

# The EV Future – A Need for New Skills in the Automotive Industry



## Agenda

- Presentations by:



**STEVE NASH**  
CEO  
The Institute of the  
Motor Industry (IMI)



**TOM DENTON**  
Owner and Author  
Automotive Technology



**KHALID ALWASSIA**  
Trainer  
Tiqani Management  
Consultancy

- Q&A Session

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INSTITUTE OF THE  
MOTOR INDUSTRY  
Driving the industry since 1920

A need for new skills in the automotive industry

Steve Nash FIMI  
CEO



# Transition to a Mobility Sector



Autonomous

Today ADAS

Tomorrow autonomous  
machines



Connected

Vehicle to everything (V2X)

Cybersecurity

Personal data



Mobility Service

New ways of purchasing  
mobility

Transition to new retail &  
business models



Electric

Electric powertrain

Battery technology

Hydrogen fuel cell

# Focus on Electrification

Across all vehicle types

Emerging technologies



# Poll question:

Do you acknowledge the potential health & safety risks for those working on the high voltage systems of electrified vehicles?

Yes/No





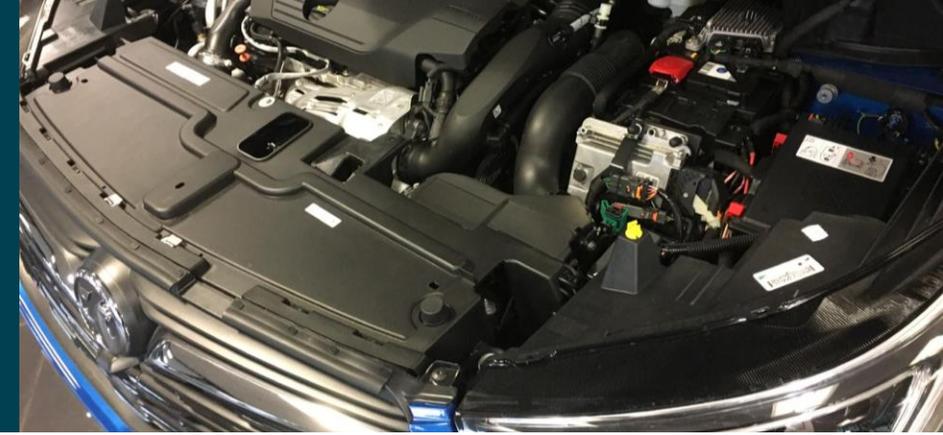
## What the research tells us about the pace of electrification

- Volkswagen expects R&D expenditures of over € 30 billion and aims to have 22 million electric vehicles on the streets by 2030
- BMW plans to launch at least 25 electric vehicle models before 2025
- Bloomberg suggest 60 Million EVs by 2040

# Poll question:

In your market are individuals who work on electrified vehicles regulated in any way (e.g. minimum regulatory standards, required qualifications)?

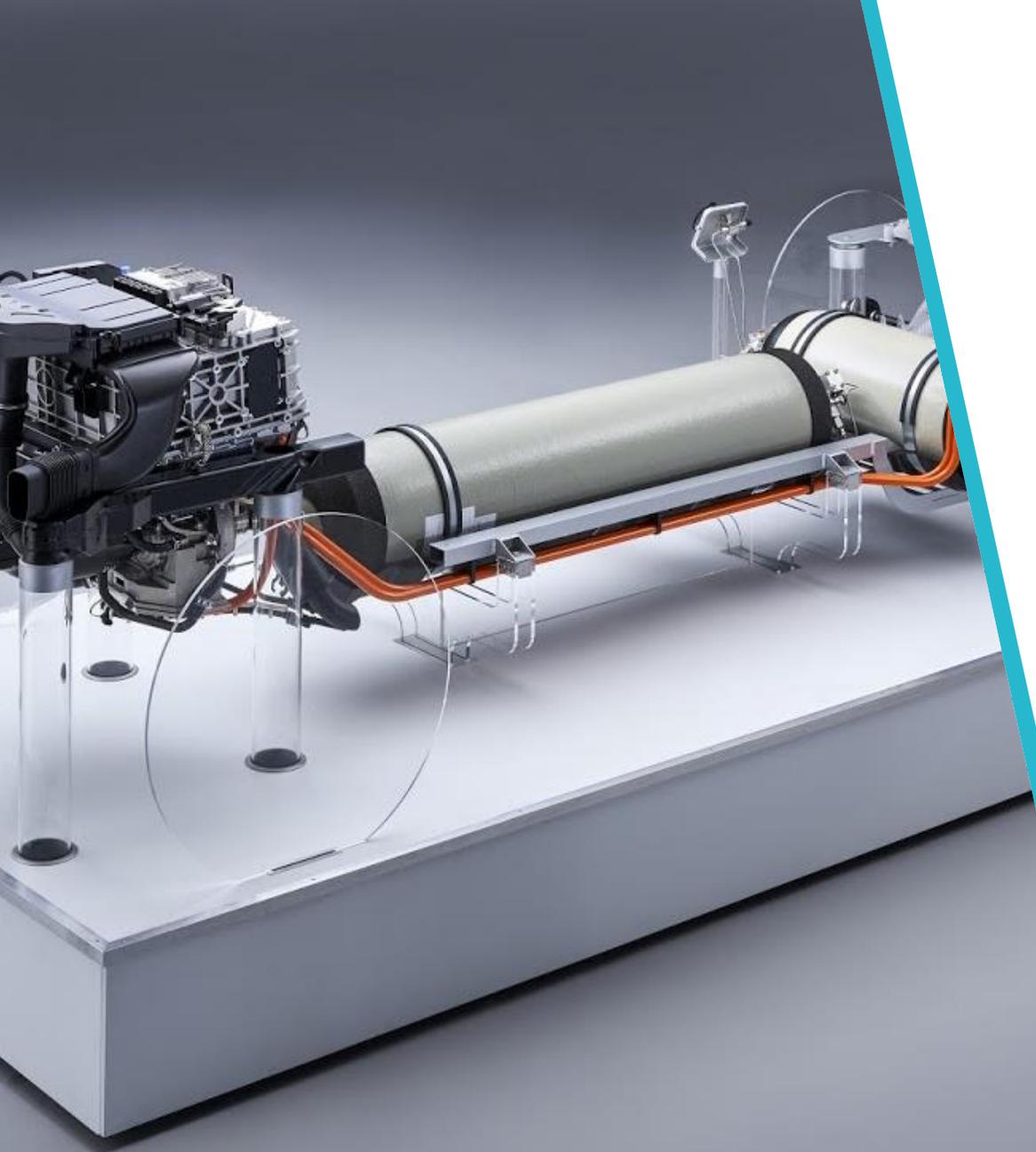
Yes/No



# Cybersecurity - Aftermarket

- Cybersecurity is becoming a new dimension of quality for automobiles
- Automotive industry is rethinking cybersecurity along the entire value chain
- **Managing cyber risk throughout the vehicle lifecycle will require new working practices**
  - For example, in the aftermarket:
  - Code of practice





## Hydrogen

BMW have made a commitment to hydrogen (as have others)

All the same issues as with EVs but additional areas where safe practices are necessary

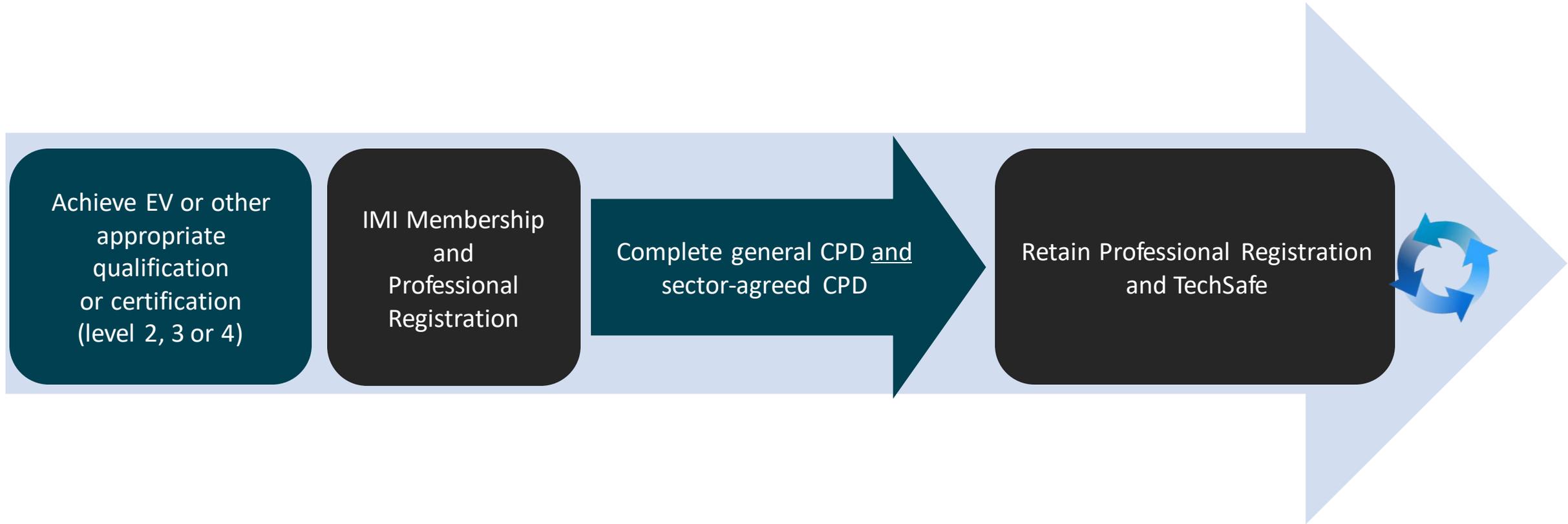
# Poll question:



What is the level of trained and/or qualified EV Technicians in your market?:

- Very Low
- Low
- Modest
- Adequate
- High

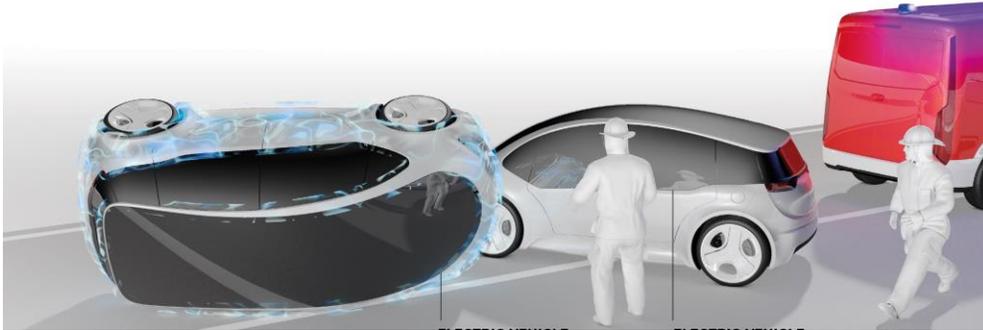
# Professional Register TechSafe™ Certification & Retention



# CPD (examples)

## EXPLOSIONS THAT SAVE LIVES

Bosch technology reliably switches off the current flow in electric vehicles involved in an accident



# Poll question:



Do you currently have access to:

- Suitable EV training? Yes/No
- Appropriate EV qualifications? Yes/No



## Next steps

Determine what other areas should be included as TechSafe:

- ADAS (different levels)
- Automated driving
- Hydrogen
- Cybersecurity

Searchable international public database

What the industry says:

<https://vimeo.com/320271756>

# The EV Future

## *A Need for New Skills in the Automotive Industry*

Webinar Training Series  
By Tiqani Inc.

# Welcome

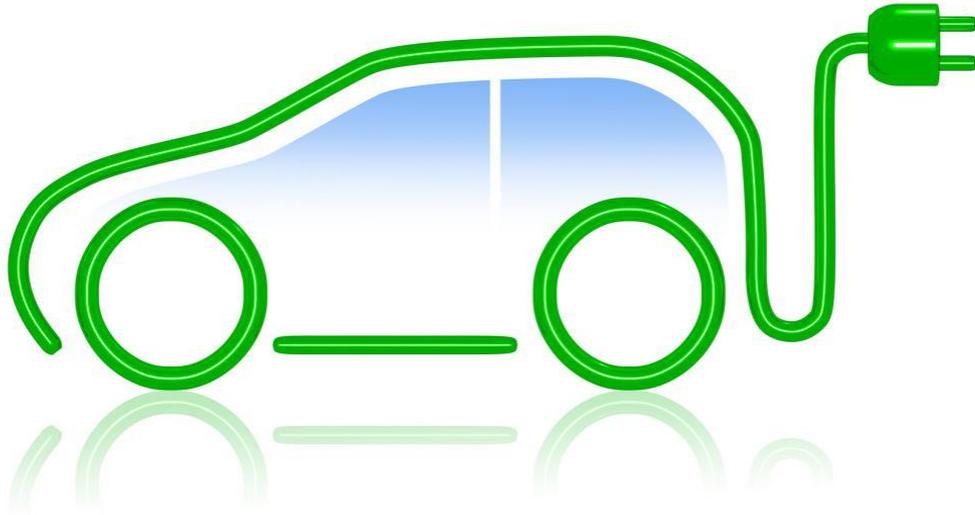


## **Khaled Alwassia FIMI MBA:**

- ❶ Active in the automotive industry since 1983 starting as a BMW Apprentice.
- ❷ Established an IMI approved BMW and JLR technicians Apprenticeship program in KSA.
- ❸ Represents Tiqani since 2016 in Saudi Arabia.
- ❹ Management Trainer, Executive & Team Coach

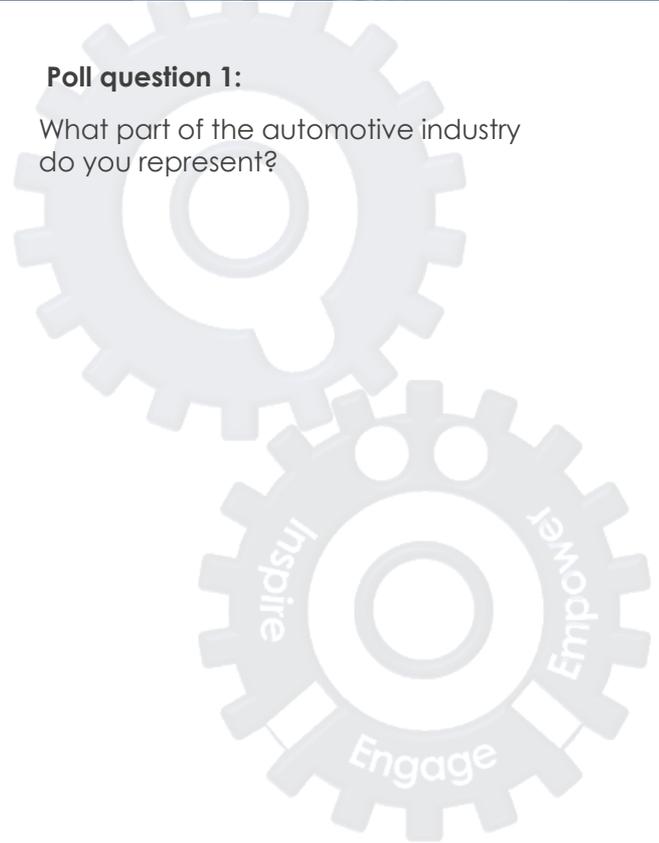
# Introduction

## Middle East



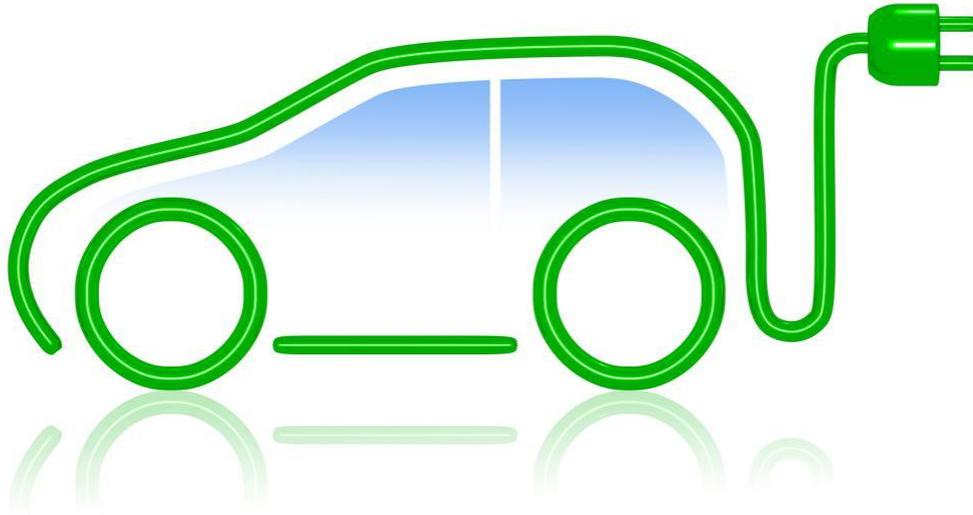
### Poll question 1:

What part of the automotive industry do you represent?



# Introduction

## Middle East



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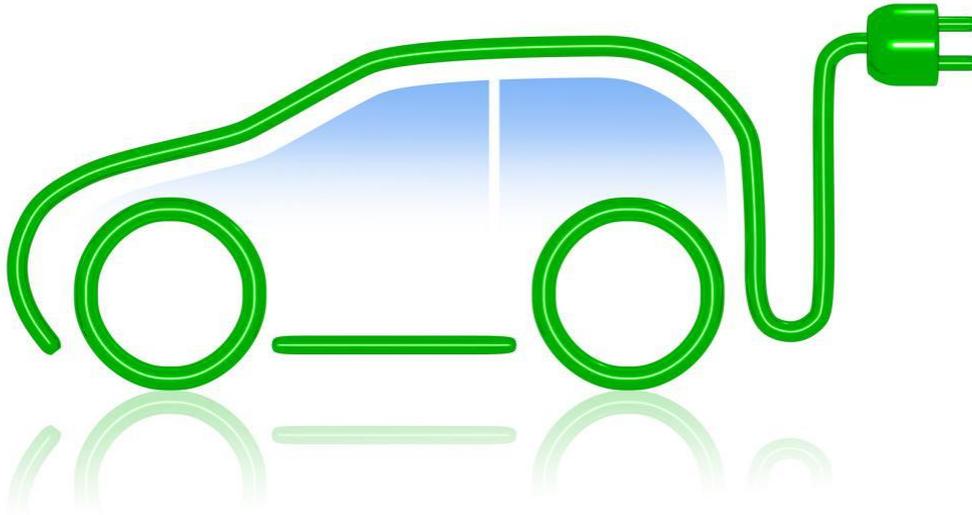
### Poll question 2:

Which offers of Hybrid or Electric Car Training have you received or are aware of?



# Introduction

## Middle East



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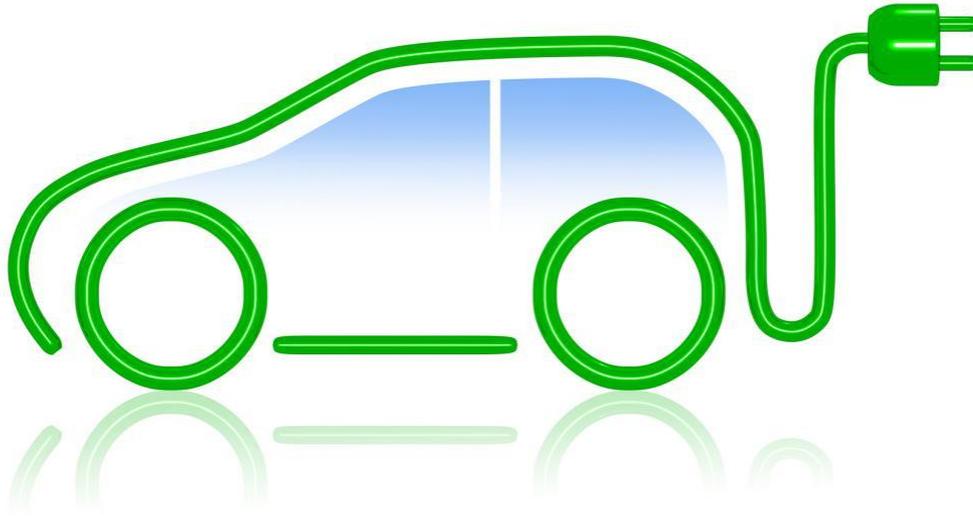
### Poll question 3:

Which of those offers have your or your team attended?



# Introduction

## Middle East



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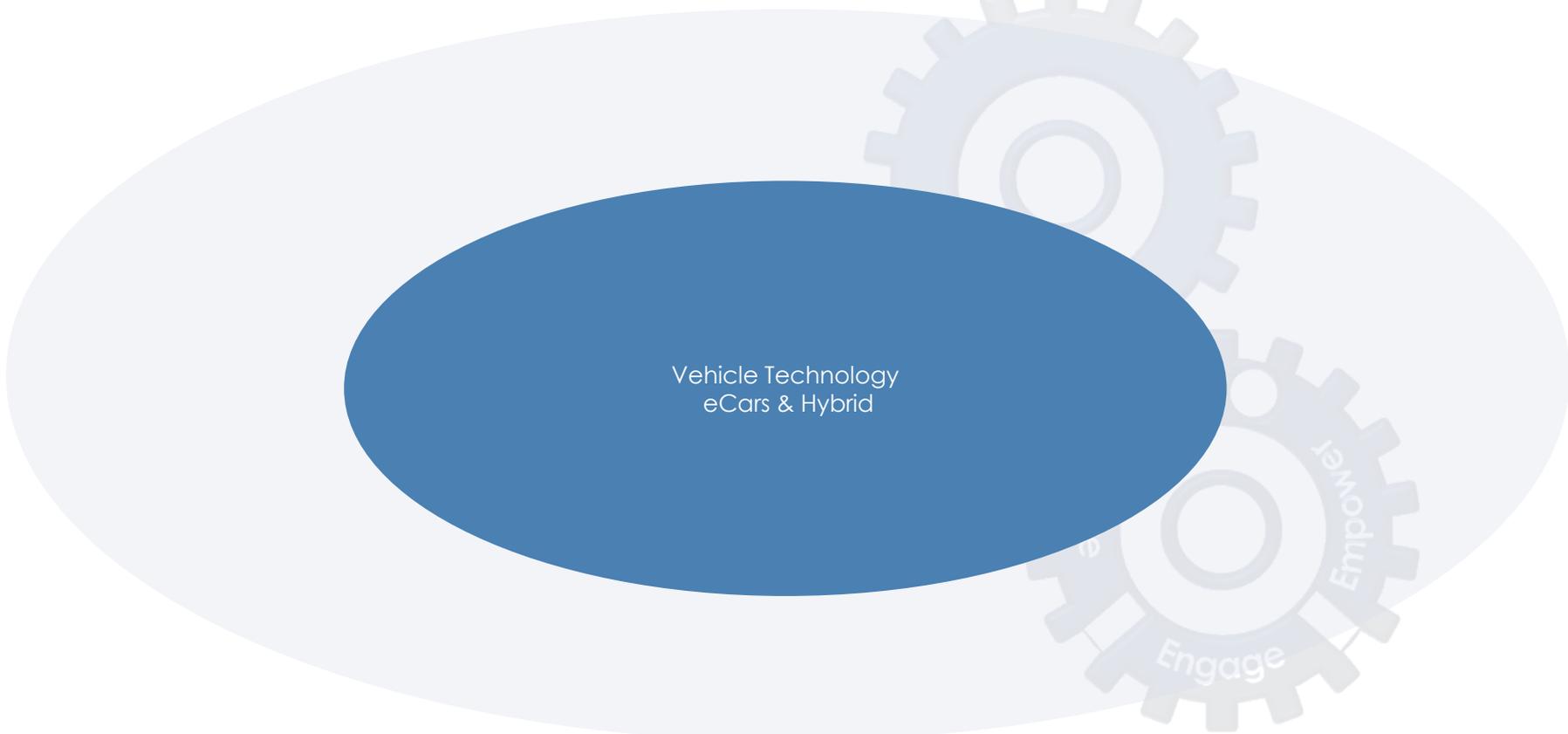
### **Poll question 3:**

Which of those offers have your or your team attended?

### **Poll question 4:**

How confident are about your organization's readiness to service Hybrid & EV customer vehicles?

# Infrastructure Requirement

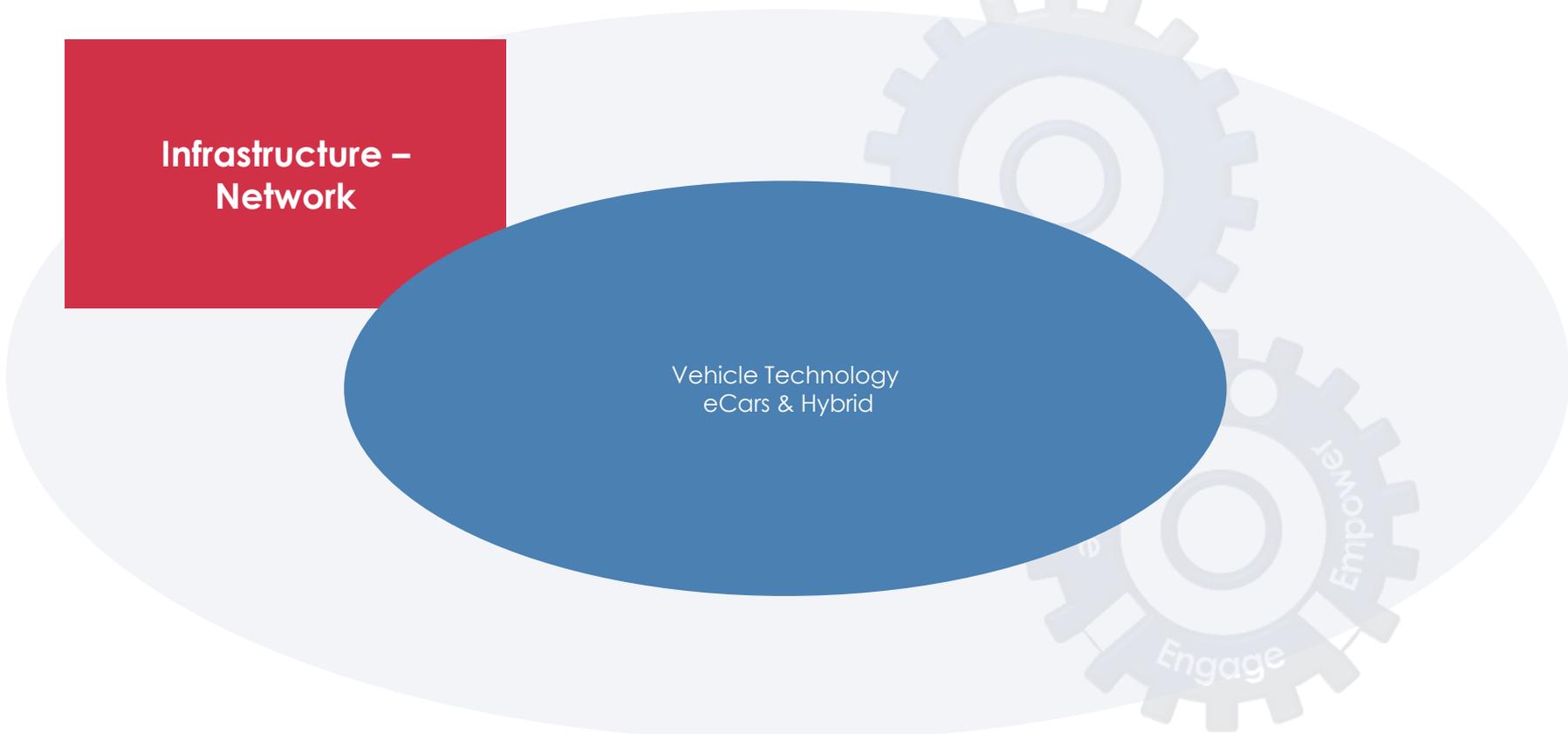


Vehicle Technology  
eCars & Hybrid

# Infrastructure Requirement

**Infrastructure –  
Network**

Vehicle Technology  
eCars & Hybrid



# EV Training

## Infrastructure Requirement

Infrastructure –  
Network

Infrastructure –  
Charging Stations

Vehicle Technology  
eCars & Hybrid



# Infrastructure Requirement

Infrastructure –  
Network

Infrastructure –  
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Vehicle Technology  
eCars & Hybrid

System  
Services



# EV Training

## Infrastructure Requirement

**Infrastructure –  
Network**

**Infrastructure –  
Charging Stations**

Vehicle Technology  
eCars & Hybrid

**System  
Services**

**Sales &  
Aftersales**

# EV Training

## Infrastructure Requirement

**Infrastructure –  
Network**

**Infrastructure –  
Charging Stations**

Vehicle Technology  
eCars & Hybrid

**System  
Services**

**Sales &  
Aftersales**

**Legislation &  
Regulation**

# EV Announcement

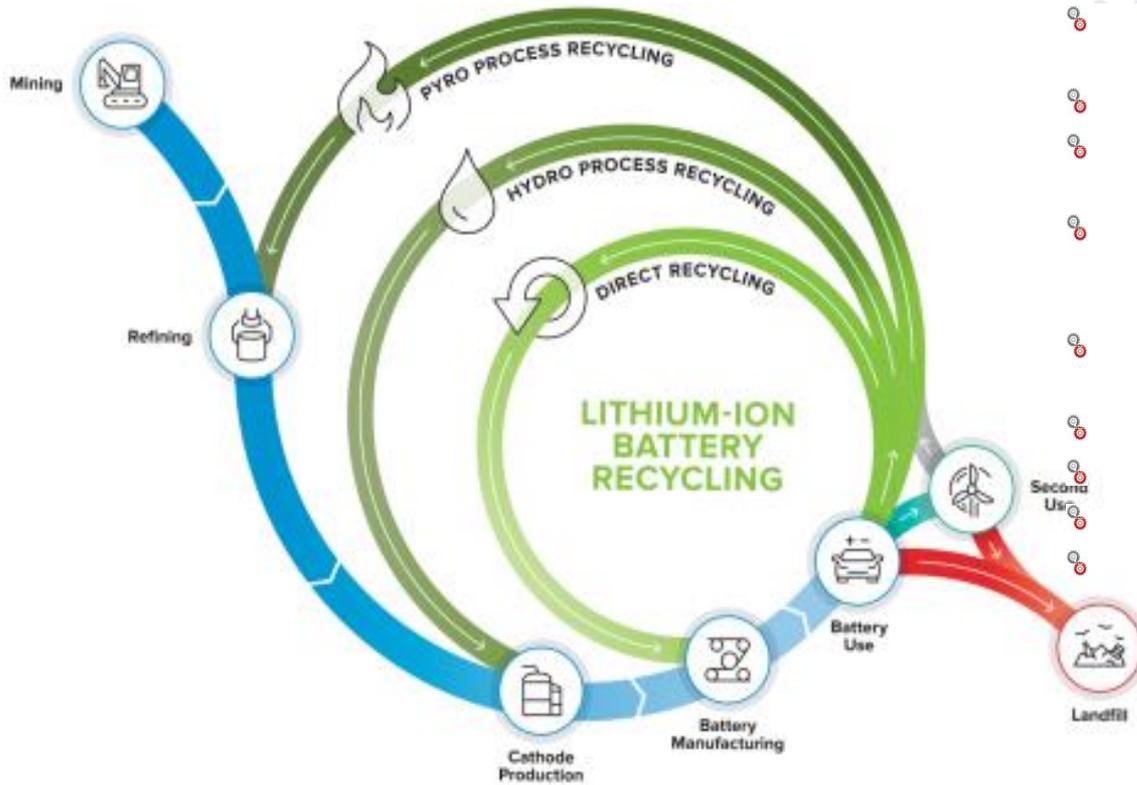
## Middle East



- Lucid Motors – KSA investment 1B \$.
- Masdar & Hafilat – First Electric bus on Abu Dhabi Roads 2019
- DEWA installed 240 Charging stations across Dubai
- RTA UAE Installs 60m of power-charging grid
- Dubai Police gets GM Bolt EV
- Arabian Taxi gets 50 Toyota Prius
- Shift Rental Car receives 5 Renault ZOE 40 LR
- RTA purchases 200 Tesla & adding 125
- Self Drive launches 5 AED/hour electric cars
- GREENPARKING EV-NETWORK
- DEWA launches App to locate EV charging stations
- Nissan & KSA's SEC
- MG Motor launch MG ZS EV in KSA

# EV & Regional Governments

## Middle East



- UAE System for Electric Vehicles announced in 2017.
- GCC Standards organisation
- UAE requires registered Agents for EV Cars
- Oman's Authority for Electricity Regulation (AER) plans to prepare a regulatory framework 2018
- KSA - Dealer need authorised battery recycling partner 2020.
- Saudi Council of Engineers Licence
- TVTC Training Programs Update
- EV Purchase Incentives
- Jordan has a developed Hybrid market with some EVs

# EV & Hybrid Training

## Bus, Truck, VAN



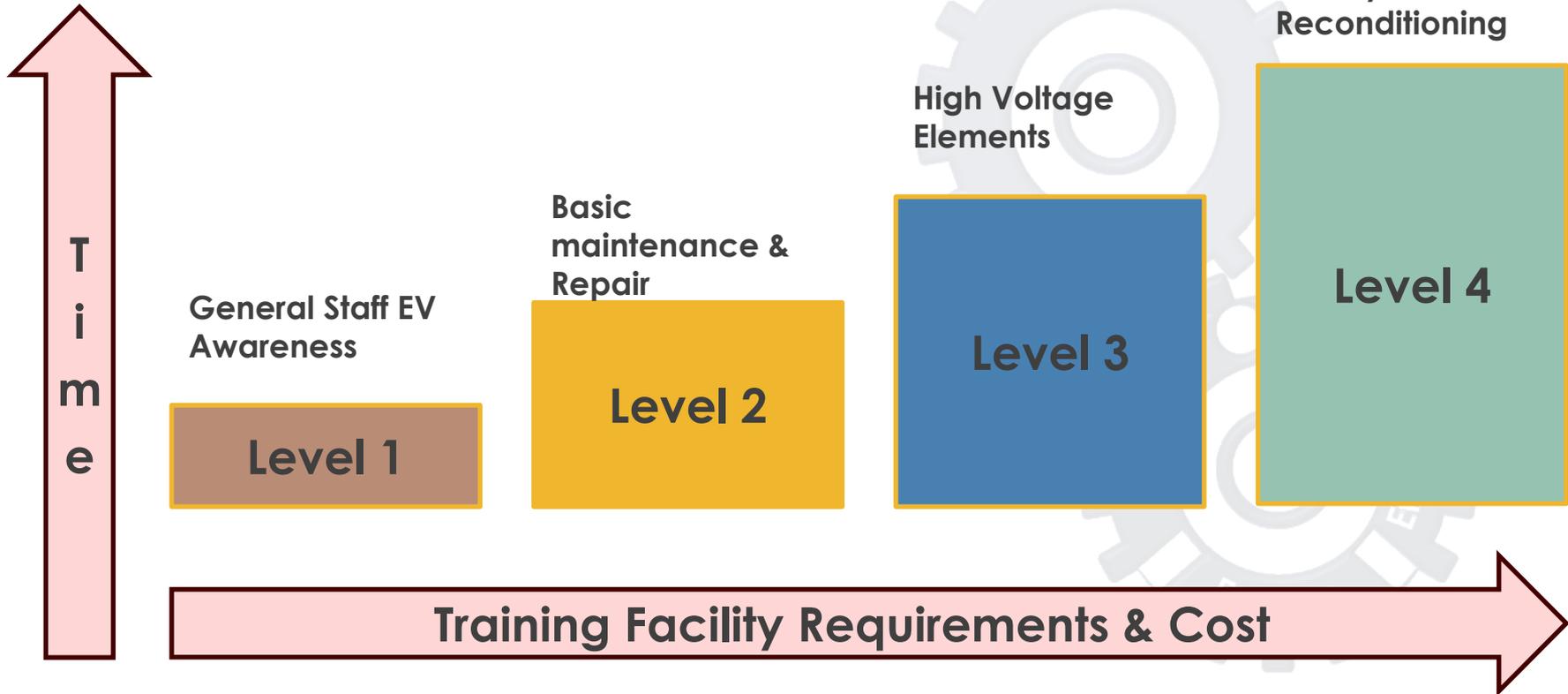
- Leading Buss & Truck VAN Brand absent from Middle East EV market
- Masdar & Hafilat – UAE
- Bee'ah, the UAE-based environmental energy and waste management company, has ordered 50 Tesla Semi trucks.
- DHL Express customize Volkswagen e-Golf electric car for document delivery and collection.

# EV & Hybrid Training

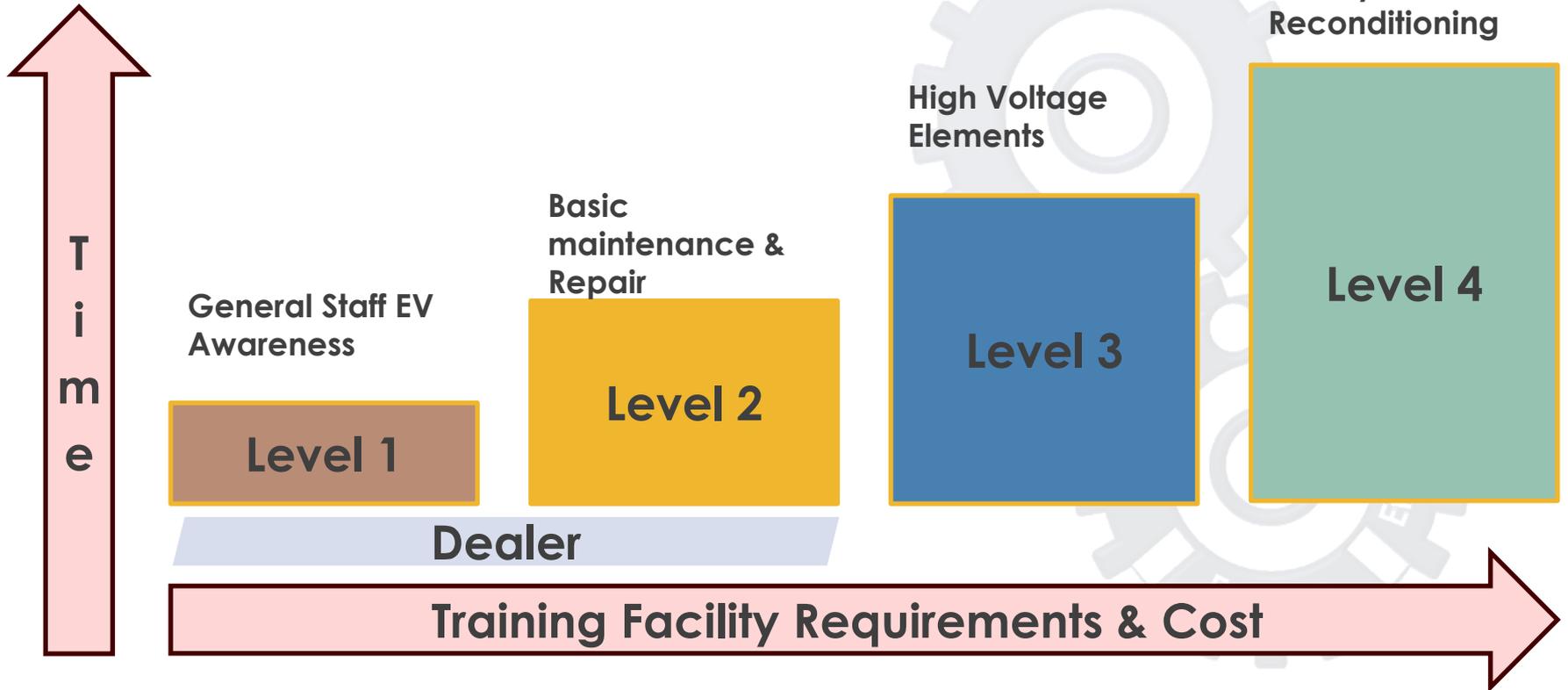
## Dealer Staff



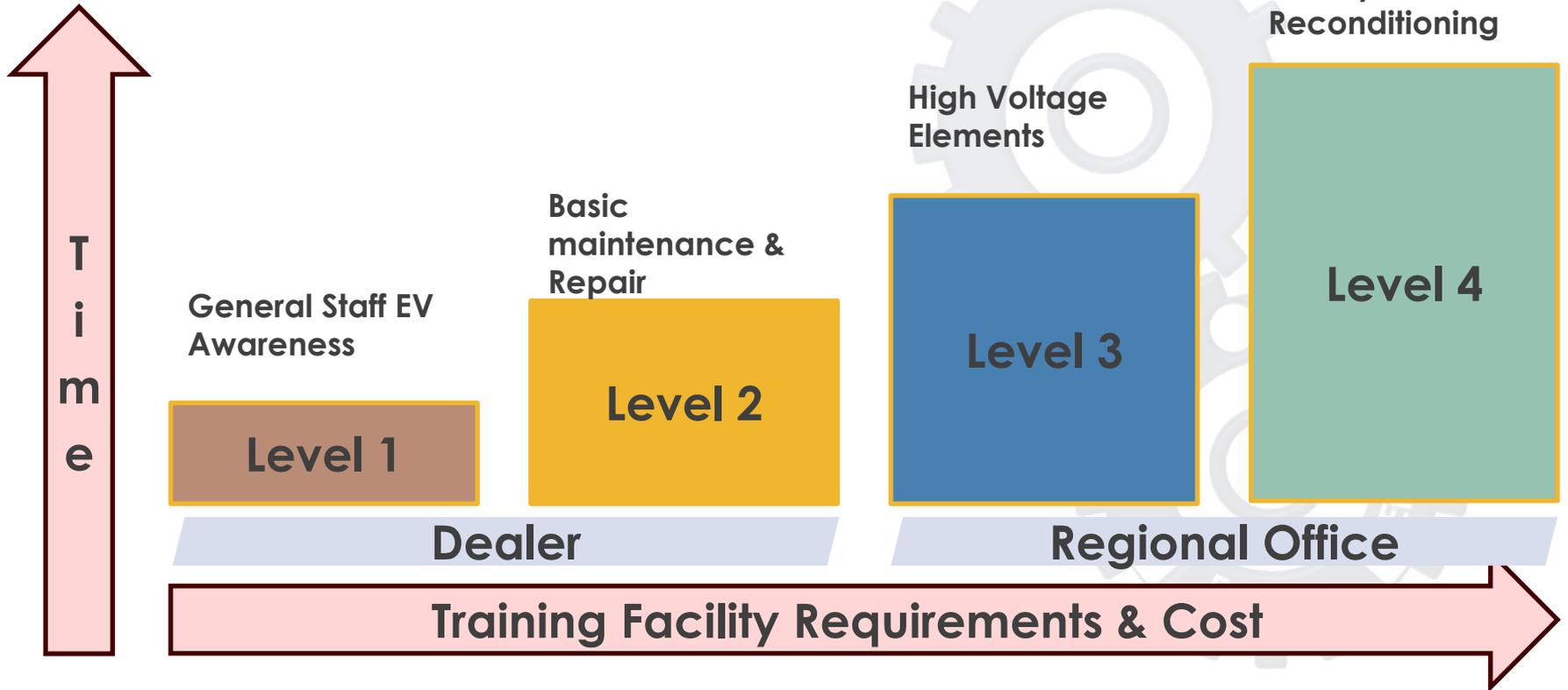
# EV & Hybrid Training *Dealer Staff*

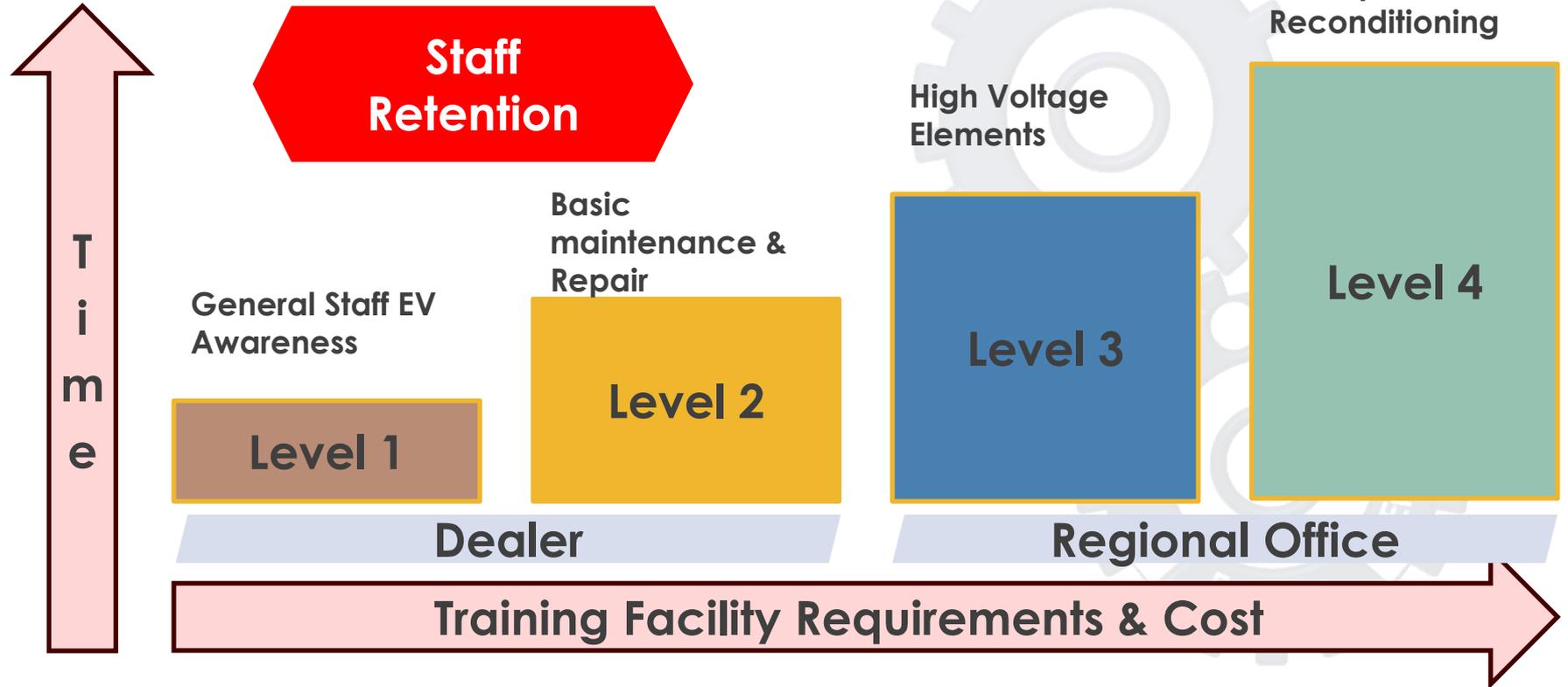


# EV & Hybrid Training Dealer Staff



# EV & Hybrid Training Dealer Staff





# Tiqani Inc.



## Services:

• Training delivery F2F & Virtual

• Arabic

• English

• French

• German



• E-learning

• P R O D I A G S

• **CDX Learning Systems**

• Executive Coaching



• Material Translation

• Talent & Skill Measurement

• Process Audits



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