

WEGDAY2019



GLOBAL MARKET SEGMENTS

Gustavo lensen

Process Industries



Agriculture



Building & Structure



Textile



Oil & Gas and Petrochemical



Marine & Offshore



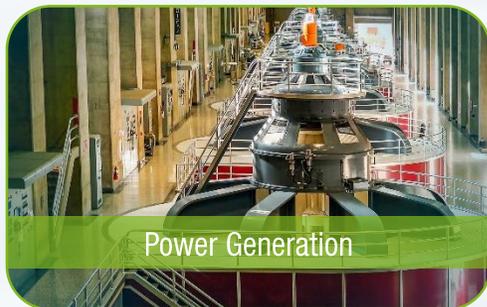
Metals



Food & Beverage



Mining



Power Generation



Pulp & Paper

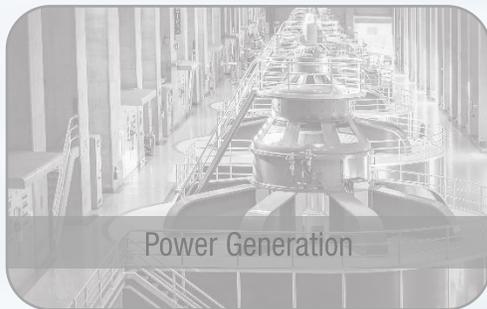


Sugar & Ethanol



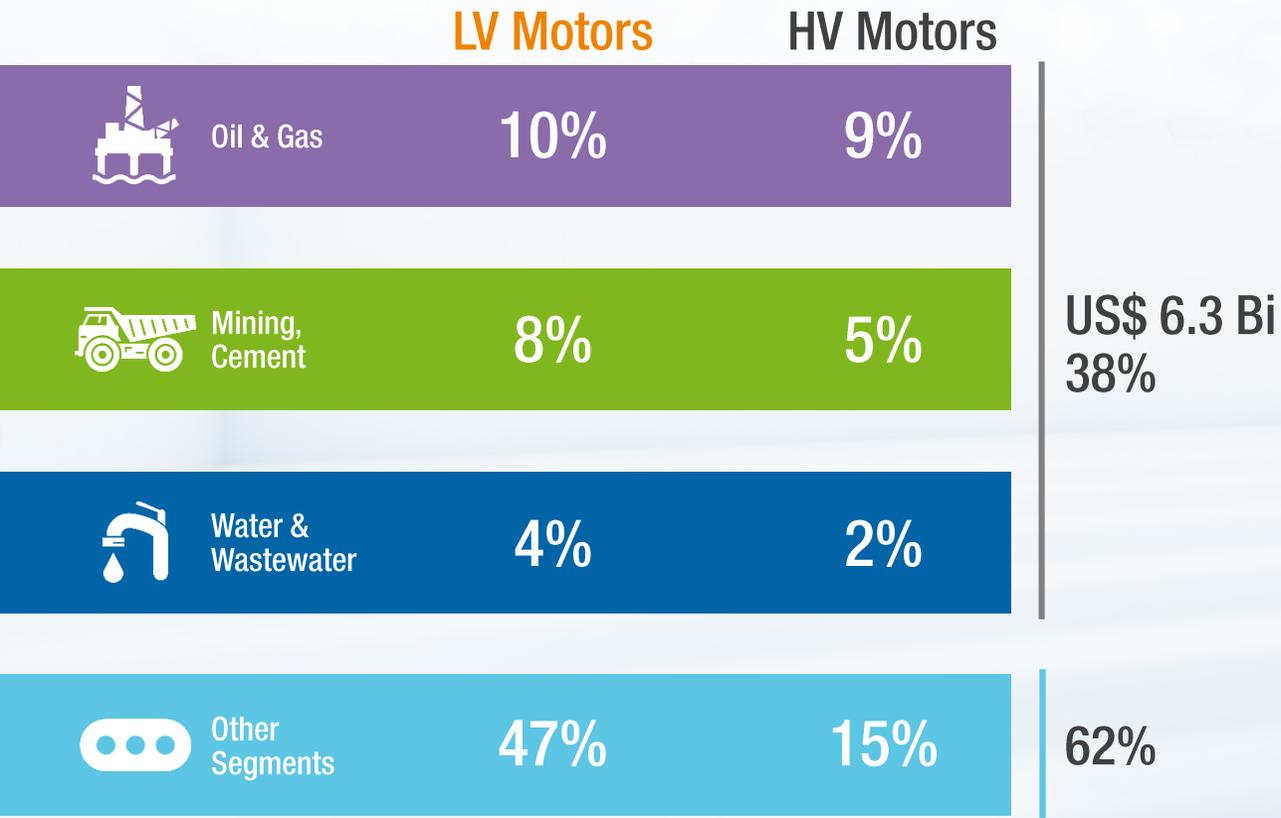
Water & Wastewater

Process Industries

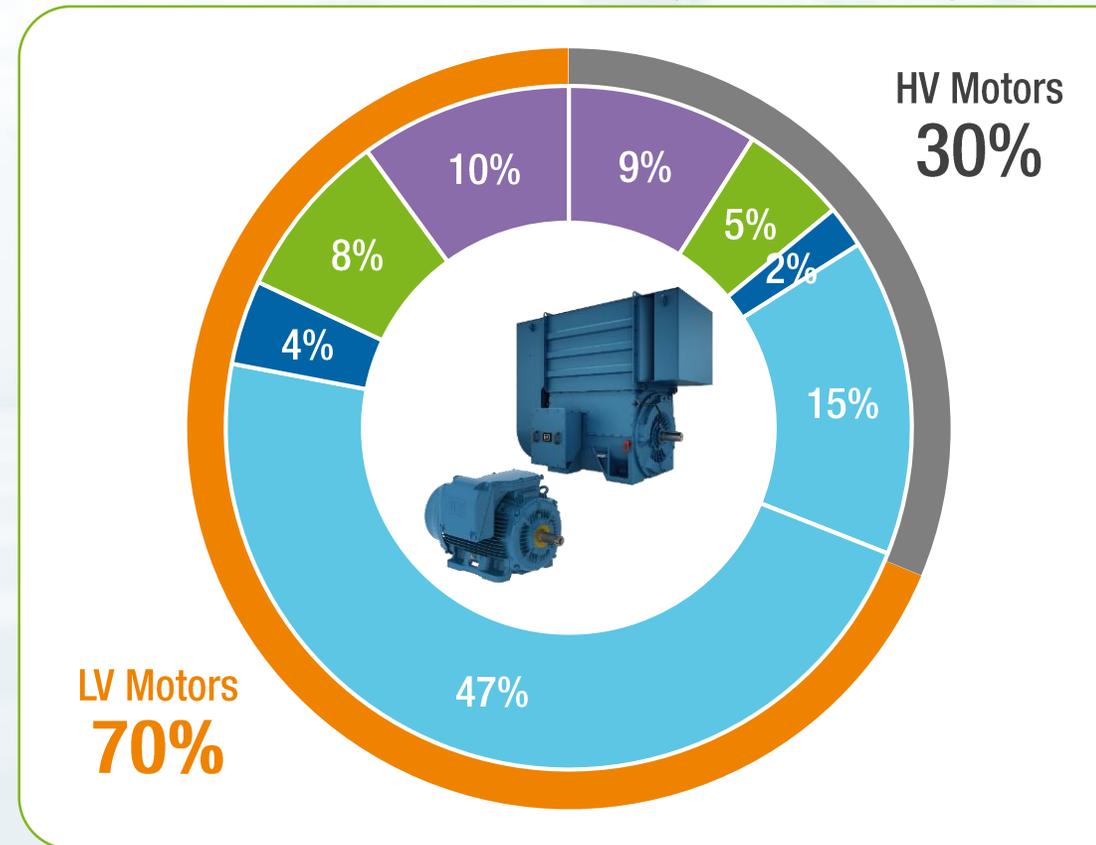


Market Segments

Low Voltage (LV) & High Voltage (HV) electric motors market size as a driver



LV & HV Market Size (~US\$ 17 Bi)



Bottom-up & Top-down Strategies

Expectations

End-Users & EPC*

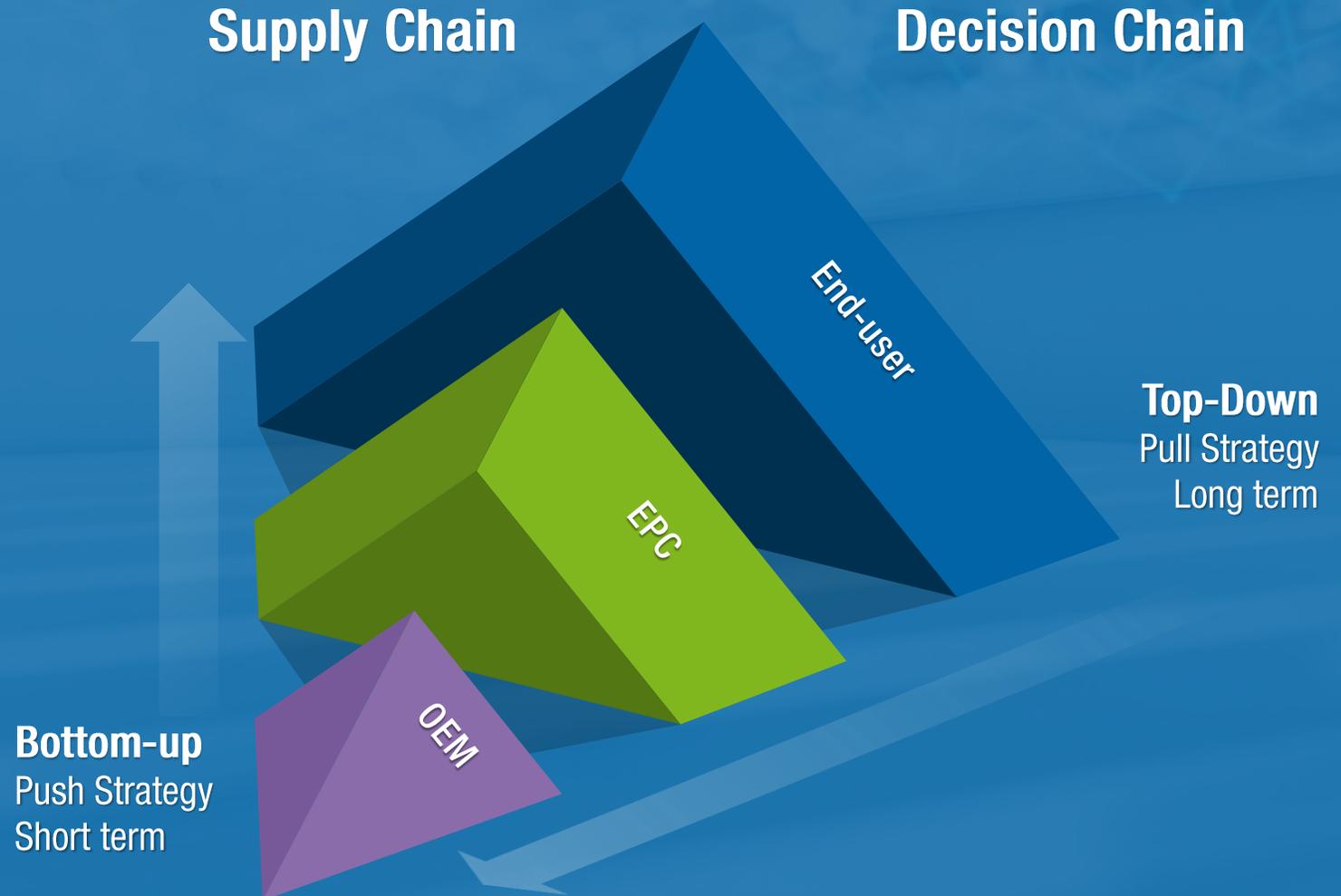
- Trust
- Reliability
- Documentation
- Global coverage
- Energy efficiency

OEM*

- Prices and delivery times
- Response time to quote on request
- Local sales support
- Quality product

Supply Chain

Decision Chain

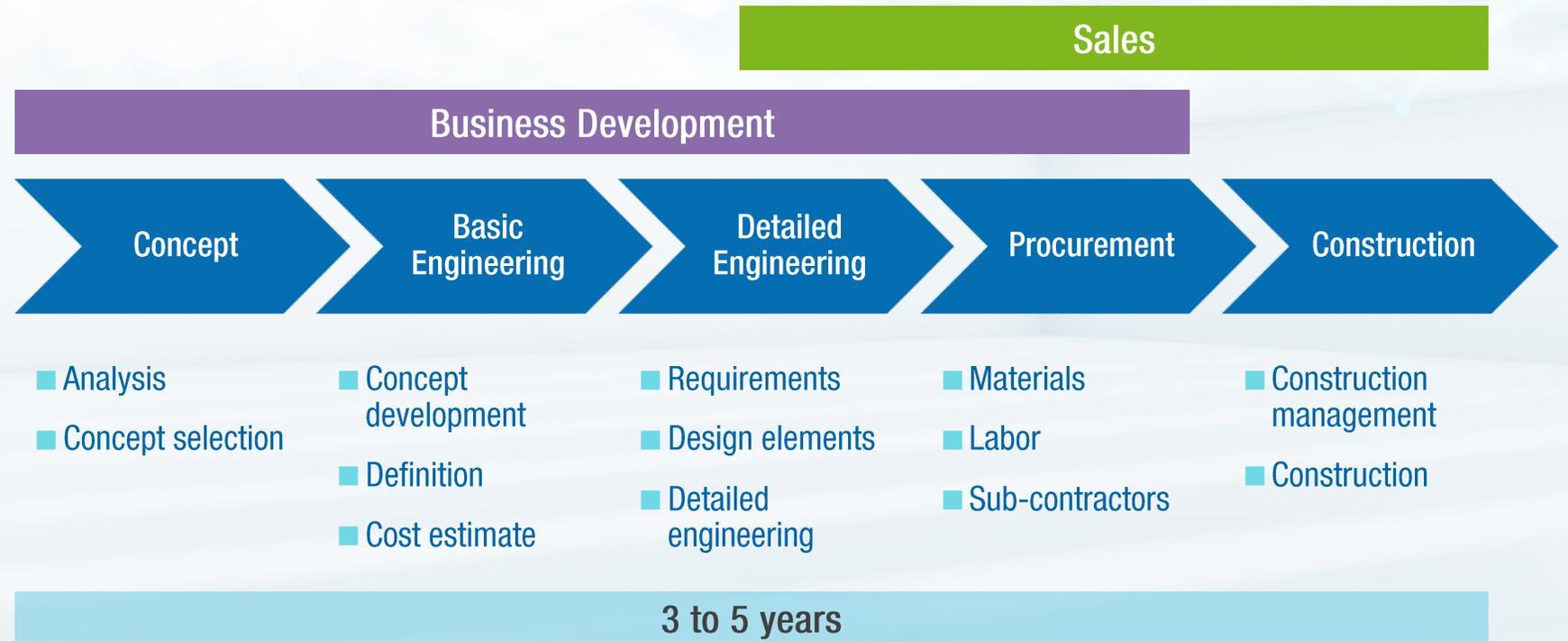


Top-Down Market Approach

- Actions to increase WEG's Brand recognition on these industries
- Early engagement on strategic project pursuits
- Approval vendor list
- Frame agreements
- Global capture teams to monetize those opportunities
- Technical agreement



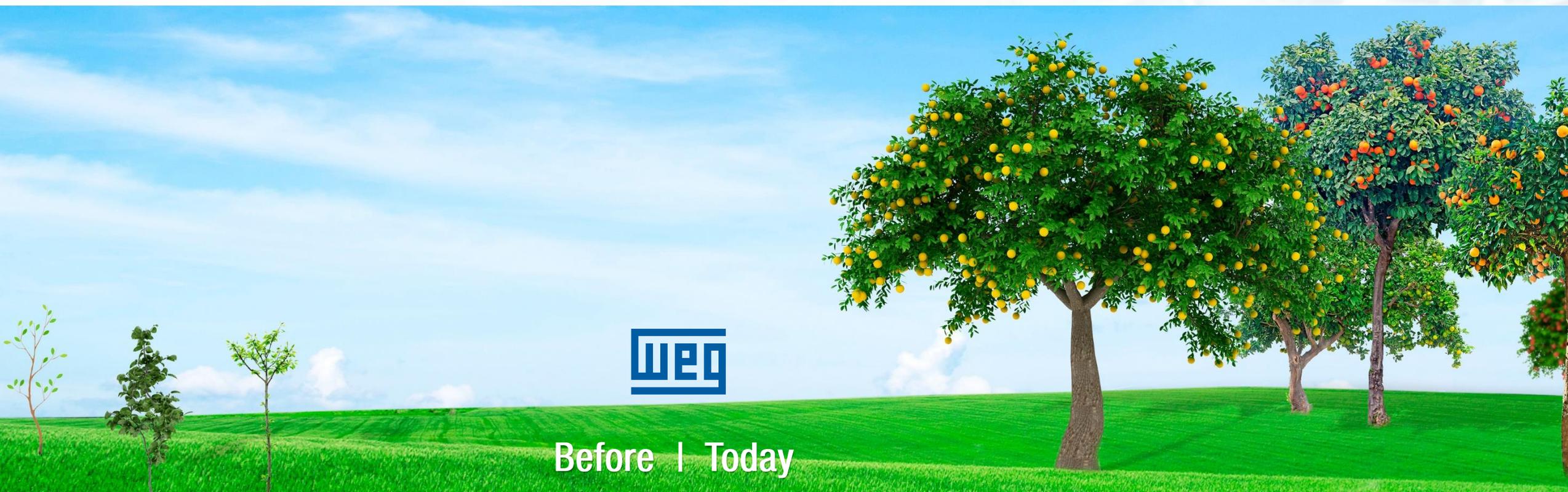
Typical Project Timeline



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OIL & GAS



Before | Today

Petrobras

Sonatrach	ExxonMobil	Sabic	Dow Chemical	Gazprom	Petronas	
SIBUR	CEPSA	BP	KNPC	LyondellBasell	ADNOC	INEOS
Petrobras	Chevron	Phillips 66	Equinor (Statoil)	Repsol	PDO	OOC

Overview



Projects viable at lower oil prices

Gas demand continues to grow globally



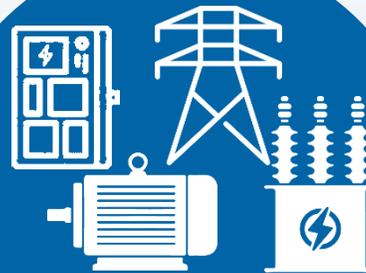
Global coverage structure



Leader in high voltage motors for offshore platforms



frame agreements
vendor list approvals
unlocking new customers



Opportunity of growth for traditional products



Solutions for all O&G:
Upstream
Midstream
Downstream



- 1983: WEG certified its first product line for “Ex” area in Canada “CSA”



- 1988: WEG reached the USA Market with “UL” certificate



- 1992: WEG expanded its Ex products to Europe – ATEX Certification

- 2002: WEG acquired Ex Manufacturing site in Portugal

- 2009: Intelligent market expertise team

- 2011: WEG acquired EM in USA to complete its portfolio

- 2015: WEG establishes the Global O&G structure

1980

1990

1990

2000

2010

2020

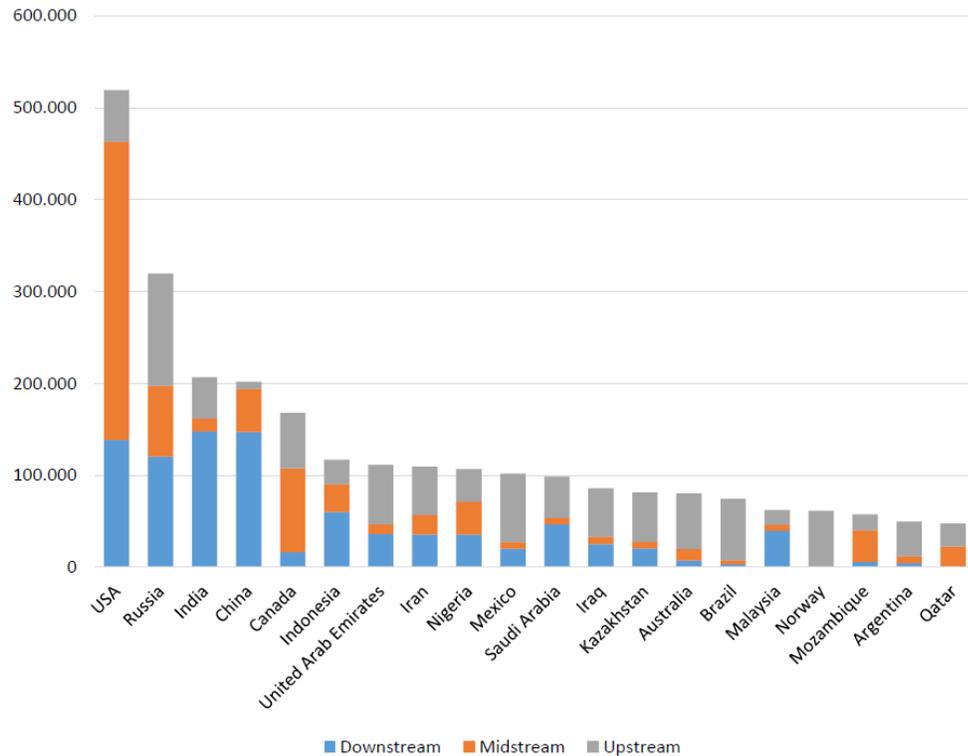


Expectation for global market growth

Top 20 Countries are expected to invest
~US\$ 2.3 trillion in new projects **up to 2026**

Some of the **Top Operators**
 with massive investment plans

CAPEX by country through to 2026 (\$million)



ADNOC

Saudi Aramco

Petrobras

Shell

BP

ExxonMobil

Gazprom

Equinor

PEMEX

Total

Chevron

Products fitted to market

- Widely respected brand reputation on electric motors, both LV & HV
- 2-pole and 4-pole turbogenerators technology and expertise
- Comprehensive automation and transformers portfolio
- Among the largest manufacturers of anticorrosive and marine paints



What we have been doing to create new opportunities?

- Investment to improve brand awareness at End-users and EPC's yielding greater acceptance of WEG products
- New End-user Approvals and Relationship Building with key industry players

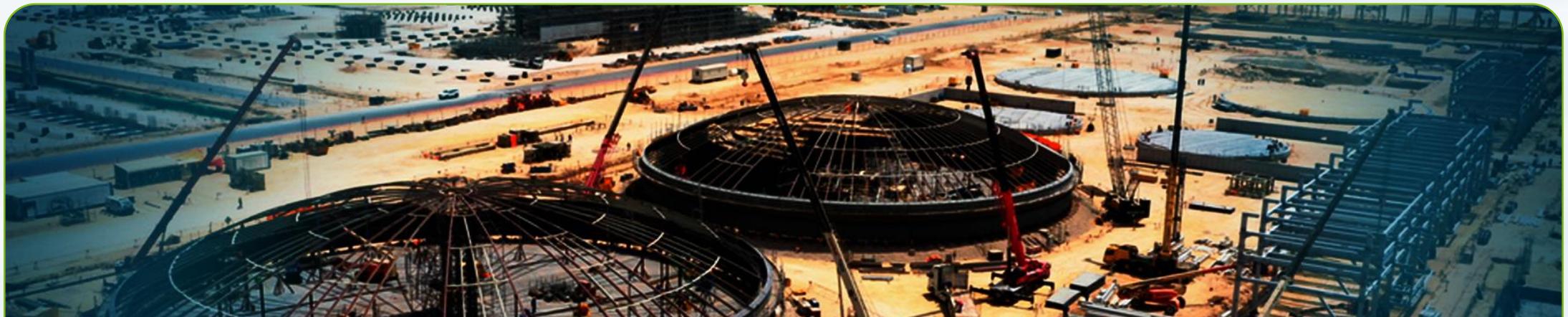


Chevron TechnipFMC BP Petronas ADNOC SBM Total Tecnicas Reunidas ARKEMA ExxonMobil Repsol MODEC Sonatrach Yinson



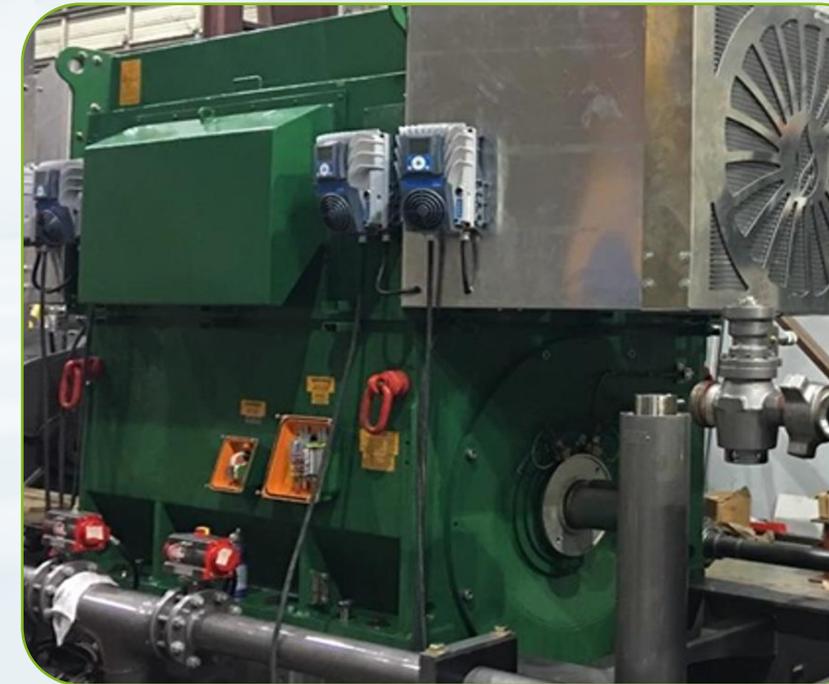
Success Cases – Duqm Refinery Project, Main Process Units

- WEG is supplying all motors and variable speed drivers for a new oil refinery in Oman
- Frame Agreement directly with the EPC Consortium



Success Cases – e-Fracking

- WEG is supplying large electric motors to the industry leader in Electric Powered Hydraulic Fracturing units



Success Cases – Sonatrach Hassi Messaoud Peripheral Fields Development

- Multiple large HV variable speed drive systems for gas compressors in Algeria



Success Cases – INEOS Lavéra

- HV variable speed drive system with e-house for a petrochemical facility in France

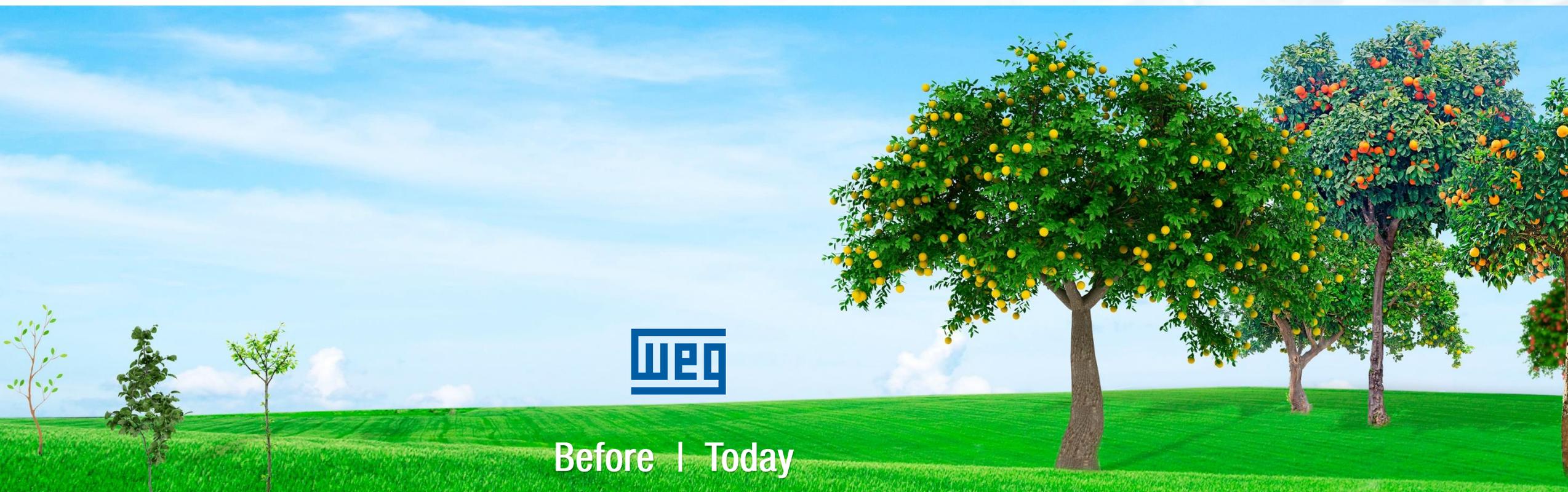


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MINING

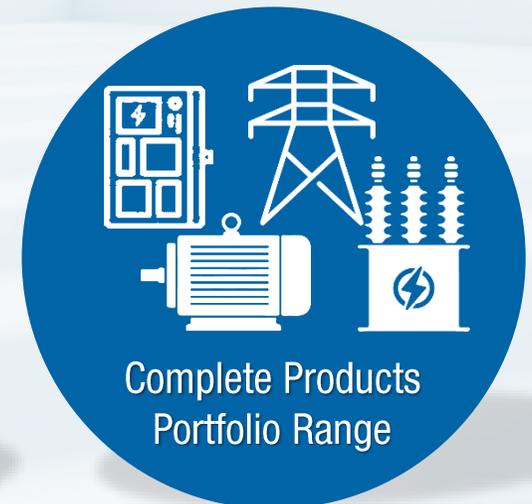




Before | Today

Votorantim	Anglo American	Vale	CODELCO	Teck	Nexa	Vale	KAZ Minerals	Votorantim	BHP Billiton	EGA
			First Quantum	SQM	Chinalco	South 32	Anglo American	KGHM	FMG	Rio Tinto

Overview



- 
- WEG Products success in Crusher/Mining Application
 - Developed Crusher Duty Motor Line
 - First Global Agreement Svedala/Metso
 - WEG Motors developed a dedicated line for mining
 - Opening of WEG Australia
 - WEG buys Zest and control South African Market for Mining Industry
 - Opening of WEG Peru
 - Mobile Substations Development
 - Mining Intelligence Market Team Created (Global Projects).
 - New frame Agreements having WEG as a single source supplier for mining projects
 - M Mining Line Development (HV WEG Energy)
 - MV VSD Software/ Firmware for grinding mill systems
 - E-houses development in Africa and Brazil

1980

1990

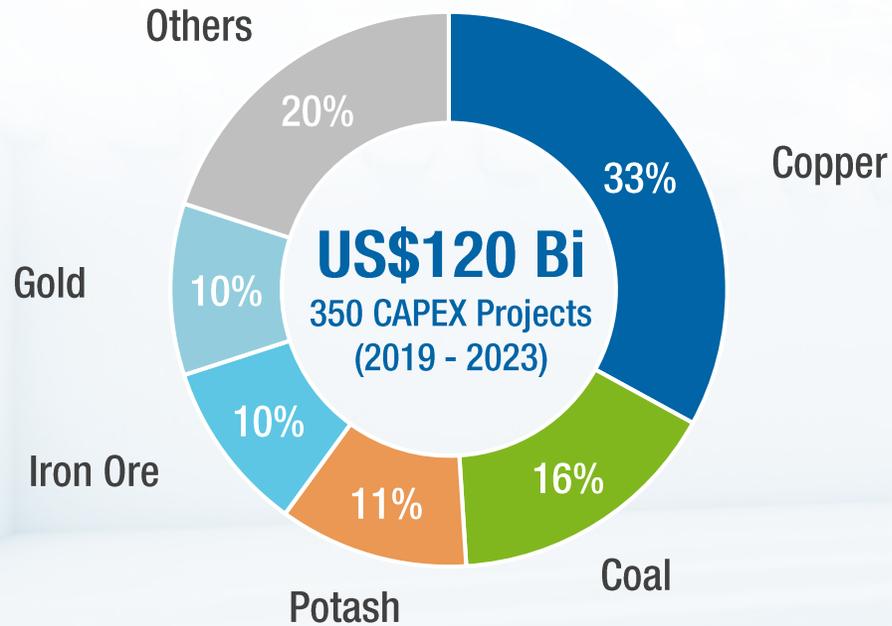
2000

2010

2020



Expectation for global market growth



- Demand for base battery metals driven by electric mobility and energy storage can reach US\$ 450 Bi CAPEX up to 2030

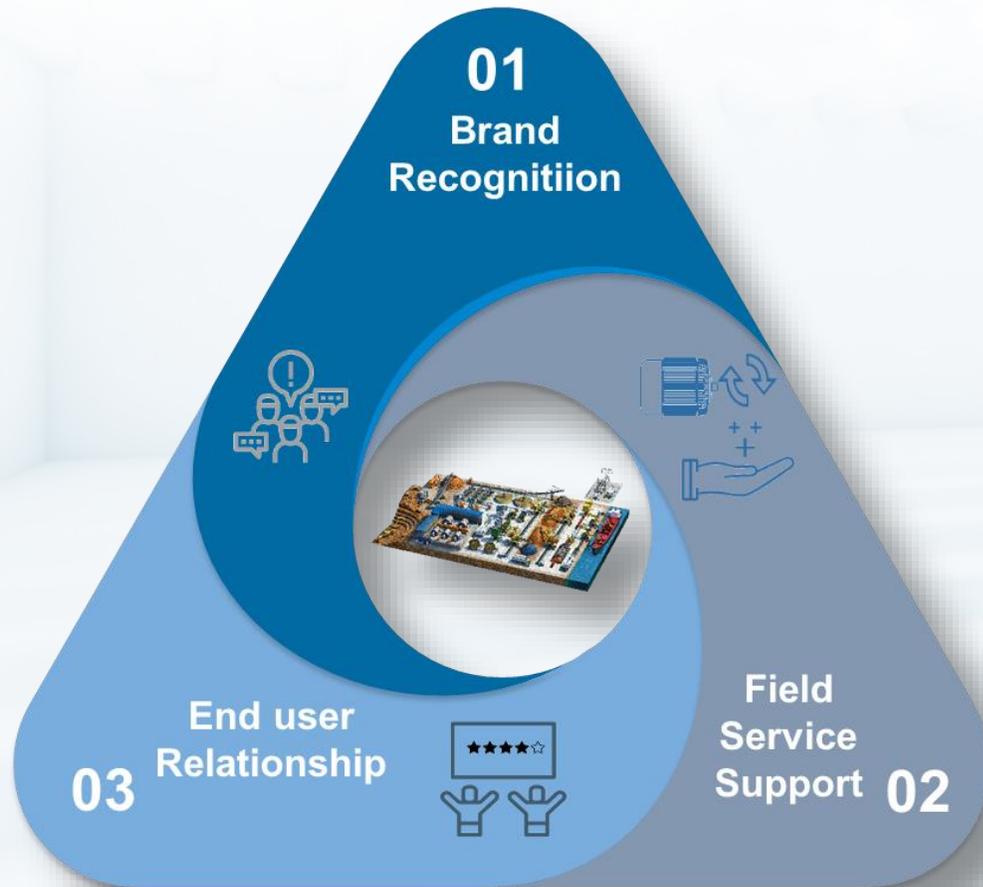


Products fitted to segment

- Wide range of electro-electronic products
- Products that fit to mining needs: reliability on harsh environment conditions
- Ready for Mining 4.0 (digitalization): predictive and monitoring systems



Brand recognition by providing a wide range of products supported by specialist and consulting staff to ensure long term end-users relationship



Ausenco
Fluor



World Mining Congress



Polyus
Bechtel



Success Cases

Chile: Quebrada Blanca Phase II – TECK Chile / USD 5 bi

Panama: Cobre Panamá – First Quantum / USD 6.2 bi

Canada: Jansen Potash – BHP Billiton / USD 12 Bi

Canada: K+S – Legacy / USD 2.9 bi

Peru: Quellaveco – Anglo American / USD 3.2 bi

UAE: Al Taweelah Alumina Refinery – EGA / USD 2 bi

New Caledonia: Vale Nickel Cobalt / USD 1.5 bi

Mongolia: Tsagaan Suvarga – MAK / USD 0.5 bi

Australia: Worsley Alumina / USD 3.2 bi



Success Cases

- Al Taweelah Alumina Refinery – USD 2.0 Bi Capex
- LV & HV motors frame agreement: 1,300 LV motors + 66 HV motors
 - **Project Name:** Al Taweelah Alumina Refinery
 - **Location:** United Arab Emirates (UAE)
 - **End-User:** Emirates Global Aluminium (EGA)
 - **Contractor:** Bechtel Petrofac JV
 - **Signature:** 2015
 - **Scope:** High standard IEC LV & HV Motors



Success Cases

- Quebrada Blanca Phase II – USD 5.0 Bi Capex
- LV & HV motors frame agreement: 141 LV motors + 77 HV motors
 - **Project Name:** Quebrada Blanca Phase II
 - **Location:** Chile
 - **End-User:** Teck Resources
 - **Contractor:** Bechtel
 - **Signature:** 2012 / 2017
 - **Scope:** High standard NEMA LV & HV Motors

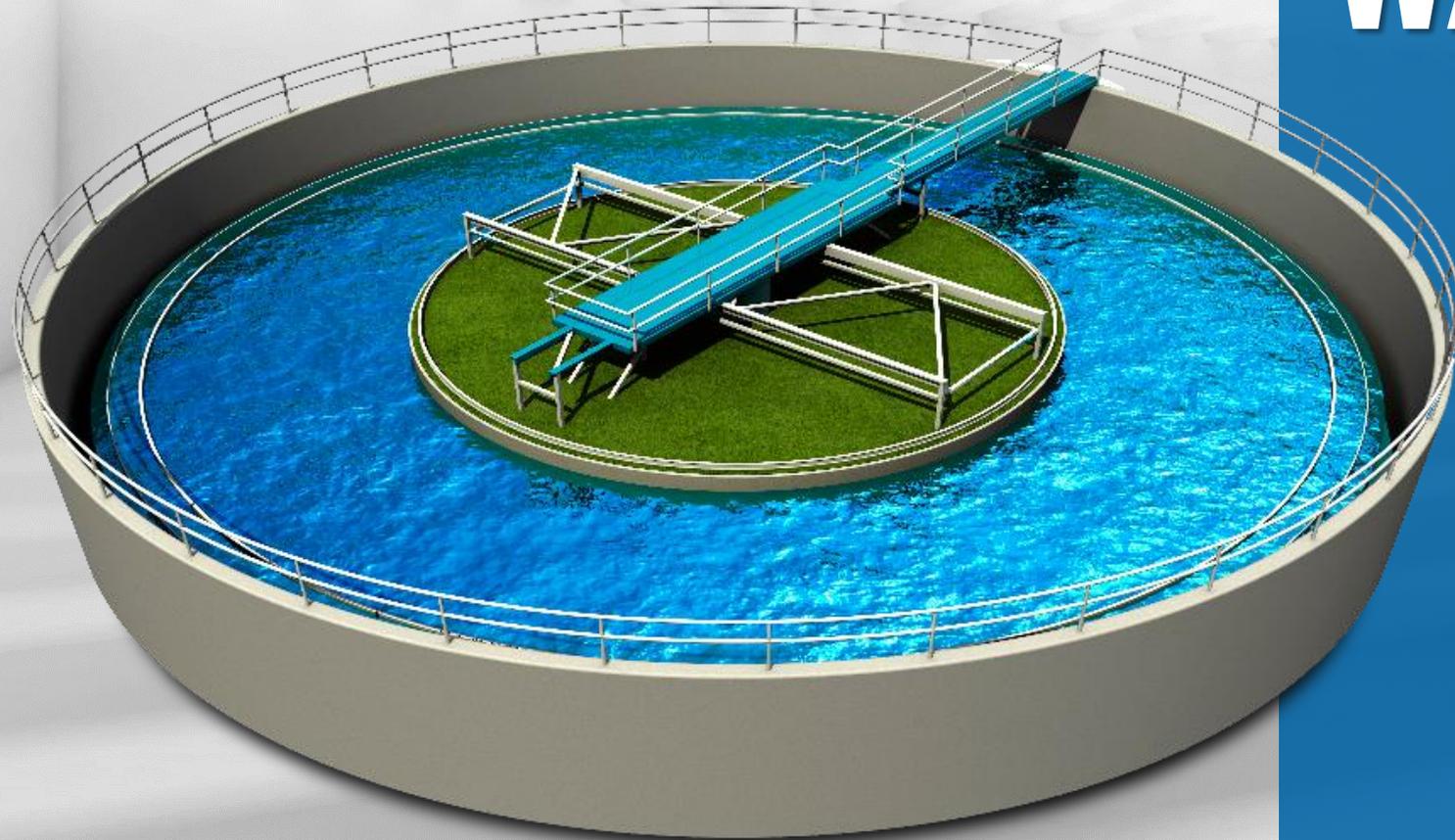


Success Cases

- Cobre Panamá – USD 6.2 Bi Capex
- LV & HV motors frame agreement: 1,600 LV motors + 93 HV motors
 - **Project Name:** Cobre Panamá – First Quantum Minerals
 - **Location:** Panamá
 - **End-User:** First Quantum Minerals
 - **Contractor:** Process E&I / FQML Engineering
 - **Signature:** 2016



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WATER & WASTEWATER



Before | Today

Sabesp	Sanepar	Copasa
Southern Water	Thames Water	CEDAE

Sabesp	Southern Water	SWPC	Sanepar	Tedagua	SWCC	
CEDAE	Suez	Sacyr	Thames Water	Veolia	Tecnicas Reunidas	
COPASA	Acciona	ADWEA	PUB	ABENGOA	IDE	Aqualia

Overview



■ First Global Contract signed (Sulzer/ABS)

1985

■ Release VFD Control (Multipump)

2009

■ WEG Awarded by Water Utilities in UK

20011

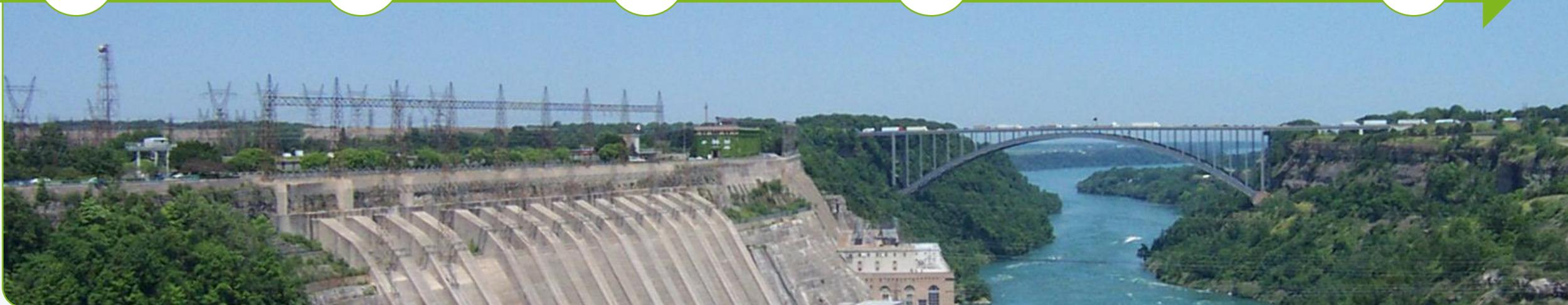
■ Water Intelligence Market Team Created (Global Projects)

2013

■ 2014: Dedicated VFD Software for water industry (Pump Genius)

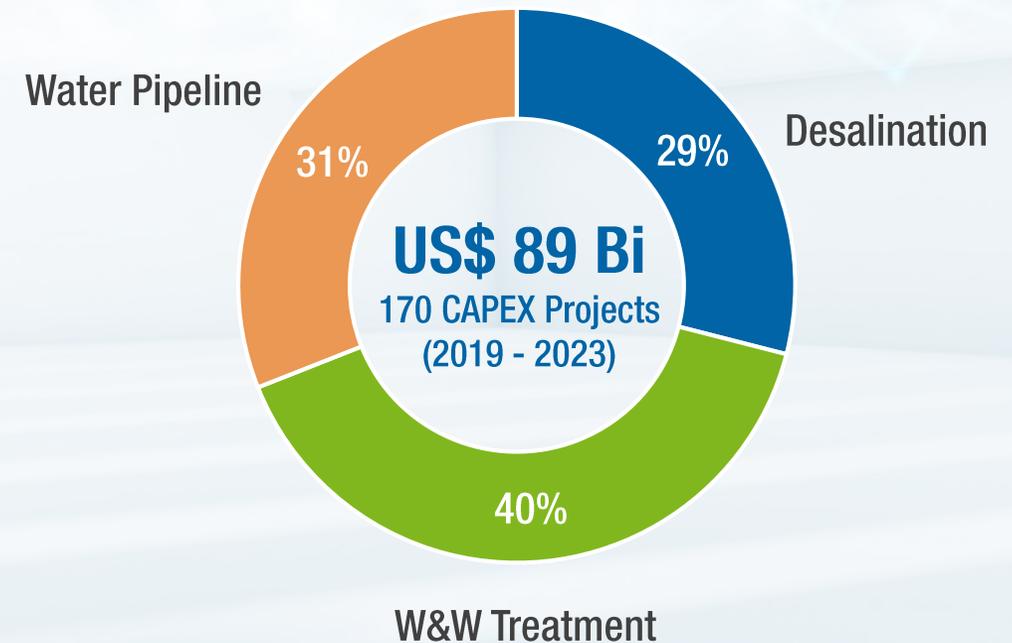
■ 2016: River Transposition system supply

2020



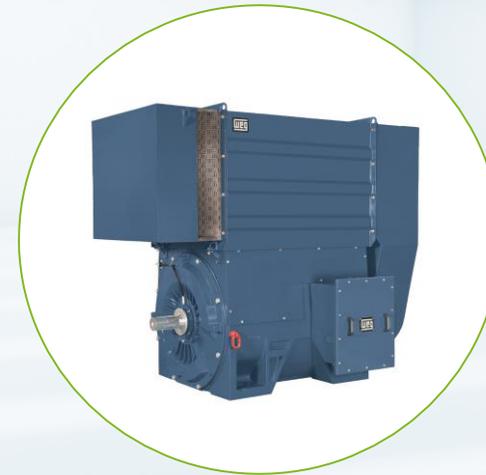
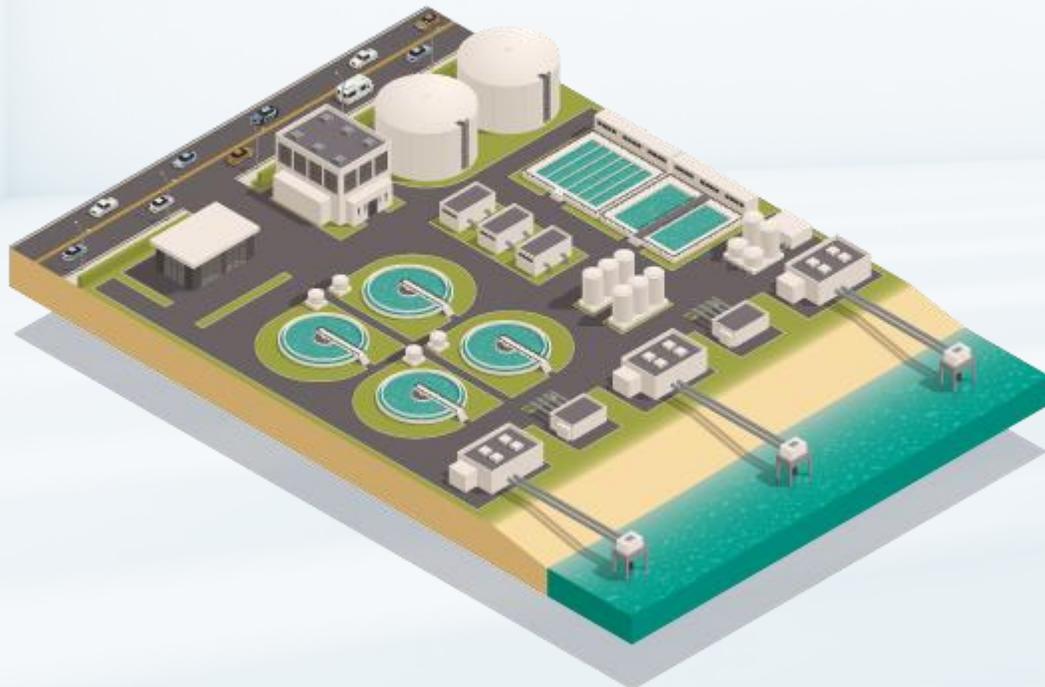
Expectation for global market growth

- 170 projects in the focus region with US\$ 89 Bi in Capex
- Main focus region in the Middle East, Europe and Americas with other regions providing technical and commercial support
- Focus water plants: Desalination, Pipeline stations, Water and Wastewater Treatment
- Continuous market growth



Products fitted to segment

- High Efficiency product portfolio (width range)
- Dedicated solution (Drivers / Motors / Gearbox) to fit segment
- Global presence availability and project specification supply



Brand awareness at End-User and European EPC's to guarantee acceptance of WEG products on water projects

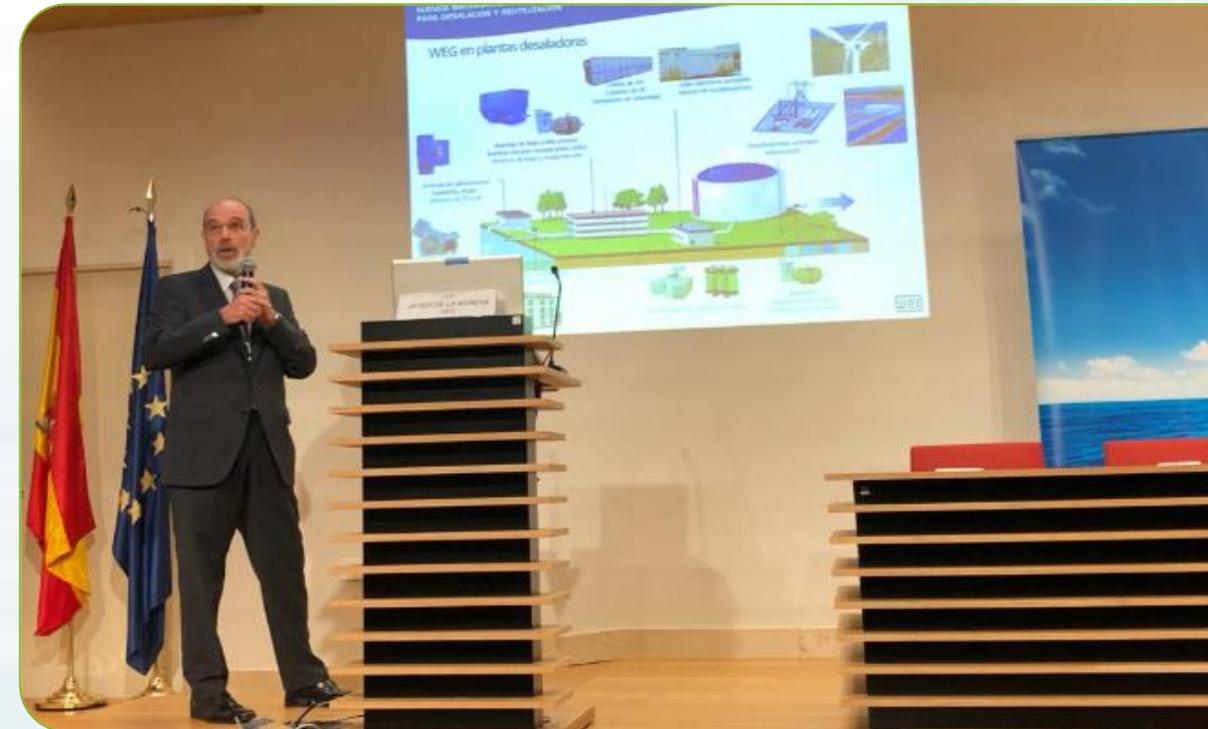


- Seminars, fairs and forum participation showing efficient and reliable solutions

Abengoa

FCC Aqualia

SWCC



- Water specialist team providing knowledge and expertise to customers on water segment

Suez

Tecnicas Reunidas

SWPC

Success Cases

SURUÇ WATER TRANSPORTATION Turkey

High Voltage Motors



Success Cases

WATER TREATMENT PLANT REVERSE OSMOSIS Chile

Low Voltage Motors



Success Cases

DESALINATION PLANT Saudi Arabia

Low and High Voltage Motors



Success Cases

DESALINATION PLANT Copiapó – Chile Puerto Punta Totoralillo

High Voltage Motors



Success Cases

DESALINATION PLANT Canary Islands

High Voltage
Switchgear
Soft starters
Motors



Success Cases

AQUEDUCT EXTENSION PUMP STATIONS California

Low and High Voltage Motors



Key messages

Relationship with end-user customers allowing the understanding of their necessities and expectations

Brand recognition through application knowledge and technical competence

Industrial processes expertise enabling innovative solutions with engineering contractors and end-users

