

# GovTech for Fiscal Sustainability

## Digital Transformation and AI Journey of Korea Customs Service

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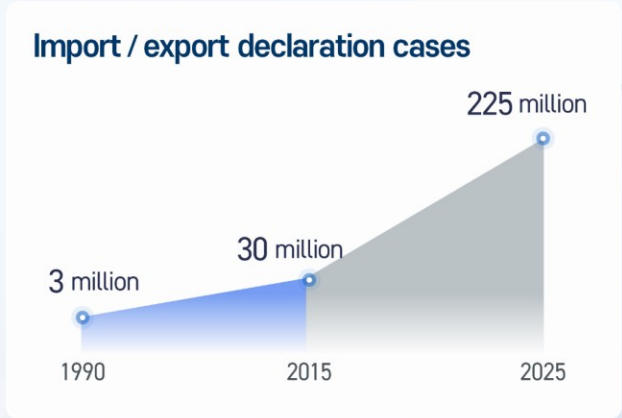
01 Digital Customs as Fiscal Infrastructure

02 GovTech Best Practices (Machine Learning & R&D)

03 AI-Enabled Customs Administration (Roadmap and Challenges)



# PART 01 Digital Customs as Fiscal Infrastructure



Digitalization, Data and  
**New Technologies**

## Efficiency

- Facilitate trade
- Prevent illegal activities
- Increase revenue collection

## Accuracy



Workload rises rapidly  
Staffing remains **stagnant**



Improve efficiency and accuracy  
with **data and advanced technologies**

# PART 01 Digital Customs as Fiscal Infrastructure

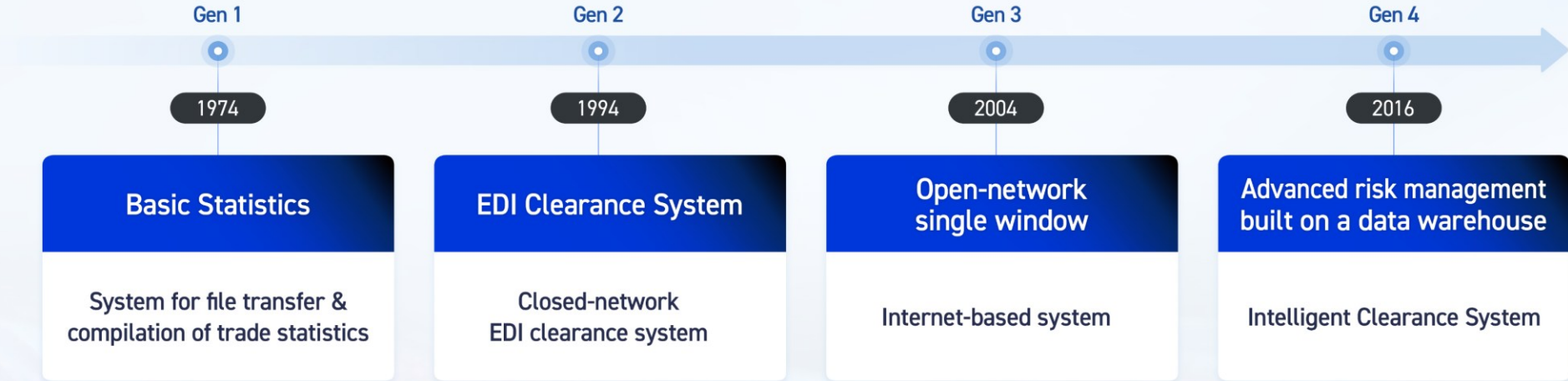
## KCS's digitization journey



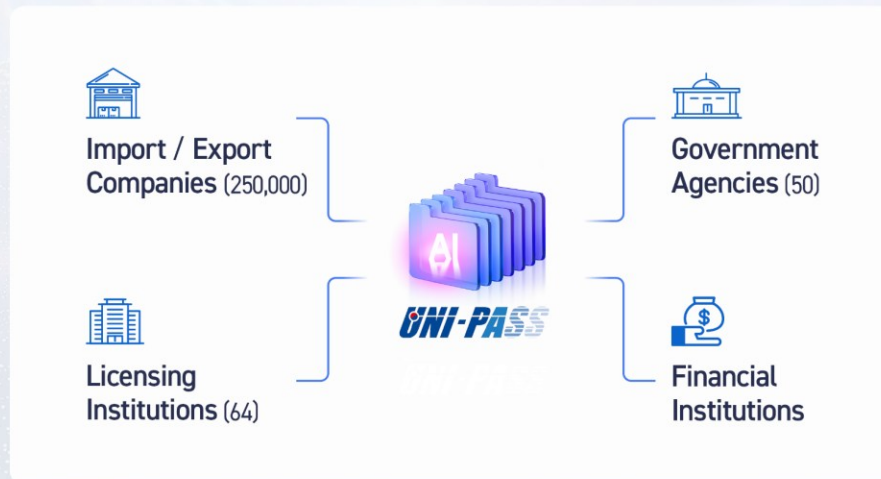
Share of National tax revenue (2025)

Total Tax Revenue  
USD 267 billion

KCS share of Revenue  
USD 49.8 billion (20%)

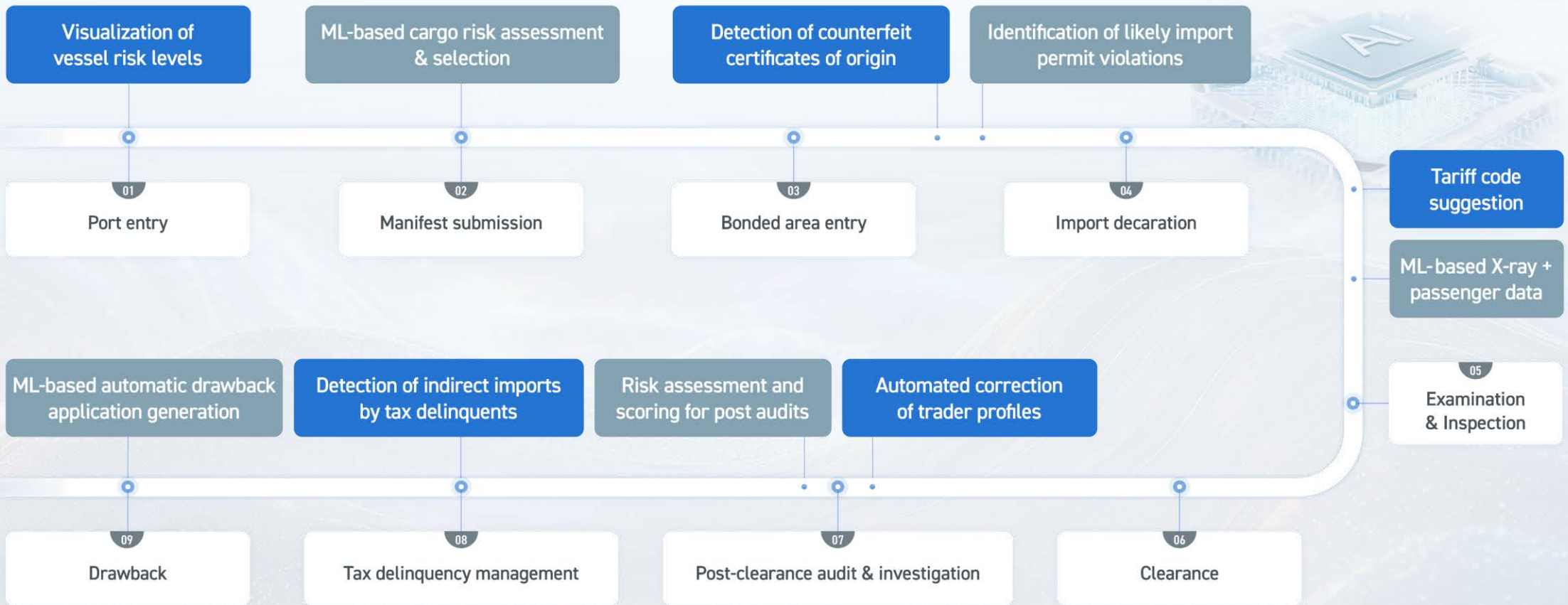


## Data: The fuel powering AI



# Key machine learning-based systems

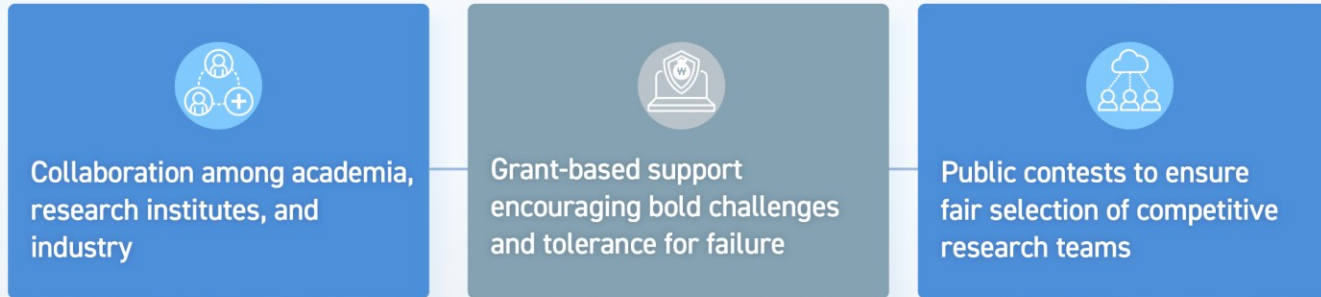
✓ 10-40% higher than rule-based



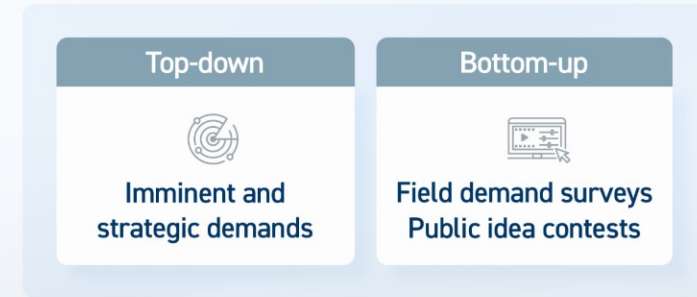
✓ 15 times more illegal FX transactions detected in 2025 than in 2020

# Korea Customs R&D Framework

## Principles for R&D Projects



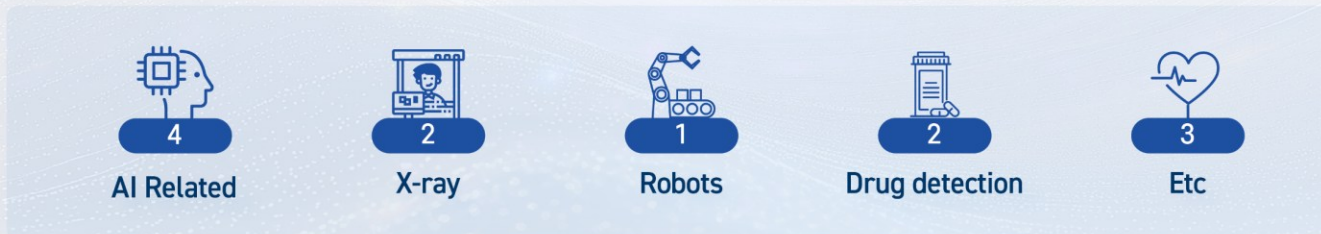
## Project approach



## Process



## Project Portfolio (Total 12 projects)



## R&D scale



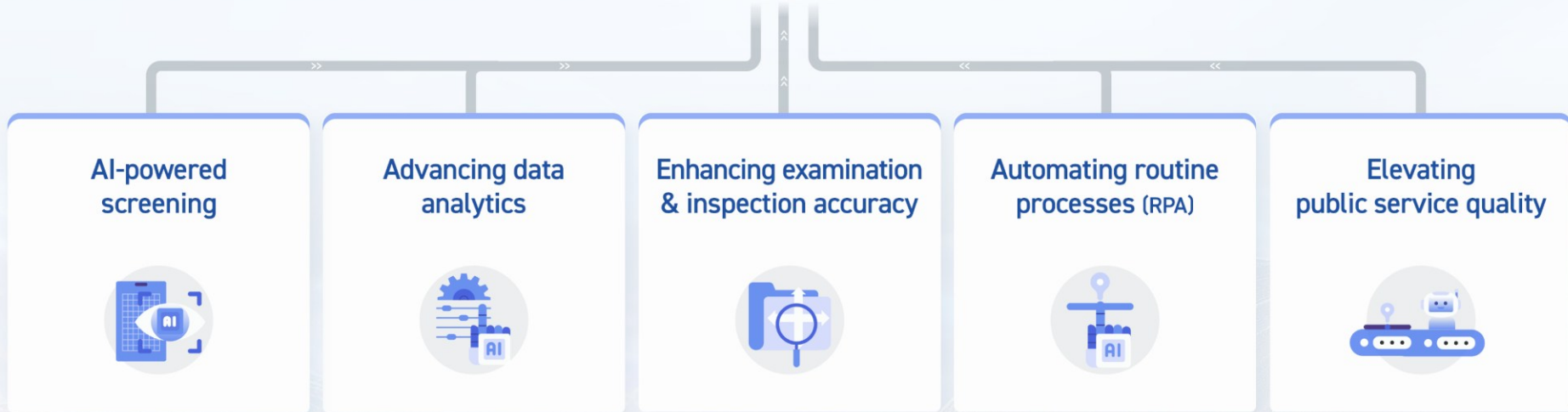
# AI Strategy



Vision >>>

“ Korea Customs Service, Leading Fair and Shared Growth with AI ”

Strategic initiatives >>>



Enablers >>>



**PART 03** AI-Enabled Customs Administration

Feasible AI-driven customs roadmap

# ISP for AI-driven customs administration

Transforming workflows through  
AI integration



Delivering tangible customs services  
for the public and businesses

Establishing integrated AI infrastructure  
for sustainable operations

# Implementation and Challenges

**Specific Focus**

Optimizing the use of AI through a phased and parallel approach



- USD 76 million investment in AI transformation (2027 - 2030)
- Human-in-the-loop and accountability remain essential

Supporting AI use by officers

2 weeks → 10 minutes  
FTA-related analytic report generation



Preparing machine-ready data

457 TB  
of data available



Enhancing existing models and developing new ones



Strengthening and expanding AI-conductive IT infrastructure



Building generative AI agents



**Thank you for your attention.**

