



WCO Technology Conference & Exhibition

Implementation of an Artificial Intelligence - Based Selection System for Enhanced Analytical Model Management and Risk Detection

Marilú Llerena Aybar
National Intendent of Customs
Development and Innovation
Perú



Perú in Numbers:

Scale and Complexity of Foreign Trade

US\$ 60 bn

Imports



44 k

Importers



885 k

Import Declarations



US\$ 87 bn

Exports



10 k
Exporters



441 k

Export Declarations

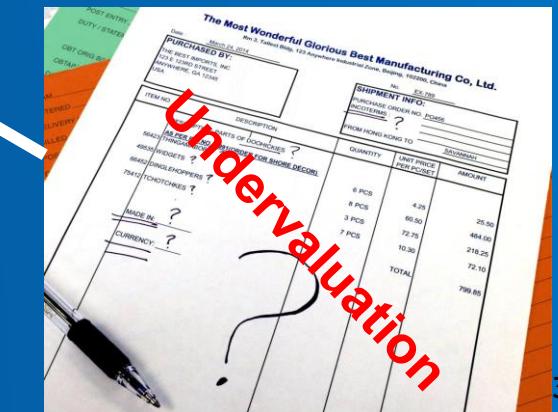


Customs Offences

21 tonnes of illicit drugs seized



US\$ 115 m contraband seized



Limitations of Isolated Risk Management

Centralized Risk-Based
Channel Selection with
insufficient operational
feedback



Scanner Controls
with Limited
System Integration



Isolated, decentralized
extraordinary Controls



Fragmented intelligence
effort for detection of
international
international criminal
networks



Perú Integrated Risk Management Strategy



1

Risk Selectivity Ecosystem

Detection Maximization Model
2015

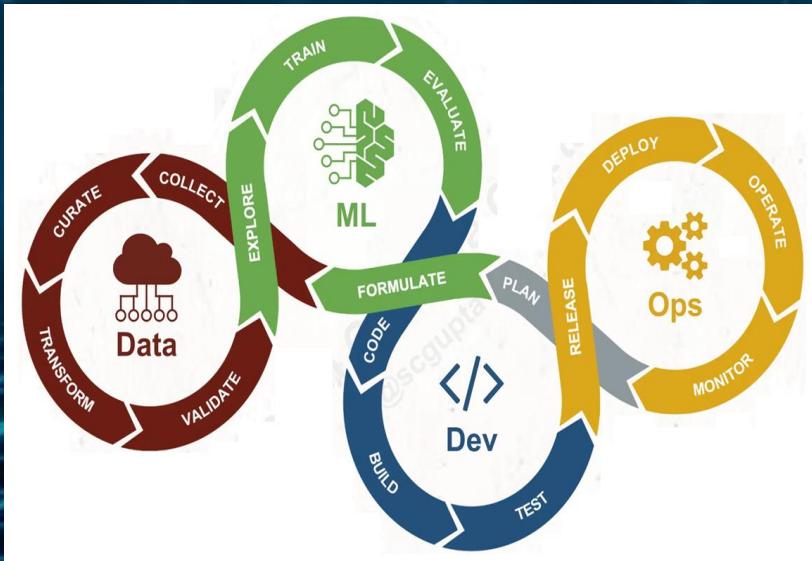
Multi-Variable Risk Filters

Data Mining Models



2

2025 MACHINE LEARNING



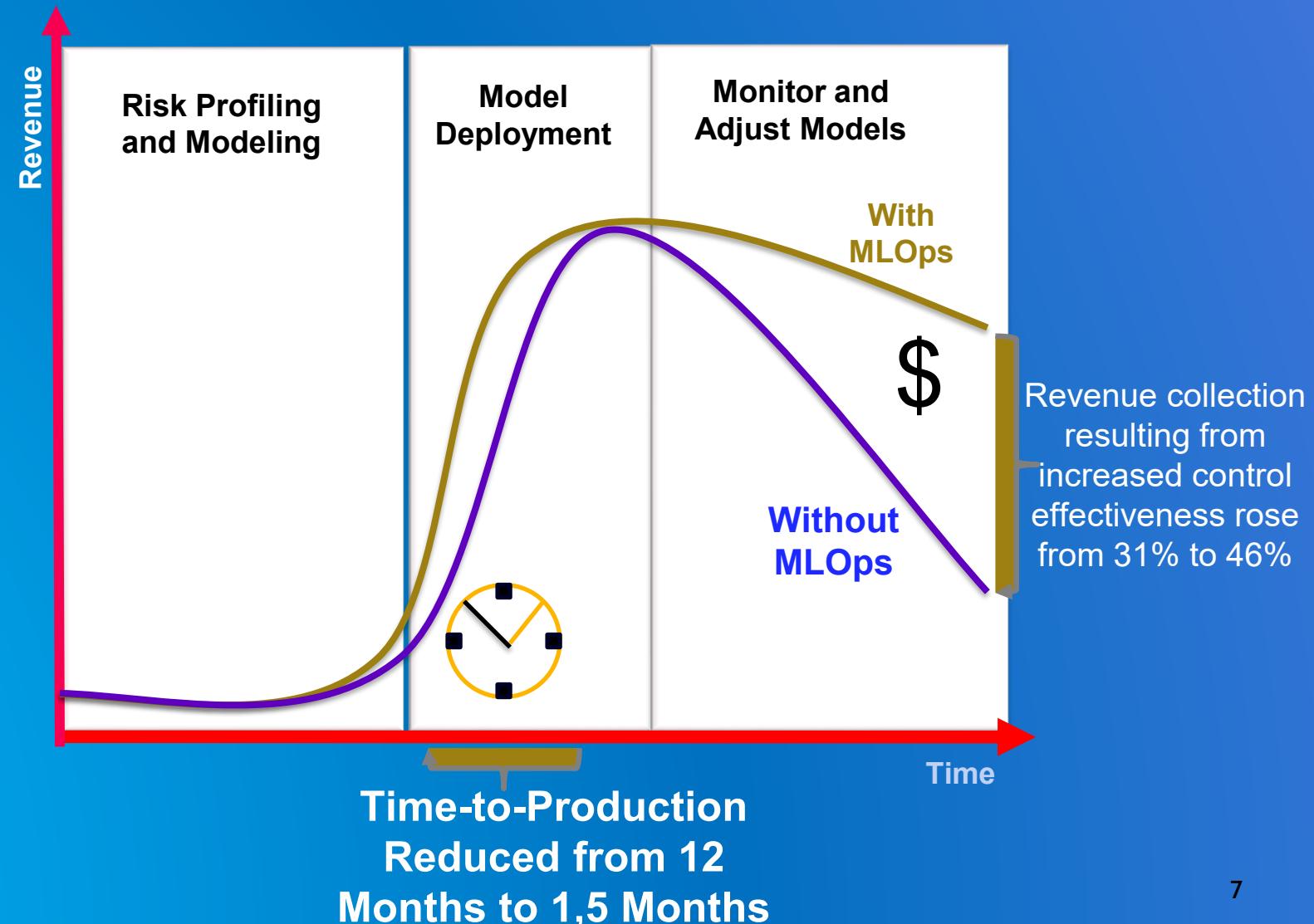
A structured framework to manage the entire lifecycle of Machine Learning (ML) models

Integrates the activities of data scientists, developers, and ML operations teams

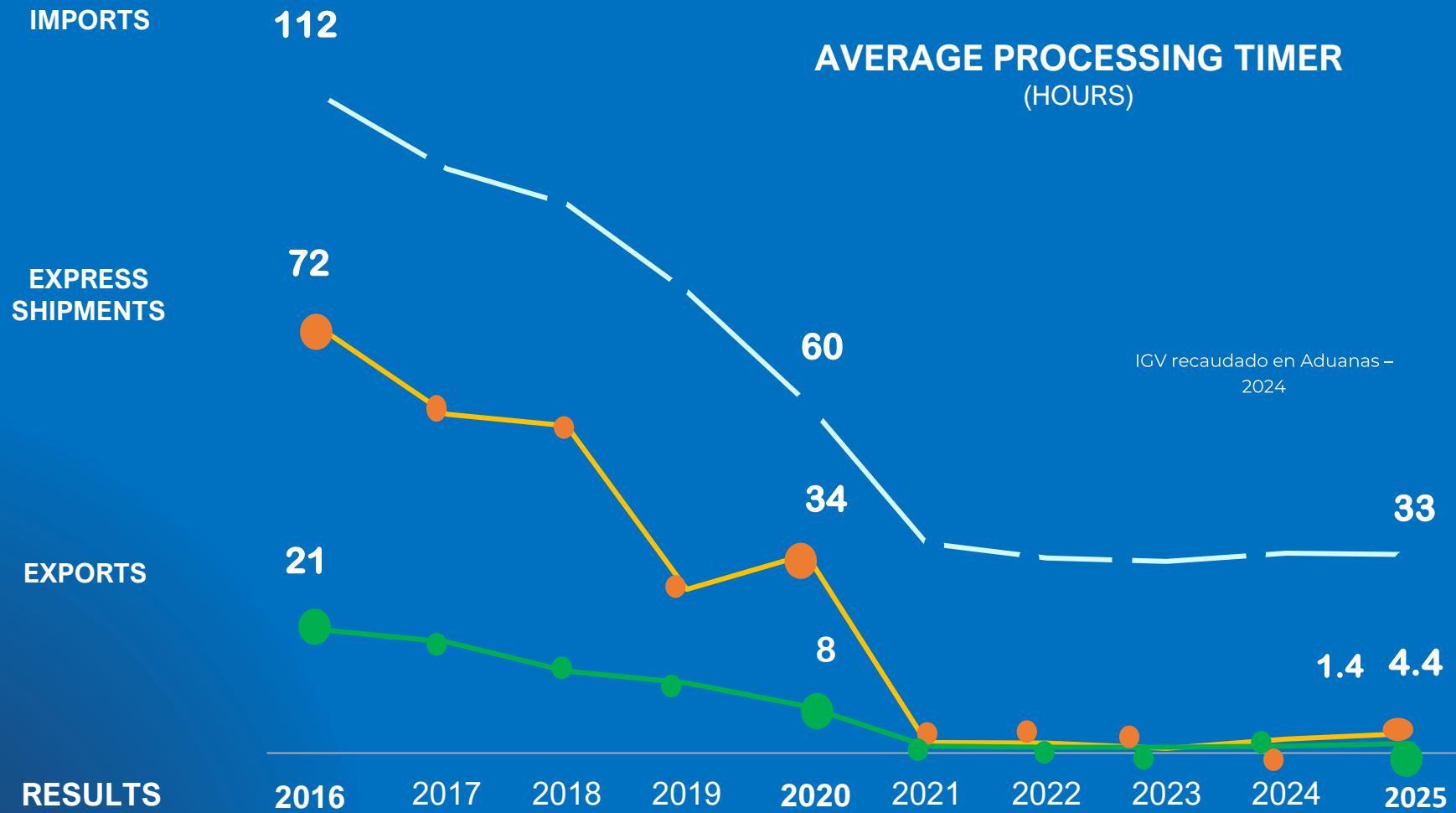
Significantly reduces the time required to move ML models into production

Enables continuous monitoring of predictive performance and model quality

Benefits of the Customs MLOps Platform

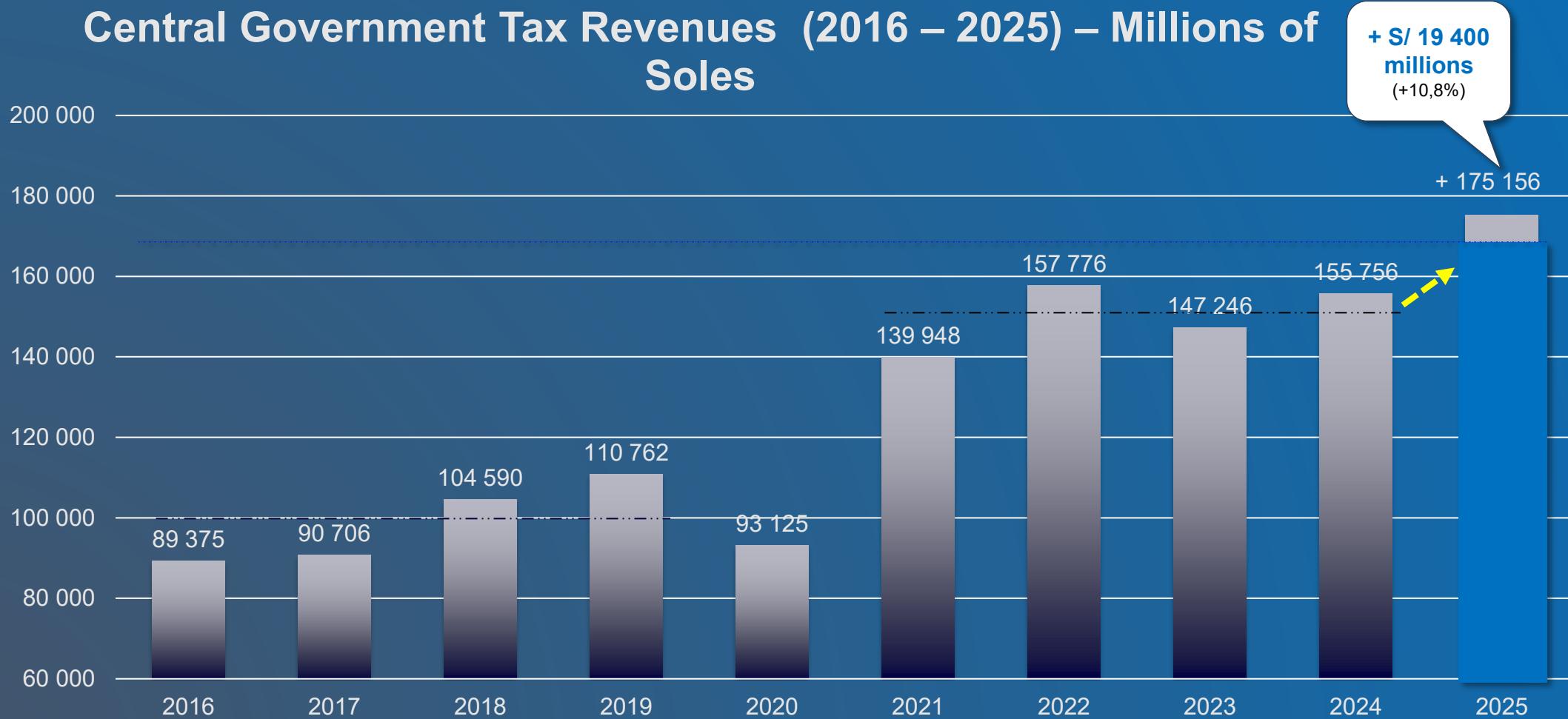


Improved Competitiveness - Shorter Release Times



RESULTS		
PRE-ARRIVAL PROCESSING		
2016	2020	2025
30%	73%	87.5%
TIME REDUCTION 2016 - 2025		
Import.	EER	Export.
70.5%	93.8%	93.3%

2025 Tax Revenue: US\$ 53B (+10,8%)



From Data Organization to Scalable Analytics



Limited skills in modern technologies and programming languages



Insufficient storage capacity to run new analytics and ML models



Transition to a Data Landing Zone



Evaluate on-premise data center vs. Cloud solutions





SHUKRAN

THANKS

GRACIAS

MERCI