



شركة تنمية نفط عُمان
Petroleum Development Oman

Road Safety Data Spatialization & Deep Learning

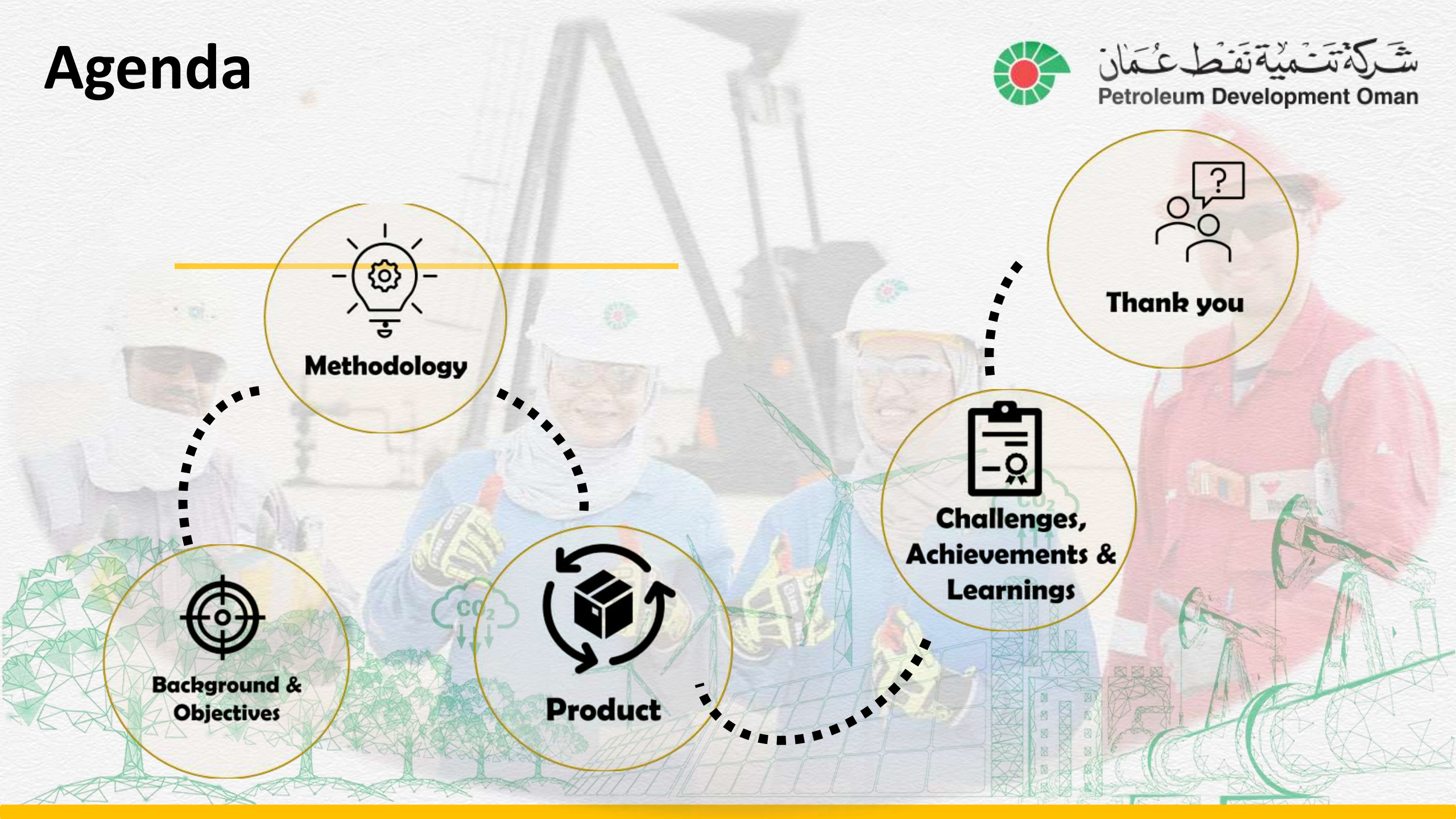
Presenters : Khadija Al Falahi (Geospatial Consultant)
, Ahmed Al Mandhari (Geospatial Consultant)
Contributors : Khamis Al Bulushi (Geospatial Consultant)



Agenda



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Background & Objectives



Background & Objectives

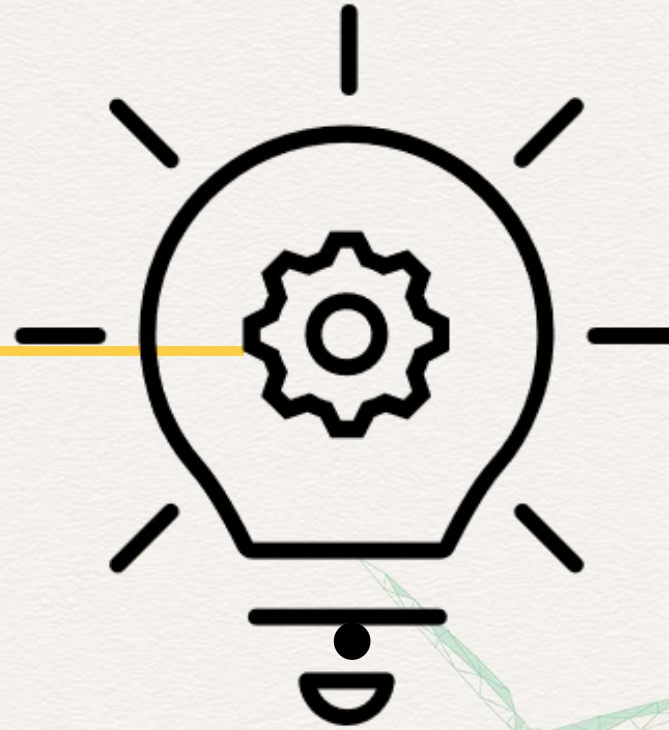


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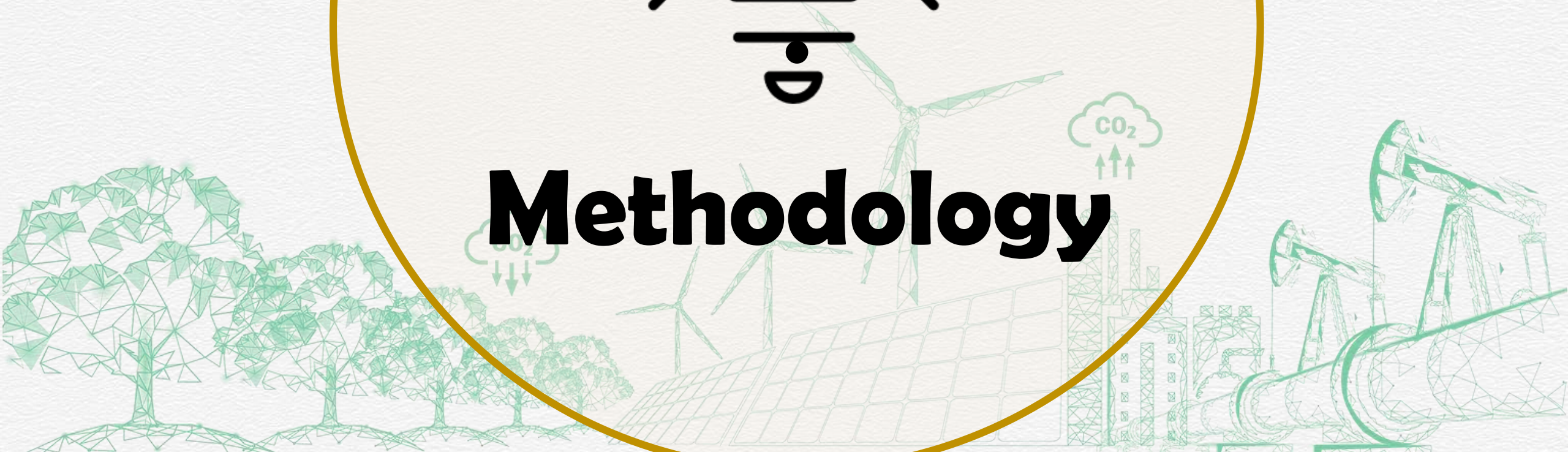
- Road safety has always been and will remain one of top priorities in PDO
- Motor Vehicle Incidents (MVI) and fatalities have increased since 2021
 - 2022 MVI = 60
 - 2022 Fatalities = 9
- Improvements and use of technology can help directly and indirectly to mitigate and/or prevent road accidents, human injuries and fatalities
- Road safety related data currently reside in multiple databases that require extensive efforts to combine and analyze that hinder any proactive intervention or timely decision making
- Objectives:
 - ✓ Support Darb Al Salama project to identify trends and patterns
 - ✓ Spatialize MVI locations
 - ✓ Enable spatial analysis & Deep Learning
 - ✓ MVI Dashboard and dynamic analysis

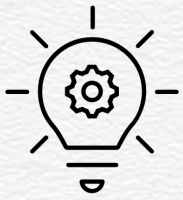


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Methodology





Methodology



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Data Sources



Data

- Excel
- Unstructured
- Coordinates Missing & Different format



GIS Integration (FME Scripts)



MVI Coordinates

- PIM reports
- RSST reports



Automation Coordinates & validation

- Excel to SDE
- FC / Table



Output



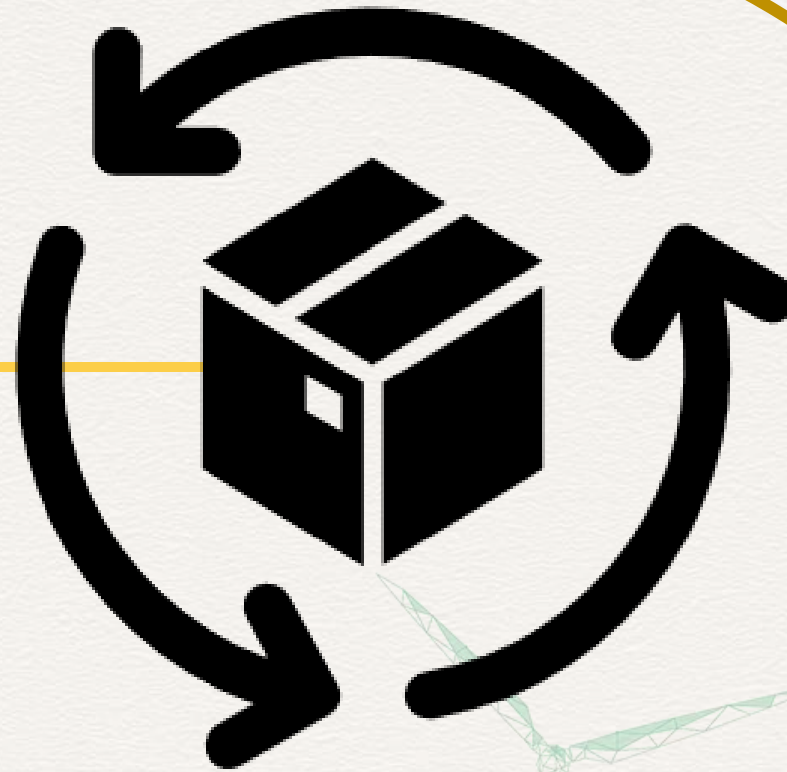
Reporting

- MVI Dashboard
- MVI Analyses
- IRC Analyses

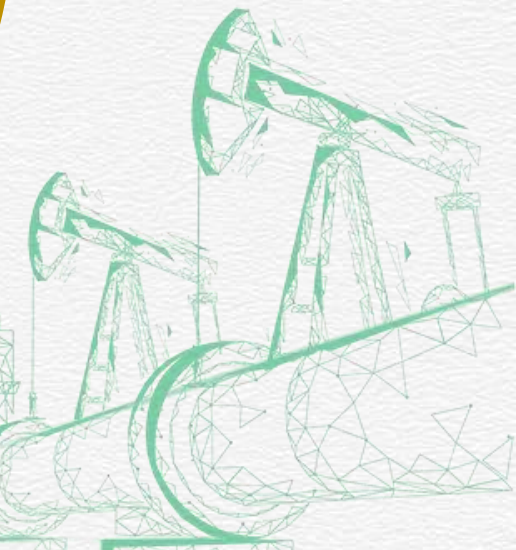




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Product





Product



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Road Safety Drab Al-Salamh



PDO Road safety initiative

MVI Dashboard

MVI Analyses Dashboard

IRC Analyses

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PDO Road Safety initiative Darb Al Salama

PDO Road safety initiative

HSE is very core to petroleum Development Oman (PDO) business therefore after 2021 road incidents tragedies which occurred led to increas

Khamis XT01

June 21, 2022



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Challenges, Achievements & Learnings





Challenges, Achievements & Learnings



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- File base & not structured data
- Multiple data sources
- Geographical locations is missing from some of motor vehicle incident reports



challenges

Achievements



- Spatialize 50 % of motor vehicle incidents
- Established the first MVI dashboard in PDO linked with a spatial data
- Support Darb Al Salamh project team with dynamic analyses

- MVIs must be recorded in database.
- IVMS historical data key to enhance analyses
- Reveled observations/patterns on the time and location of incidents



Learnings



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Thank you



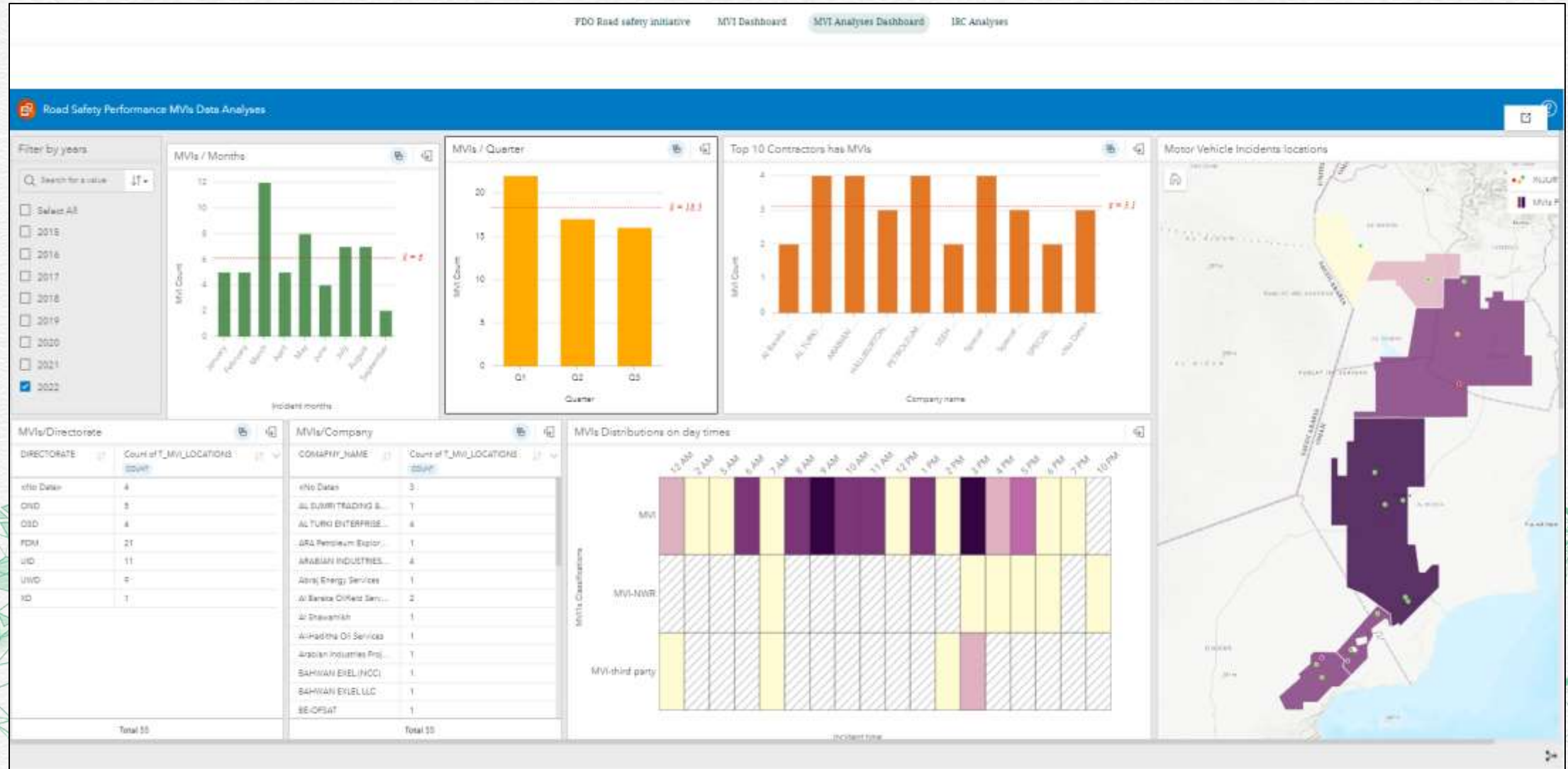


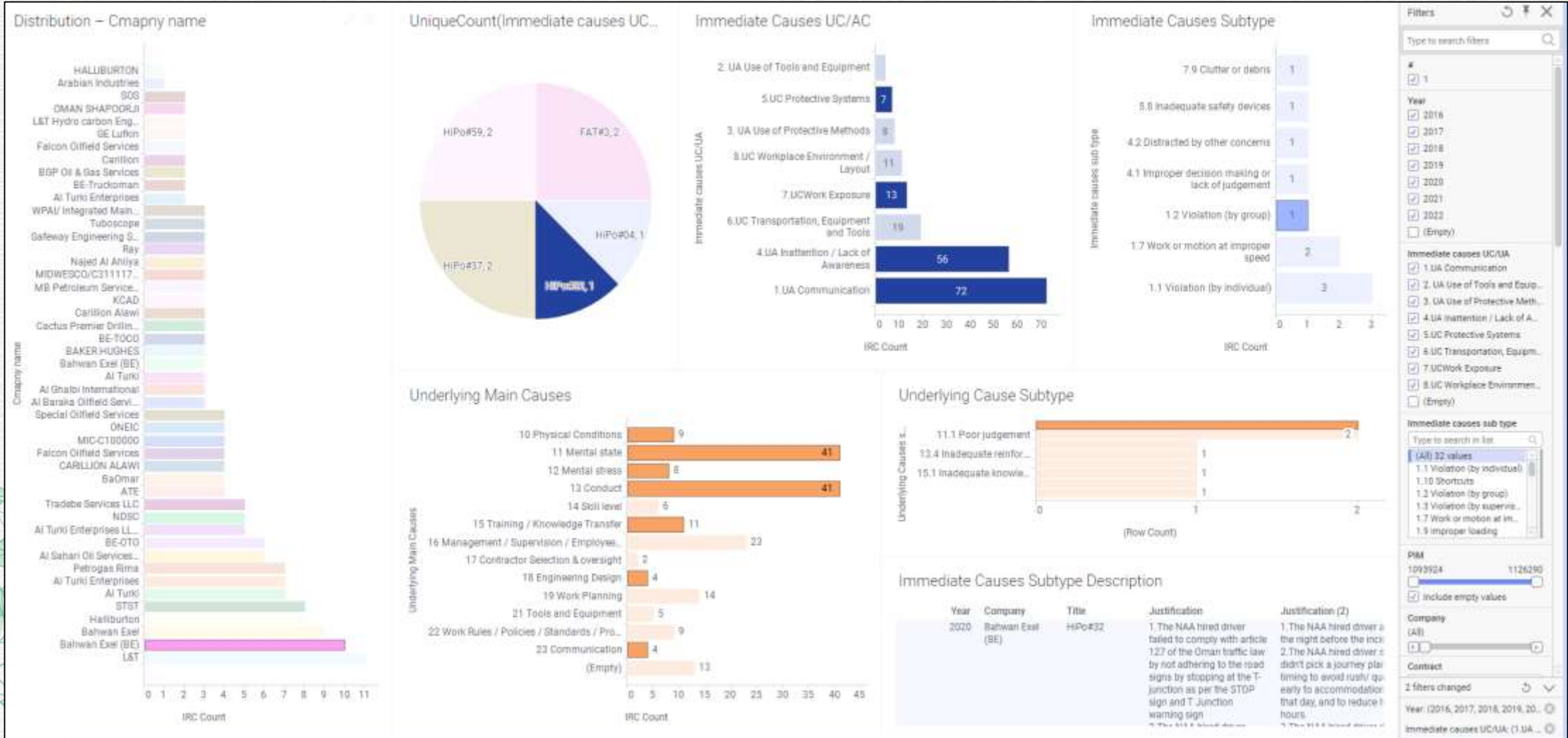
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Thank you

STAY SAVE







PDO Road safety initiative

MVI Dashboard

MVI Analyses Dashboard

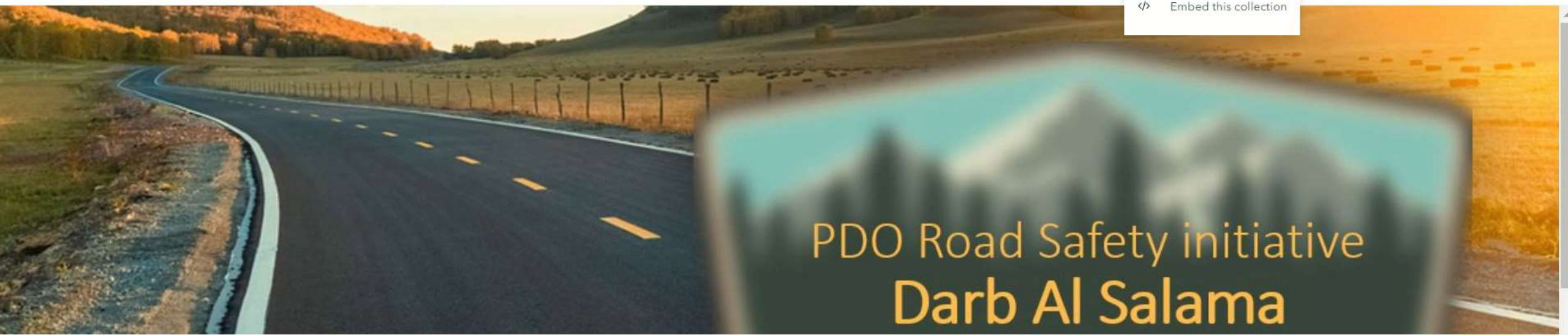
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