Innovarpel 2025
YEARS

TECHNICAL DAYS

DIGITAL TRANSFORMATION & INDUSTRIAL CYBERSECURITY
IN THE OIL&GAS INDUSTRY

arpel YEARS

JUNE, 24 & 25
Rio de Janeiro, Brazil

AI for Energy Resource Management
EP PETROECUADOR

Luis Angel Herdoíza S.
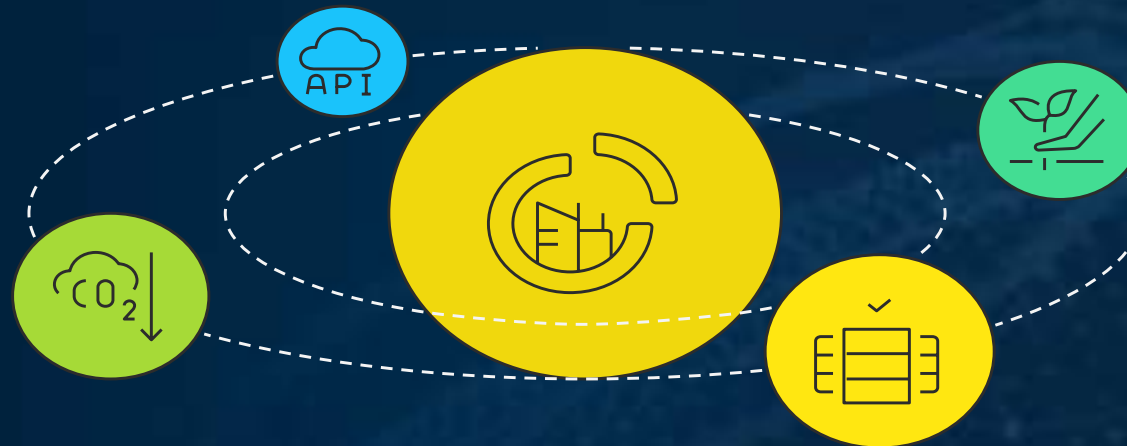**Soluciones Energéticas / EP PETROECUADOR**

EP PETROECUADOR's Energy Transformation

Artificial Intelligence

Utilizing AI to optimize energy management

Sustainability
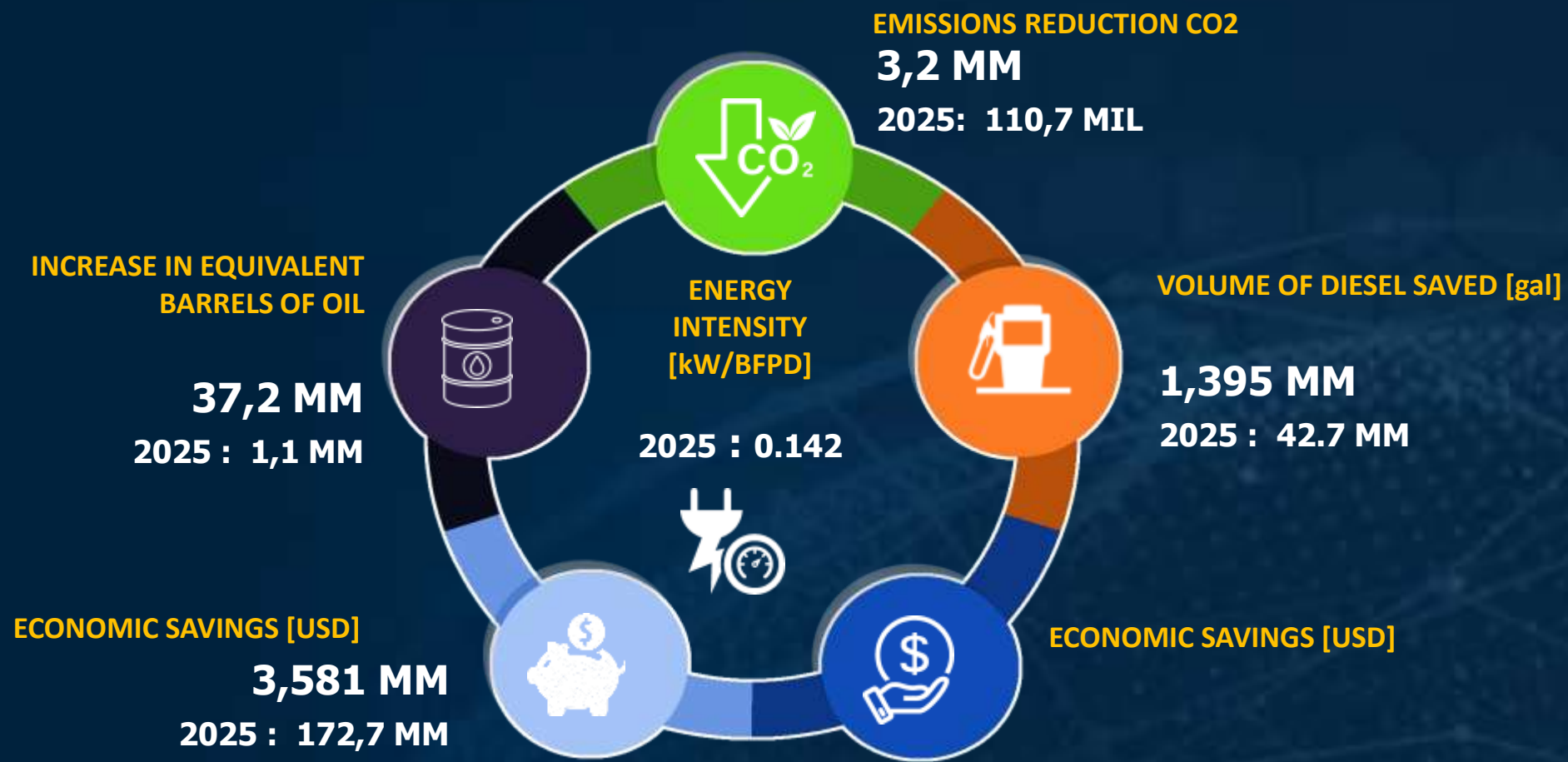
Promoting eco-friendly energy practices

Decarbonization

Reducing carbon emissions in energy operations

Operational Efficiency

Enhancing performance through AI integration

Energy Efficiency Indicators 2010 - May 2025

EMISSIONS REDUCTION CO2
3,2 MM
2025: 110,7 MIL

VOLUME OF DIESEL SAVED [gal]
1,395 MM
2025 : 42.7 MM

ENERGY INTENSITY [kW/BFPD]
2025 : 0.142

INCREASE IN EQUIVALENT BARRELS OF OIL
37,2 MM
2025 : 1,1 MM

ECONOMIC SAVINGS [USD]
3,581 MM
2025 : 172,7 MM

ECONOMIC SAVINGS [USD]

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3

Machine Learning in Energy Management

Identify Historical Data

Gathering relevant historical data for analysis

Predict Energy Consumption

Forecasting future energy consumption

Manage Energy Consumption
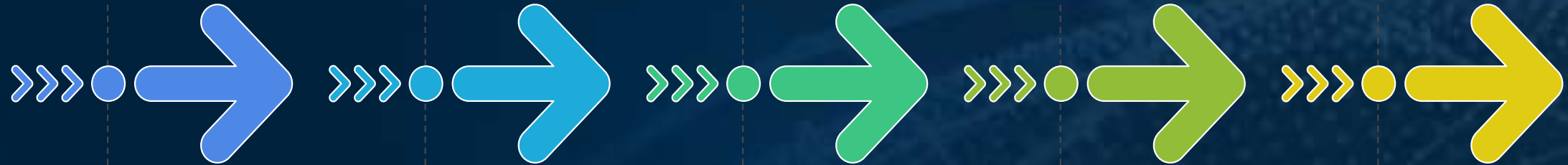
Overseeing energy use in assets

Model Complex Patterns

Using machine learning to model patterns

Apply in Energy Efficiency

Implementing predictions to improve efficiency

Strategic Digital Transformation

Our commitment is clear: improve energy performance and reduce GHG emissions. We consolidate digital transformation as a strategic axis. This includes sustainability and permanent innovation.

Sustainable Energy Future

It refers to a global system of energy production and consumption that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainable Energy Future

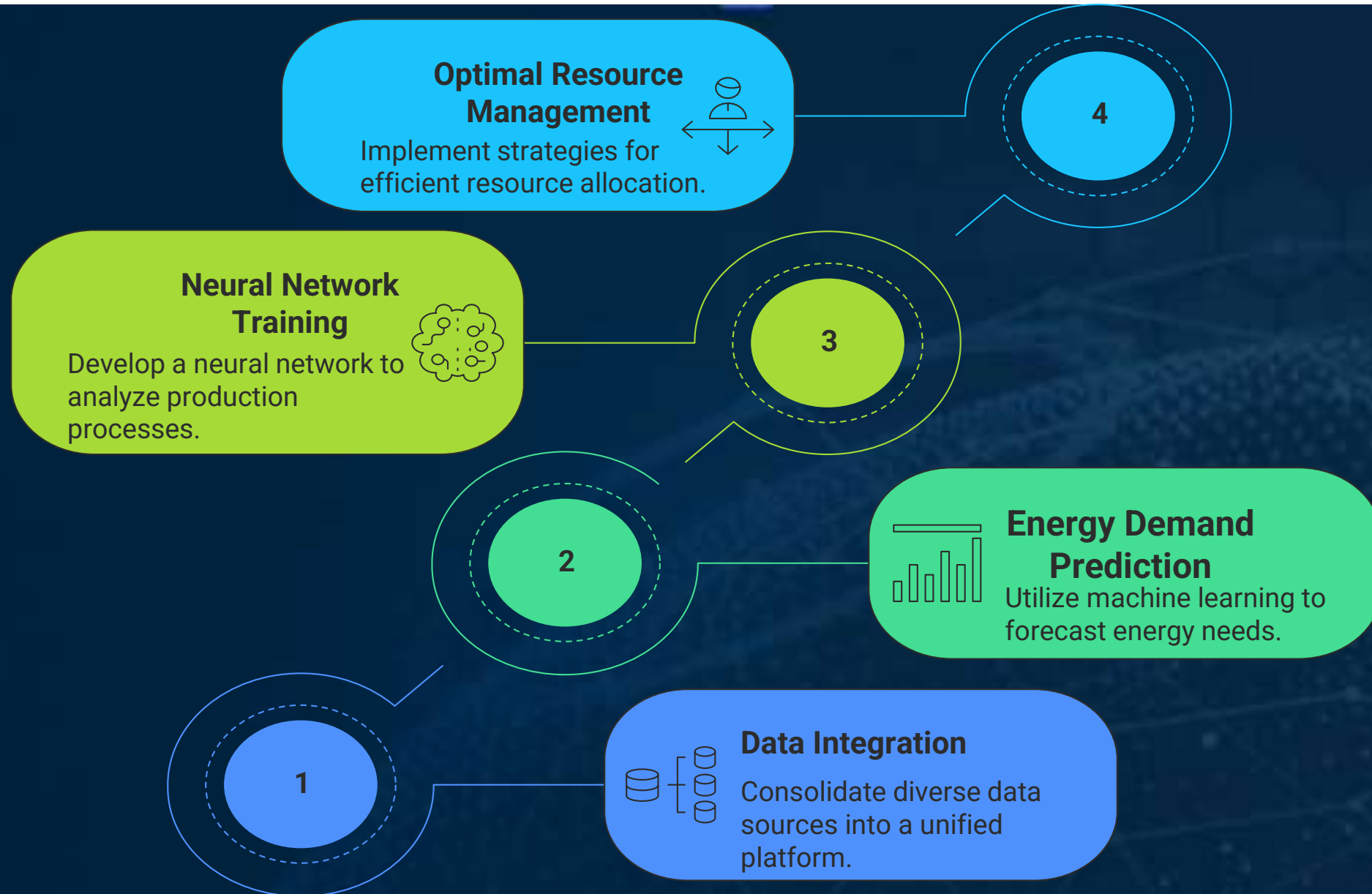**Decarbonization**

Reducing carbon emissions through renewable energy sources

Digital Transformation

Enhancing energy efficiency and sustainability with technology

Achieving Optimal Resource Management

Optimal Resource Management
Implement strategies for efficient resource allocation.

4

Neural Network Training
Develop a neural network to analyze production processes.

3

2

Energy Demand Prediction
Utilize machine learning to forecast energy needs.

1

Data Integration
Consolidate diverse data sources into a unified platform.

Business Analytics Platform Architecture.

Unveiling Machine Learning's Role in Energy Management

Machine learning enhances energy efficiency and management.

1

2

3

4

Modeling Complex Patterns

Machine learning models complex patterns in historical data.

Prediction of Historical Data

Machine learning predicts future energy consumption trends.

Application in Energy Efficiency

Machine learning optimizes energy usage for efficiency.

Application in Energy Management

Machine learning improves overall energy management strategies.

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