly for:





Predicting companies
likely to violate labor laws
based on historical data.



Managing and prioritizing complaints and reports.



## APPLICATION THE CHALLENGE OF LABOR OVERSIGHT





In Mexico, labor inspections are the primary mechanism for verifying and ensuring companies comply with labor regulations.



Over **1 million** formally stablished **companies.**\*



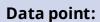
Nearly **22 million workers** registered with social security,\*



The Federal Labor Inspectorate has approximately **500 inspectors.** 



**Limited institutional resources** make it impossible to inspect a ll companies.



If the goal was to inspect every company, each inspector would be responsible for checking approximately **2,000 workplaces**. Assuming one inspection takes a single day, it would take around **8 years** to complete all those visits.



## So, who do we visit?



There is a clear need to **focus efforts** on inspecting companies that have historically failed to comply with labor regulations.

\* Source: IMSS Statistical Report 2024

https://www.imss.gob.mx/conoce-al-imss/memoria-estadistica-2024

#### SIDIL

### (Data Intelligence System for Labor Inspection)

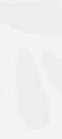








Currently, the companies selected for inspection are choosen through a **random system** that lists workplaces **without considering specific parameters.** 



Given this limitation, the SIDIL system was designed. It is a tool that uses data analysis **techniques to predict the risk of labor law non-compliance.** The system integrates information from various official sources, such as the IMSS and INEGI, and processes it through predictive algorithms. This results in a prioritized **list of workplace**s based on their probability of non-compliance.

#### SIDIL FEATURES













**Data collection** 

Mining and processing

**Risk Matrix** 

Consultation and operations

It integrates internal The databases from the STPS relevant external data from from key institutions like the calcular indi

The system extracts relevant characteristics from workplaces and calculates "labor indicators."

Based on the data analysis, each workplace is assigned a probability of noncompliance with labor regulations.

Inspection operations are focused and directed toward at-risk workplaces, maximizing the impact of resources.



# PILOT PROGRAM RESULTS





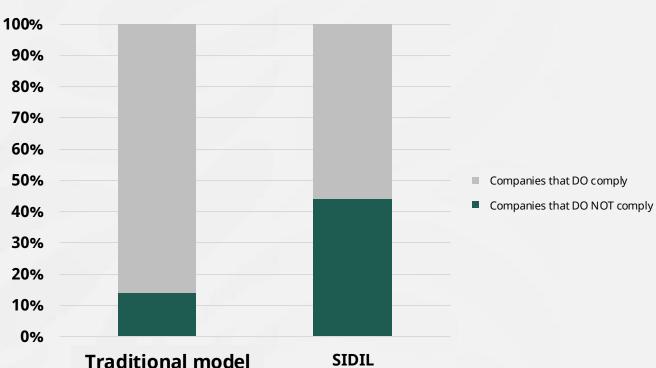
The initial results are very encouraging. With the traditional model, which was based on a random system, only 14 out of every 100 inspections identified companies with a history of noncompliance. The rest were workplaces that regularly met their obligations.

With the SIDIL, that proportion increases to **44 out** of every **100 inspections**.

+30 percentage points in accuracy



#### **Effectiveness rate**



# CHALLENGES AND AREAS OF OPPORTUNITY





The adoption of SIDIL also faces certain challenges:

Technical and infrastructure limitations.

The quality and interoperability of databases.

The need for workforce with data interpretation and analysis skills.

Additionally, the pilot program highlighted opportunities for system improvement:

Adding multiple filters.

Incorporating operational capacity criteria.

Integrating an analytical component to maximize the sucess rate of an inspection.

Refining the disctintion between federal and local jurisdiction companies.

Making considerations for companies with more than one workplace.





#### **STRATEGY**





This includes data from tax authorities (SAT) and the registry of specialized service providers (REPSE), among others.

Modernization This to ensure the quality and of information inperoperability of the databases. systems Incorporating new data sources **Gradual SIDIL** implementation

In 2025, the plan is to conduct **4500 inspections** to calibrate and improve the system's predictability rate.





### Thank you for your attention

**General Directorate of Federal Labor Inspection** 

Ing. Julio César León Zúñiga Director of Inspection