17 - 18 October 2023 / Addis Ababa, Ethiopia

IMPROVING VEHICLES TO IMPROVE LIFE

- ECA - The challenge of E-vehicles
- CITA - RAG Africa Conference

CITA

United Nations
Economic Commission for Africa

EXPERIENCES FROM AROUND THE WORLD

SESSION 3

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COSBER

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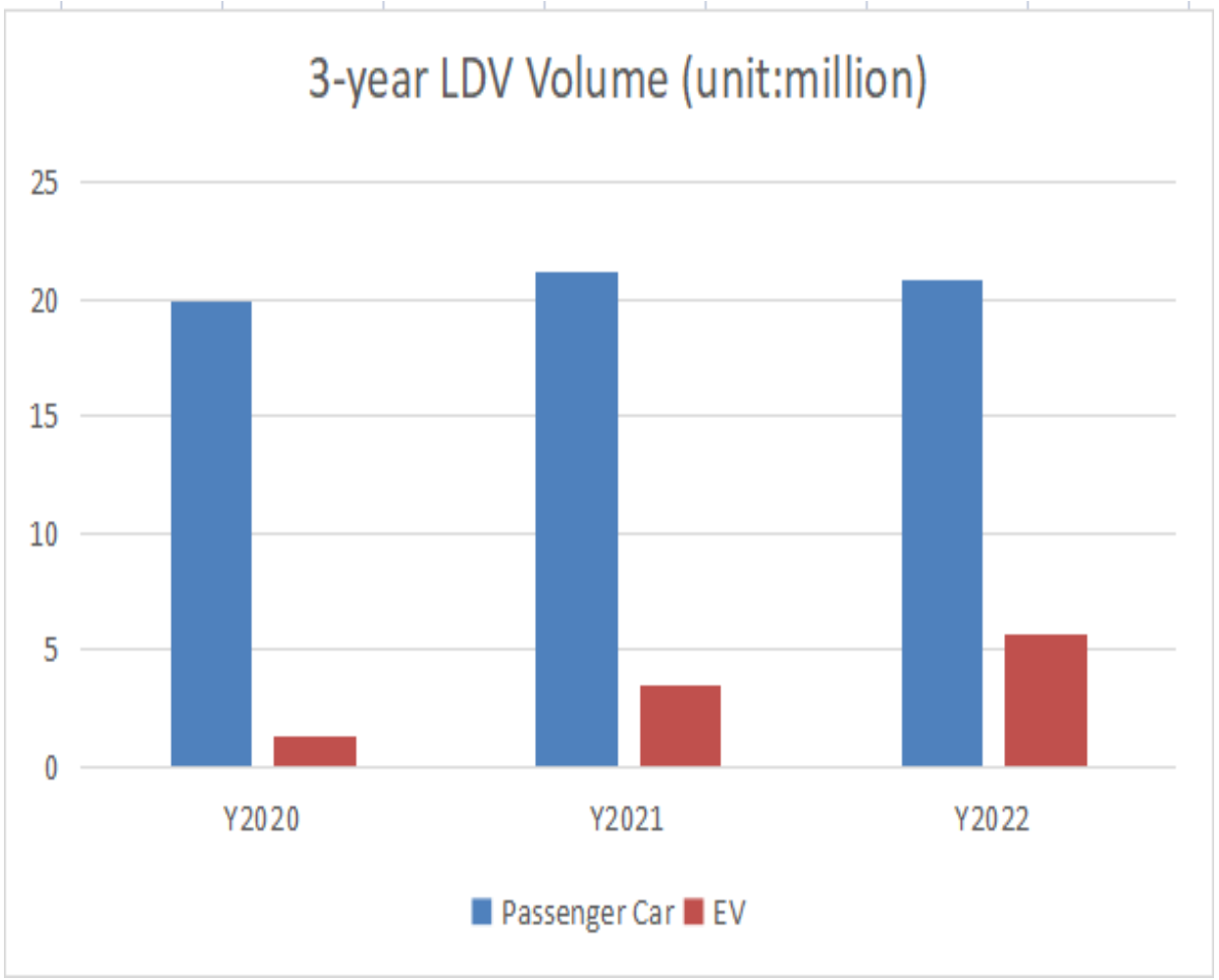
China Practice on EV Supervision

August, 2023

Index

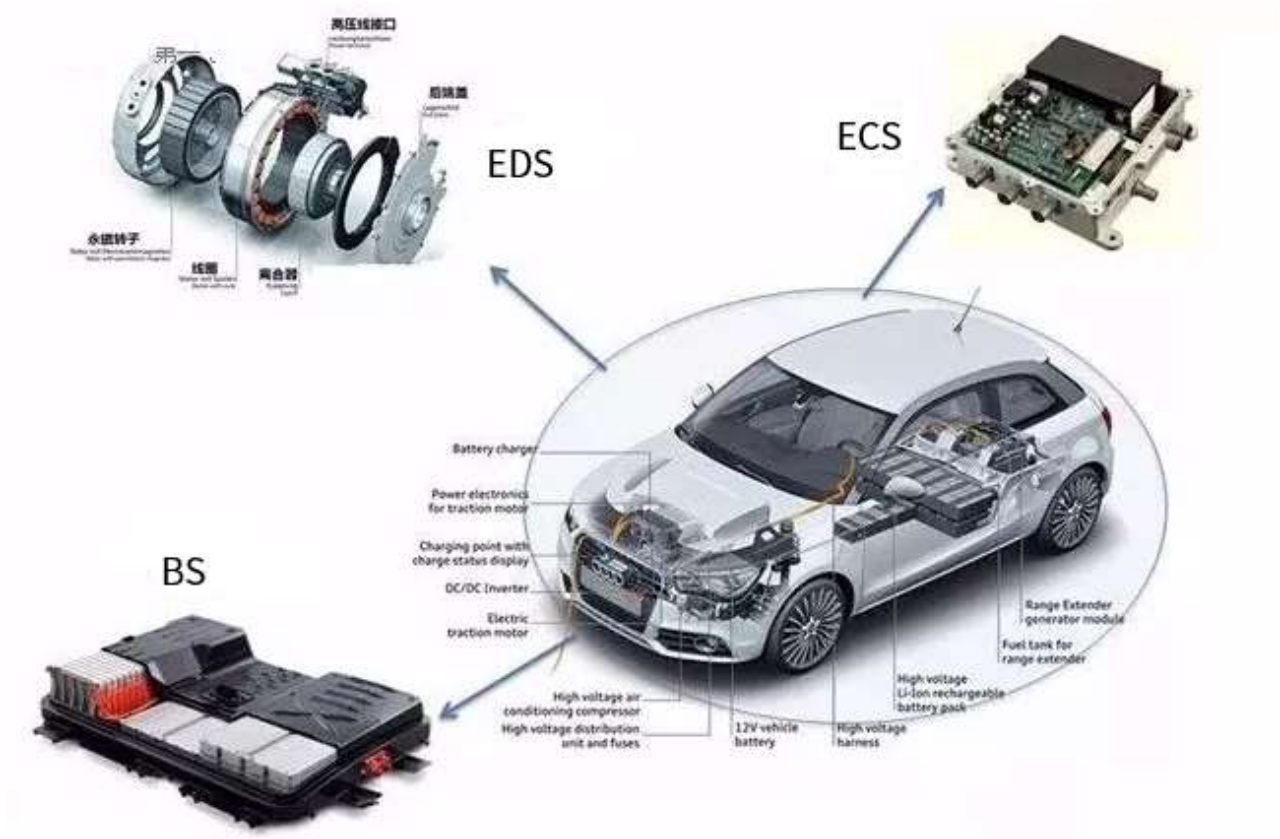
Electric Vehicles (EVs)

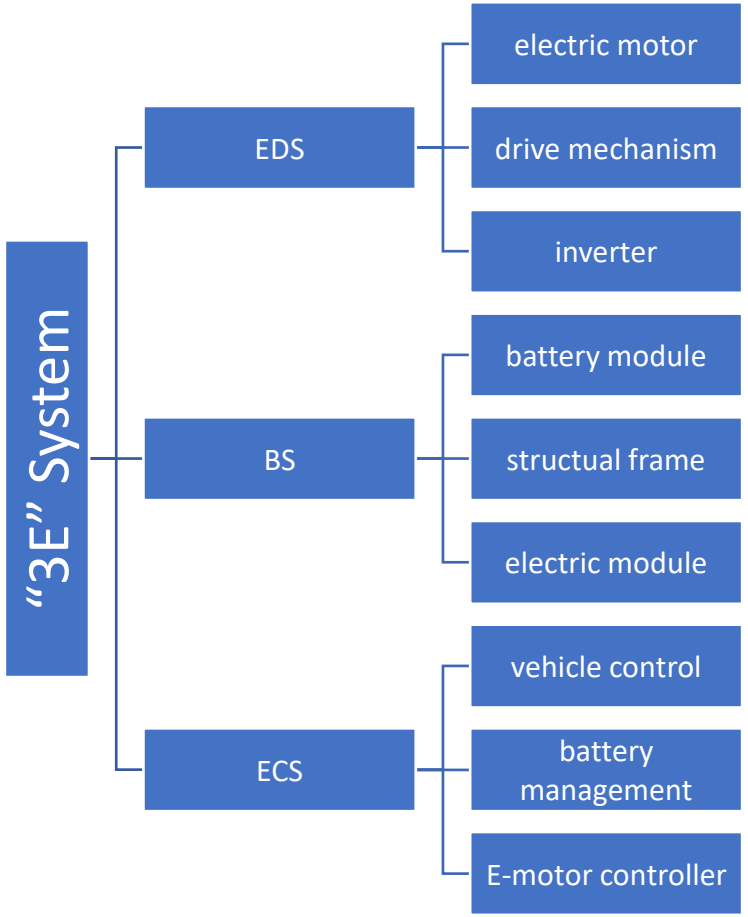


- New-energy vehicle: 16+ million
- Pure EV: 12+ million,

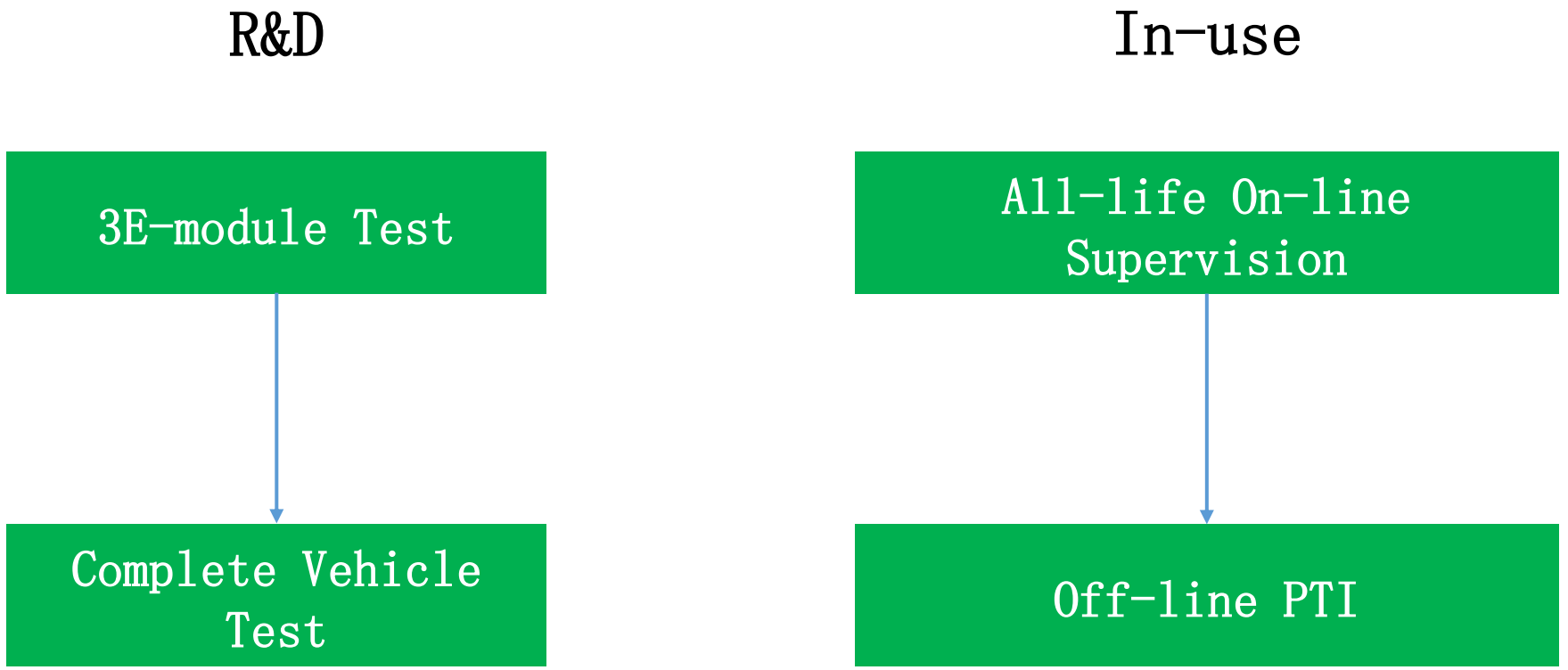
Electric Vehicles (EVs)

3E system moduel of EV: E-drive system(EDS), E-control system(ECS) and **battery system (BS)**



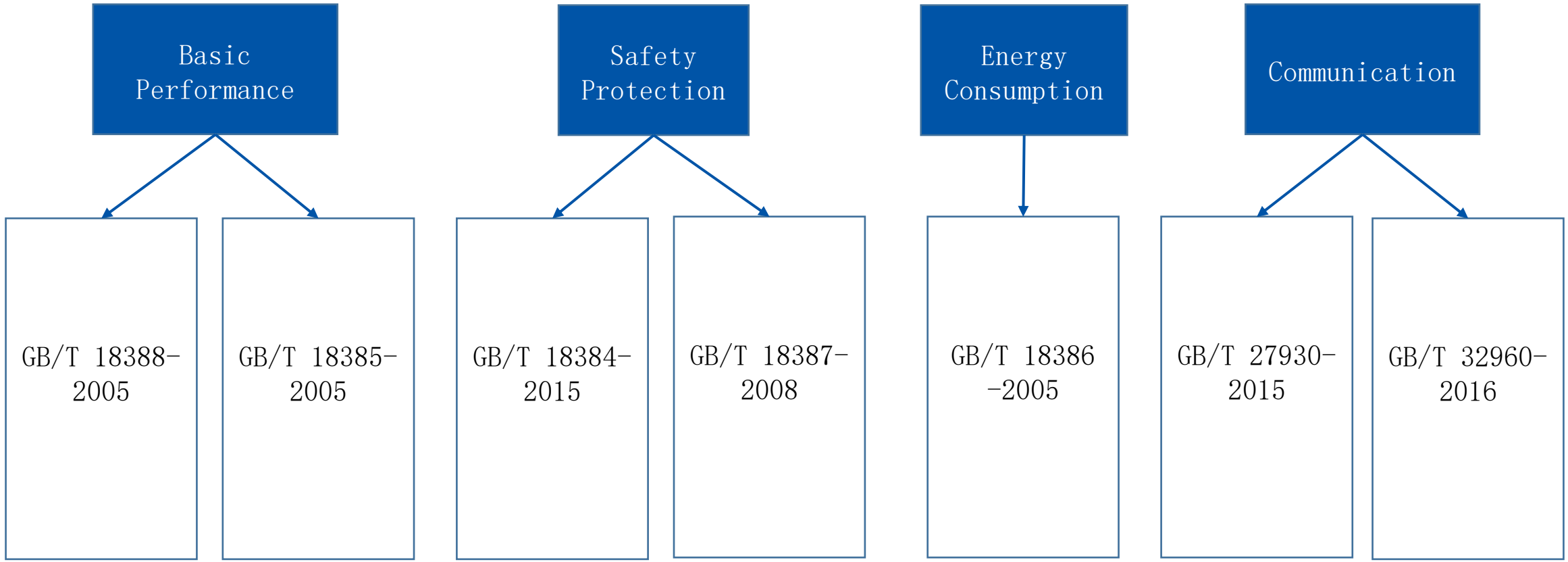


Policy/Regulation



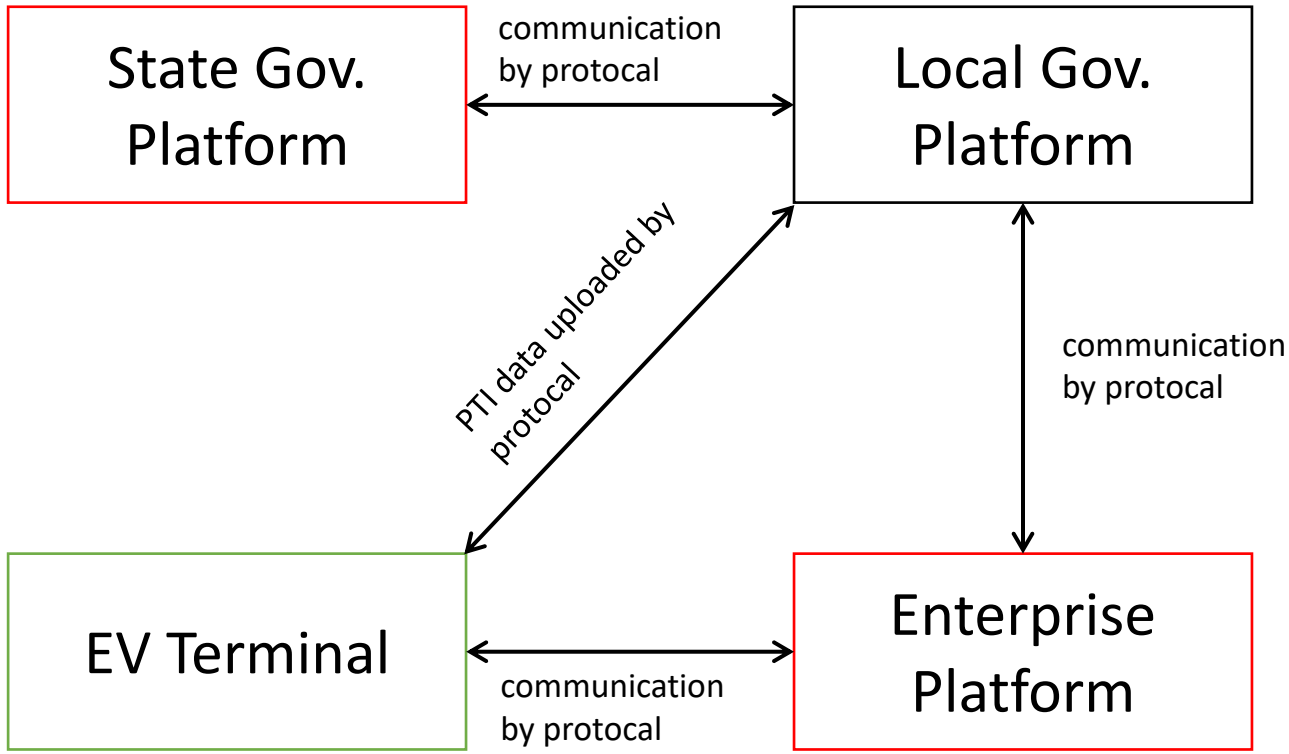
Policy/Regulation

Besides routine active/passive safety, sound and chassis test, the compulsory homologation test on EV also include complete set test regulated by the specific standard:



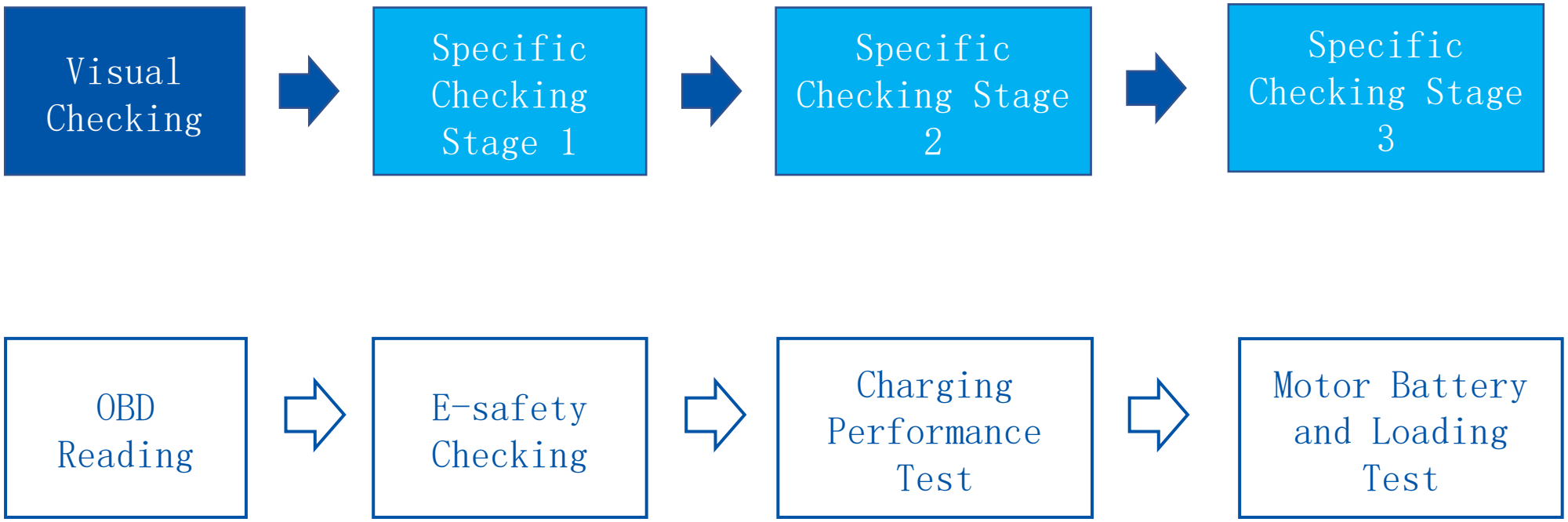
Policy/Regulation

To enhance the safety supervision on EV, China has introduced state-local-enterprise system also named 3-level system architecture since 2016 , and the enterprise is the primary responser in this system.



PTI for EVs

Besides the routine PTI rule, based on Online-Offline mode, the risky vehicle selected by the big-data platform is required to accept inspection in PTI station including **electricity safety, charging, motor battery and loading test**.



PTI for EVs

No.	Inspection Item			Suitable for the Vehicle Type		
				Passenger Vehicle		Truck (not include 3-wheel motorcycle), Specific-use vechicle
				Seats no.<9	Other type	
1	BS Safety	Charging	Max. Temp.	●	●	●
			Max. Voltage of Single Cell	●	●	●
			Pole Voltage Gap of Single Cell	●	●	●
			Indication Accuracy of BMS Total Voltage	●	●	●
		Discharging	Max. Temp.	○	●	●
			Min. Voltage of Single Cell	○	●	●
		Capacity Retention Rate		○	○	○
2	EDS Safety	Driving Motor Temp.		○	○	○
		Motor Controller Temp.		○	○	○
3	ECS Safety	DC/DC Inverter Temp.		○	○	○
4	Eletric Safety	Charging Socket Insulation Resistance		●	●	●
		Potential Equalization		●	●	●

Remark 1: “ ● ” is a must, “ ○ ” is optional.
Remark 2: Charging of BS safety and Potential Equalization(between shell) is not applicable to vehicle without DC charging pole.

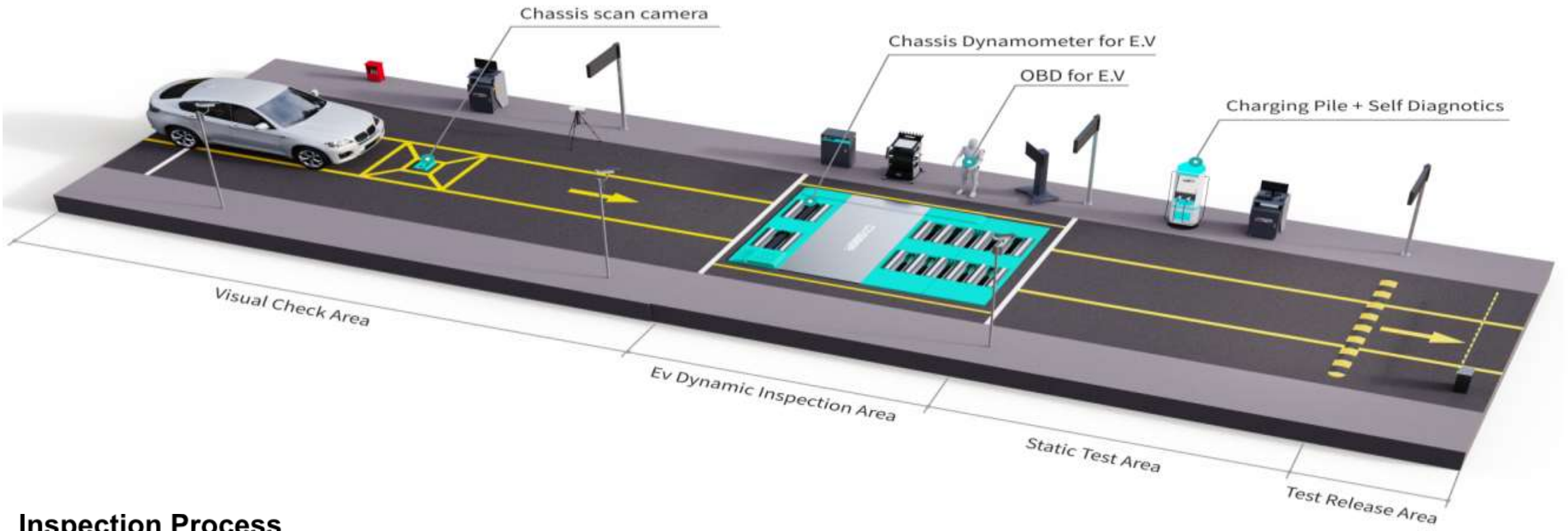
◆ Declared for public discussion and feedback before official releasing.

PTI for EVs

No.	Inspection Item	Equipment&Device	Remark
1	BS Safety	Charging Performance Tester + EV Chassis Dynamometer + OBD Reader	Dynamometer is a must for discharging test
2	EDS Safety	EV Chassis Dynamometer + OBD Reader	
3	ECS Safety		
4	Eletric Safety	Megohm Meter, Milliohm Meter	or other device with the required function

◆ Declared for public discussion and feedback before official releasing.

Cosber Solutions for EV PTI



Inspection Process

Automatic License Plate Recognition → EV Chassis Scanning, Battery Visual Check → Dynamic Vehicle Test, Electronic System Diagnosis → Electric Safety Inspection, Interoperability Test → Report Printout

Cosber Solutions for EV PTI

- **Charging Performance Tester**

- **EV Chassis Dynamometer**

Thank you for your Attention!

Contact person:
George Wang
International Sales Director
COSBER Technology Co.,Ltd.

Telephone: +86 755 2572 7015
Mobile: +86 13437705000
Email: george@cosber.com

For more information, please visit:

www.cosber.com

EXPERIENCES FROM AROUND THE WORLD

SESSION 3

CITA

United Nations
Economic Commission for Africa

Klaus Eldner

RYME

CITA

United Nations
Economic Commission for Africa

Pioneering a New Approach to Roadworthiness in Africa

Worldwide Group Analysis and Proposal for a More Effective PTI

Klaus Eldner – RYME Worldwide GmbH
_____ Worldwide Group

Worldwide Group – Analysis and three points of aim

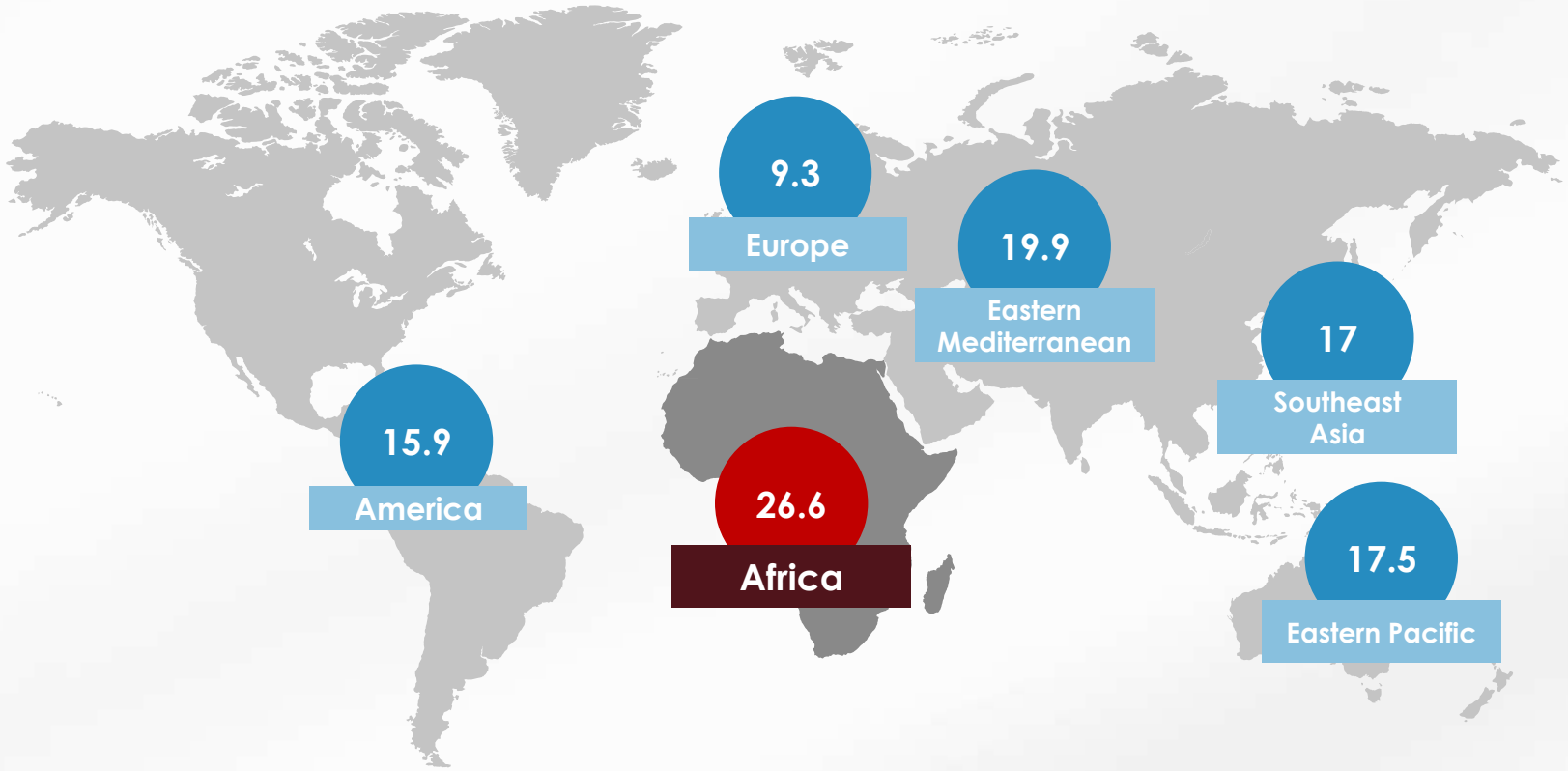
Pioneering a New Approach to Roadworthiness in Africa

worldwide group

Vehicle Inspection as a legal contribution

Environmental Responsibility

More Inspections and Better Quality



THE PROBABILITY OF DYING IN A TRAFFIC ACCIDENT DEPENDS ON WHERE YOU LIVE.

Accident deaths per 100,000 people

Source: United Nations

World average: 18 / 100,000
Africa average: 26.6 / 100,000

Vehicle Inspection as a legal contribution

Environmental Responsibility

More Inspections and Better Quality

26.6

Africa

OBJECTIVE: IMPLEMENTATION AND HARMONIZATION OF VEHICLE INSPECTION TO ALL COUNTRIES OF AFRICA

POSSIBLE SOLUTION: INCREASE THE NETWORK OF MOBILE INSPECTION UNITS

Vehicle Inspection as a legal contribution

Environmental Responsibility

More Inspections and Better Quality

26.6

Africa

OBJECTIVE: IMPLEMENTATION AND HARMONIZATION OF VEHICLE INSPECTION TO ALL COUNTRIES OF AFRICA

POSSIBLE SOLUTION: INCREASE THE NETWORK OF MOBILE INSPECTION UNITS

FOR DIFFERENT TYPES OF VEHICLES

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SPECIALIZED EQUIPMENT

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FOR DIFFERENT TYPES OF VEHICLES

SPECIALIZED EQUIPMENT

DIFFERENT MODES OF TRANSPORT

Vehicle Inspection as legal contribution

Environmental Responsibility

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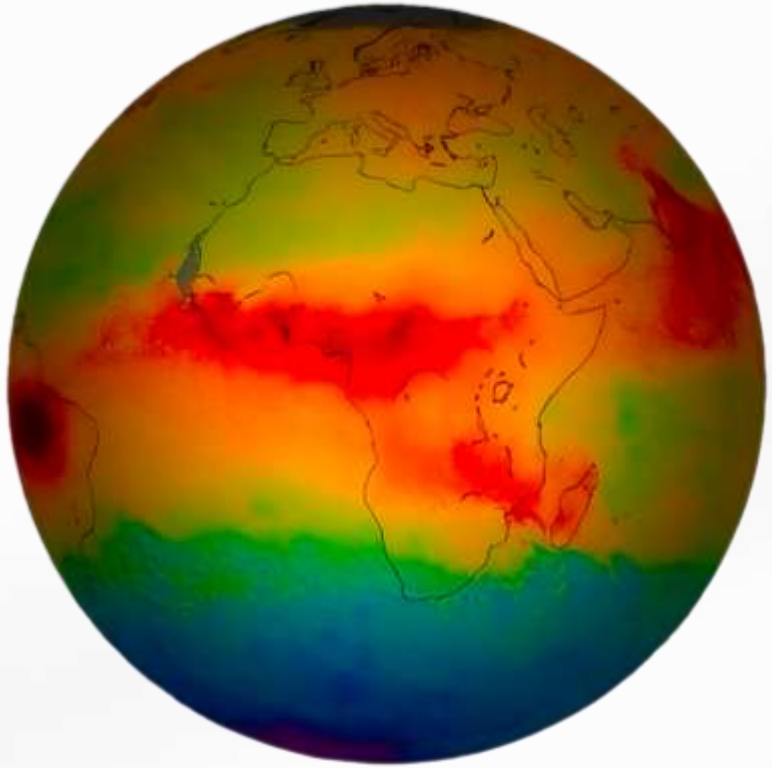

AFRICA HAS FIVE OF THE 10 MOST POLLUTED COUNTRIES IN THE WORLD IN TERMS OF OUTDOOR FINE PARTICULATE MATTER (PM2.5).

OVER 1 MILLION DEATHS LINKED TO POLLUTION IN AFRICA

"THE SCARCITY OF GROUND-LEVEL AIR QUALITY MONITORING STATIONS MEANS THAT COUNTRIES CANNOT ACCURATELY TRACK THEIR PROGRESS TOWARD MEETING AIR QUALITY GOALS AND STANDARDS". *BIOTECH MAGAZINE AND NEWS*

Highest Levels of World Contamination

Source: Health Effects Institute (HEI)

Vehicle Inspection as legal contribution

Environmental Responsibility

More Inspections and Better Quality

OBJECTIVE: IMPROVE THE QUALITY AND QUANTITY OF DIAGNOSTIC EQUIPMENT

POSSIBLE SOLUTION: MEASURE THE PARTICLE CONCENTRATION FROM MODERN DIESEL VEHICLES TO IDENTIFY DEFECT OR MISSING PARTICLE FILTERS AS ADDITIONAL EMISSSION TESTS

- **SUITABLE FOR LIGHT AND HEAVY DUTY VEHICLES**
- **MOBILE USABLE**
- **IDENTIFYING DEFECT DIESEL FILTERS**
- **EASY TO INTEGRATE IN EXISTING STATIONS** (SIMPLIFIED PROCEDURE)

Worldwide Group – Analysis and 3 points of aim

Pioneering a New Approach to Roadworthiness in Africa

Vehicle Inspection as a Right

Environmental Responsibility

More Inspections and Better Quality

The era of new devices

"Creating databases is not just about having a good Excel table, it is about integrating technology into the whole process and taking advantage of the tools and **getting the information from reliable and quality models.**"

01 – More efficient and digitalized models

02 – Big data and statistics collection

03 – Analysis and proposal approach

04 – Implementation of improvements

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OBJECTIVE: IMPROVE THE QUALITY OF THE SERVICE AND AVOID CORRUPTION

POSSIBLE SOLUTION: INCORPORATE SOFTWARE AND MANAGEMENT SYSTEMS TO REDUCE THE POSSIBLE HUMAN MANIPULATION

Software during inspection

Software before and after inspection

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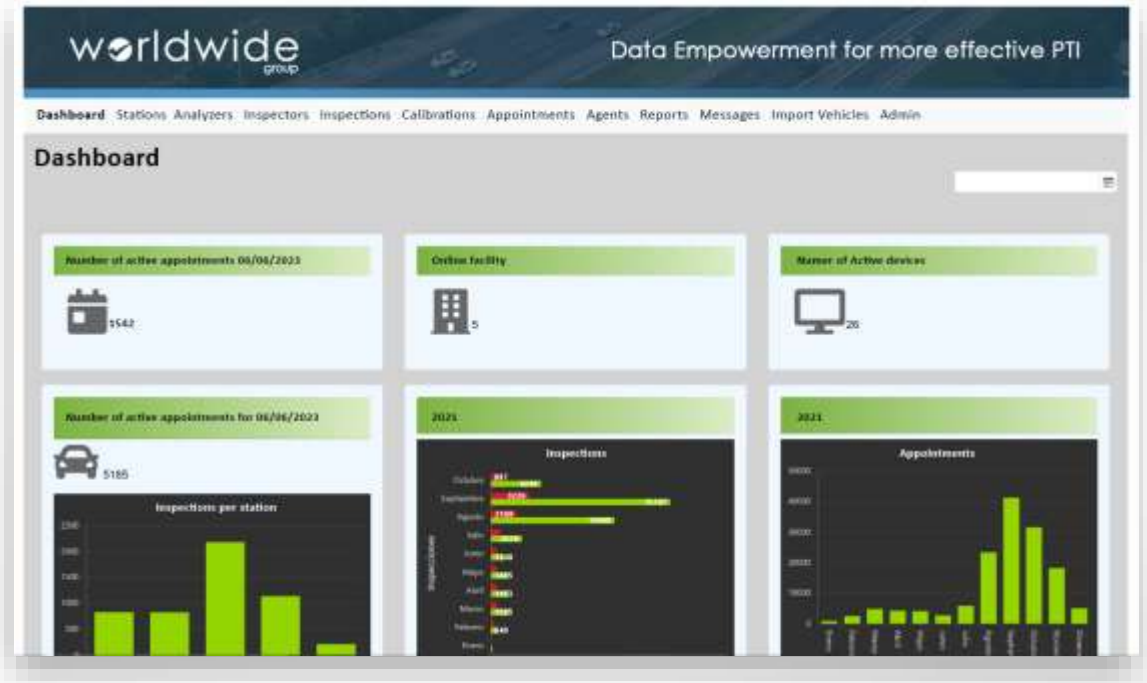

Software during inspection

Software before and after inspection

Vehicle Inspection as a Right

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BENEFITS OF INCLUDING THIS TECHNOLOGY IN PTI SYSTEMS

PTI centers

Technology providers

Public Entities

Societies

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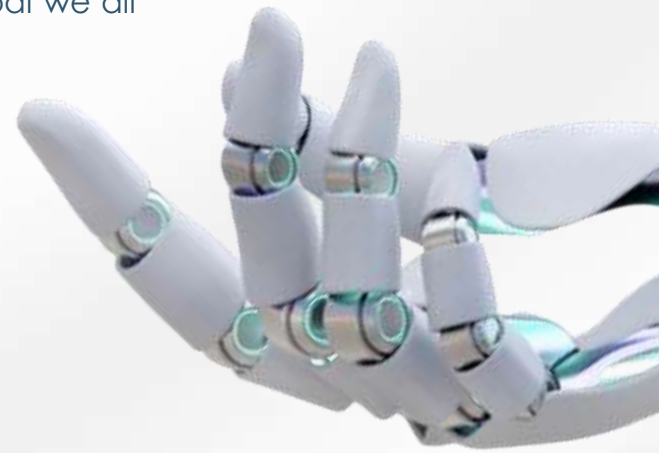
Pioneering a New Approach to Roadworthiness in Africa

In the communities of artificial intelligence, sustainable development, Agenda 2030, ICT and real-time information, the PTI sector has to be at the technological forefront to improve the whole inspection process and achieve in a more efficient way the ultimate goal we all have:

to improve our societies.



Let's work for a more efficient PTI that is technologically aligned with the rest of the sectors.

Worldwide Group

CITA
RAG AFRICA 2023

Pioneering a New Approach to Roadworthiness in Africa

worldwide group

THANK YOU!

Klaus Eldner – Ryme Worldwide GmbH
Worldwide Group

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www.ryme.com / www.wep-inc.com

Bernhard Gött

DKT

United Nations
Economic Commission for Africa

Smart Vehicle Identification for next level PTI Enforcement and Road Safety

CITA RAG AFRICA Conference 2023

October 17 - October 18

Short Introduction

Who I am?

Road Safety Experience for more than 20 years, working for MAHA from 2003-2018

Since 2018-Managing Director of DKT Deutsche Kennzeichen Technik GmbH, manufacturer of Vehicle License Plates, Smart Traffic Solutions with focus Vehicle Identification

Vehicle Registration Systems, Vehicle Register Databank solution

All kind of Vehicle Identification Technologies for smart Control & Enforcment,

Intelligent transportation technology

International Experiences and network with focus Africa and LATIN America

Bernhard Gött

Vehicle Data =

= Road Safety

Road Safety Circle

(Pre-) Vehicle Registration & technical Test

High Security License Plates

Vehicle Inspection

PTI

Control & Enforcement

Security Systems: Highway and Traffic Control

Smart Application of Vehicle ID

Interurban Traffic Signs

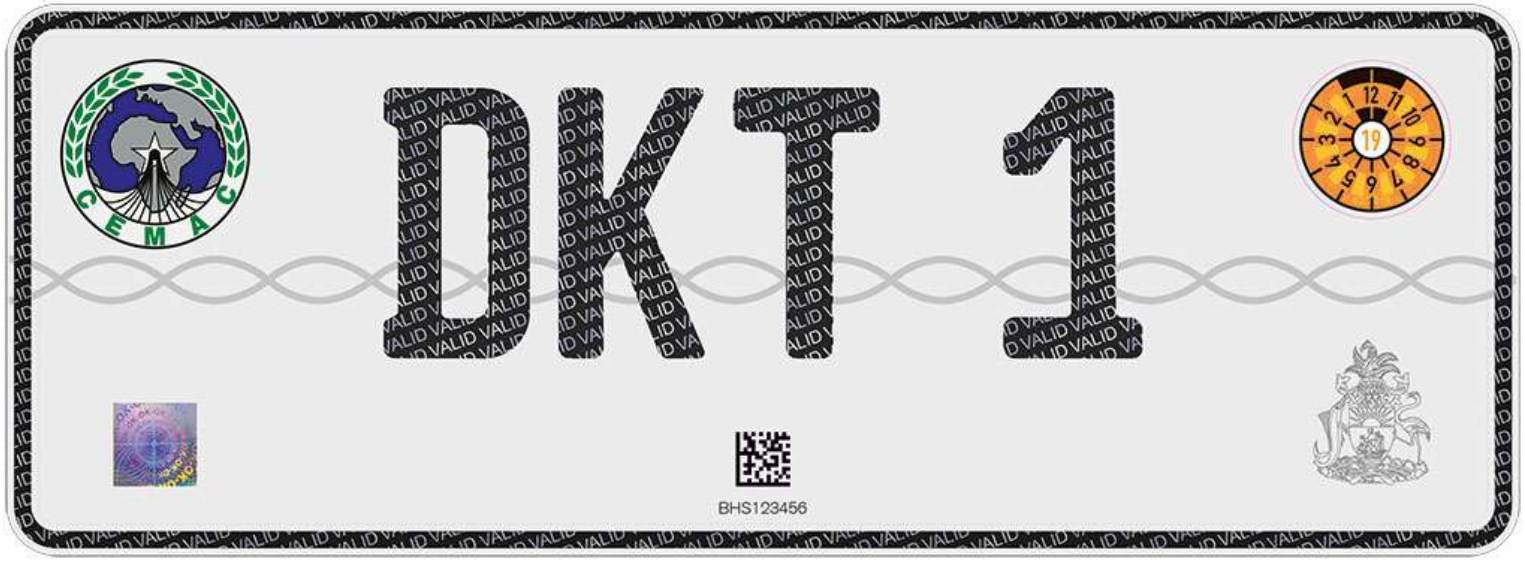
Urban Traffic Signs

Vehicle ID

Data Management

Road Safety and Vehicle Lifetime

High Security License Plates



Security Features:

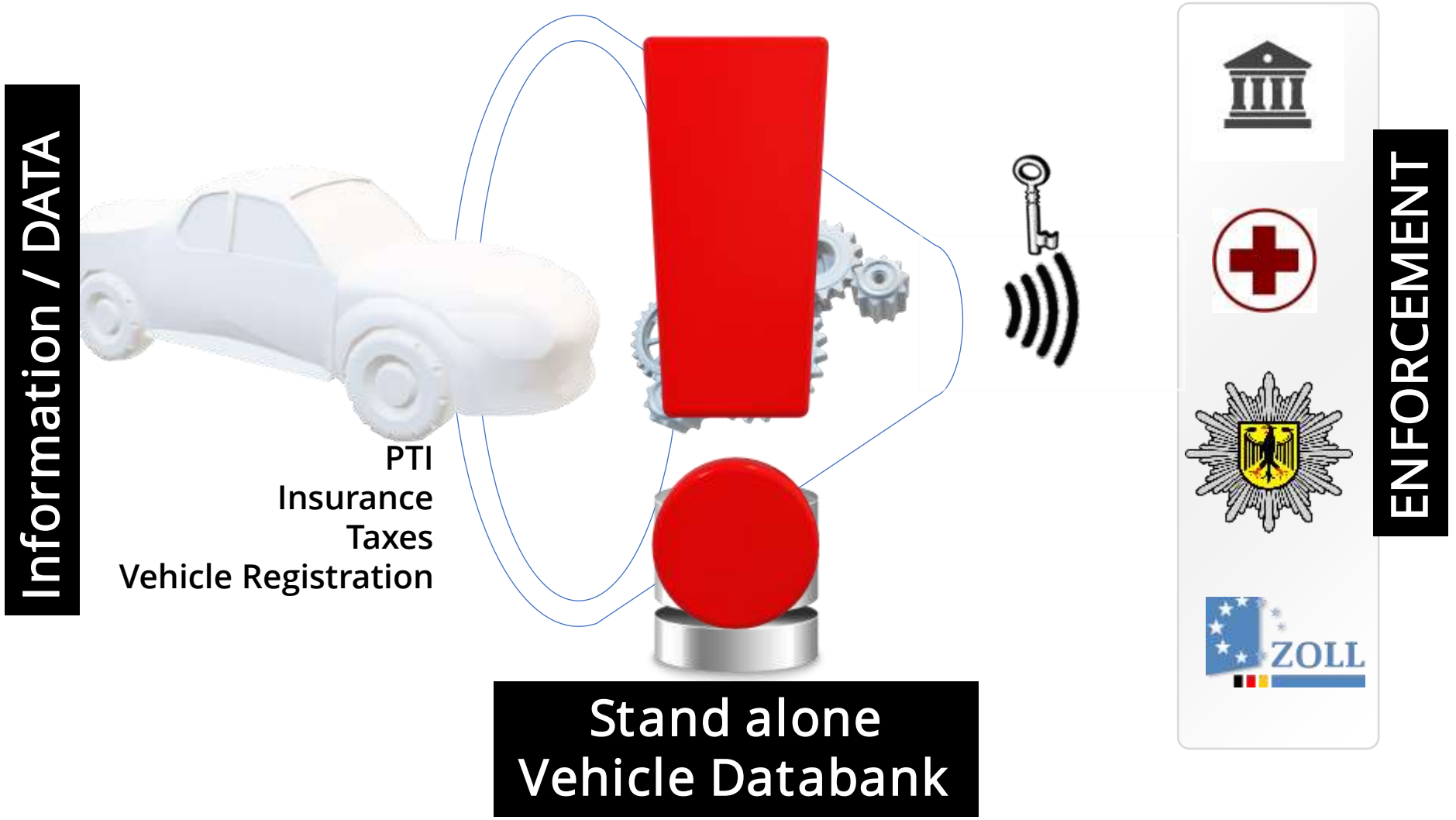
- Hologram
- Laseer Wave and Laser Marks
- Coat of arms lasered
- fully colored country flag or logo
- Security sticker (e.g. for PTI)
- QR/Barcode, serial number

Third hybrid License Plate

Description Field with ThermoTransfer Printer
e.g. Vehicle License plate or VIN

Secure and Intelligent Data Management

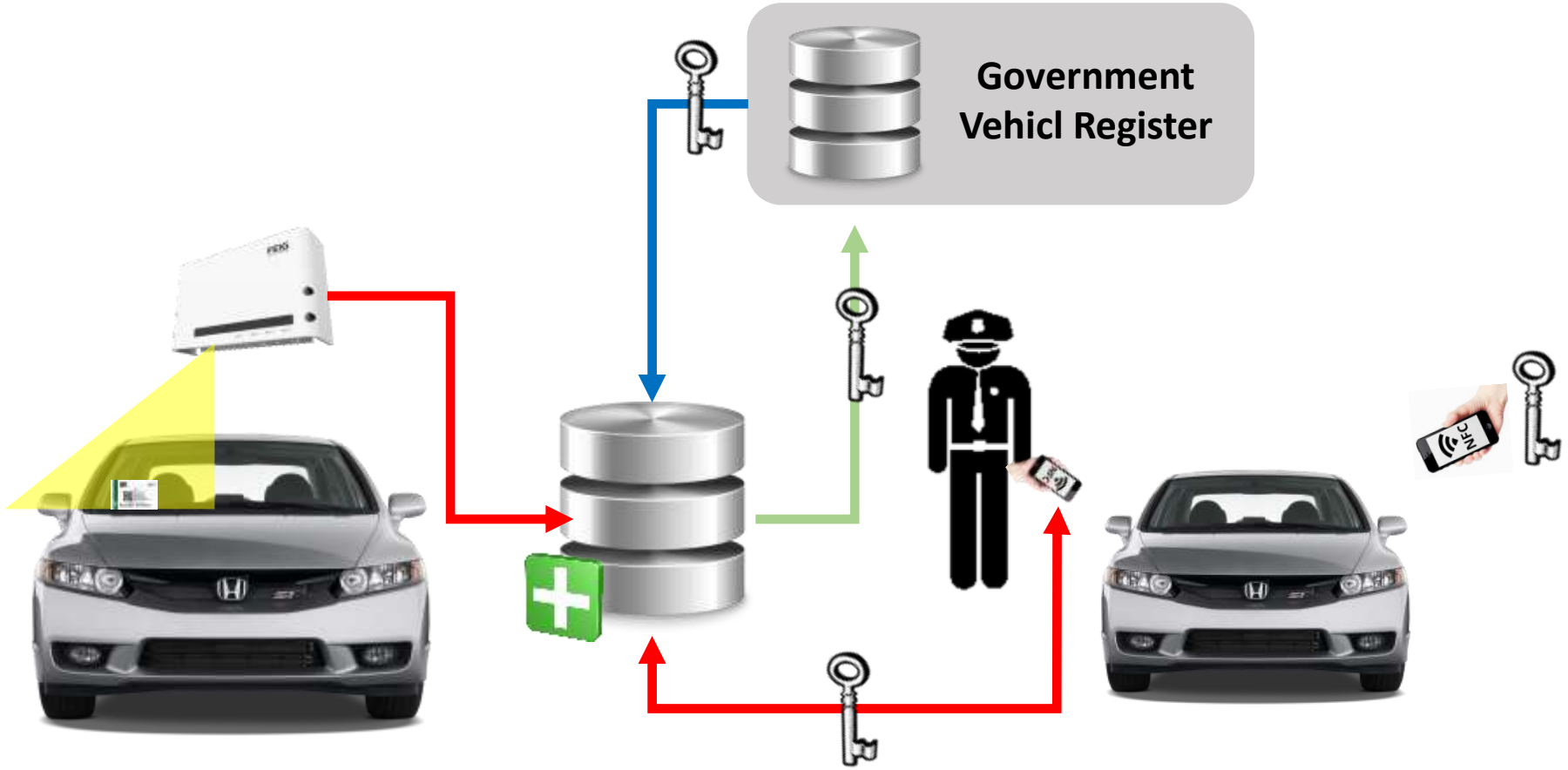
Secure and Intelligent Data Management



Electronic Vehicle Identification

EVI = make data available within
moving traffic,
stand still traffic
with real time information
with RFID and NF Technology

Smart Vehicle Identification



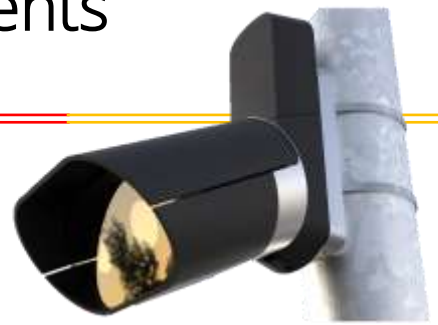
SMART Applications in moving or stand still traffic

Enforcement

Enforcement **& *Vehicle Control* = using the information/data genererated by vehicle registration and PTI**

Pass PTI test yes/no
Vehicle registered correct?
Black List checking
Insurance paid/valid
Smart Parking
Vehicle Classification (Emission)
Speed control
Traffic restrictions
Vehicle counting
Road Safety
Border Control

Tools and Instruments



- Fix Camera Systems and RFID Check Points
- mobile ALPR and
- mobile RFID Reader
- Mobile APP for Smart Phones for NFC use
- RFID Pistols

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Managing Director

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Robert Lisinge

Director Private Sector Development & Finance Division - UNECA

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Economic Commission for Africa

Gerhard Müller

CITA President

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THANK YOU!

- **DINNER AT 19:30**

  ROOM HARRAR GRILL

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