

## Disclaimer

Any forward-looking statements that may be made about future events, at business perspective, at operational and financial projections and goals, and the growth potential of WEG in the future, constitute mere beliefs and expectations of WEG's management, based on information currently available.

These statements involve risks and uncertainties and therefore depend on circumstances that may or may not occur.

Investors should understand that general economic, industrial, and other operating conditions may affect WEG's future performance and lead to results that differ from those expressed in such forward-looking statements.





Agenda







Paulo Polezi Finance Director and IRO



J.P. Silva lew Energies Directo



Gustavo lensen Iternational Director



André Luís Rodrigues CFO



Harry Schmelzer Jr.



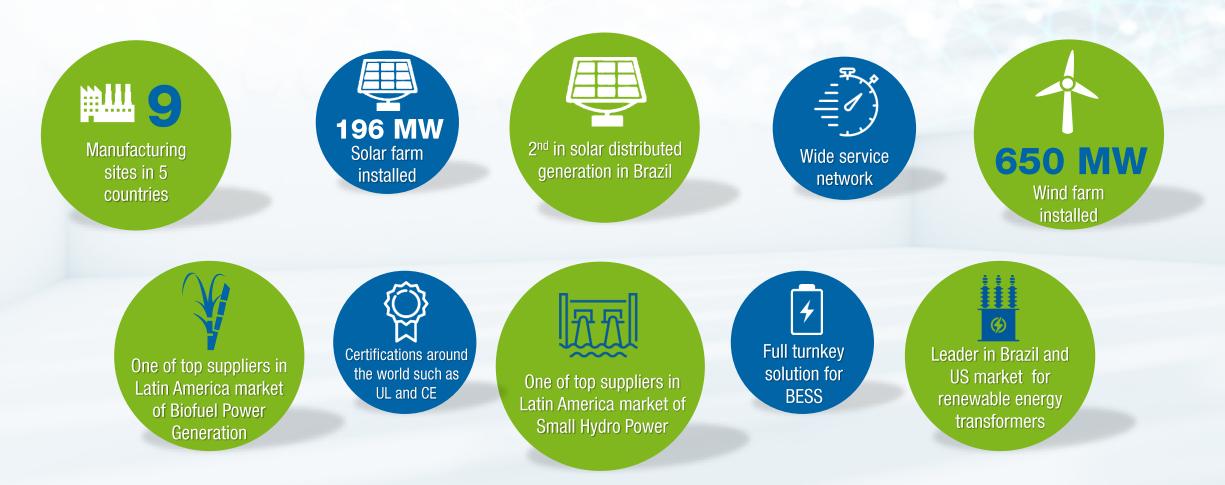
# WEGDAY2019

# RENEWABLE ENERGY



#### WEGDAY2019

#### Summary





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## Products





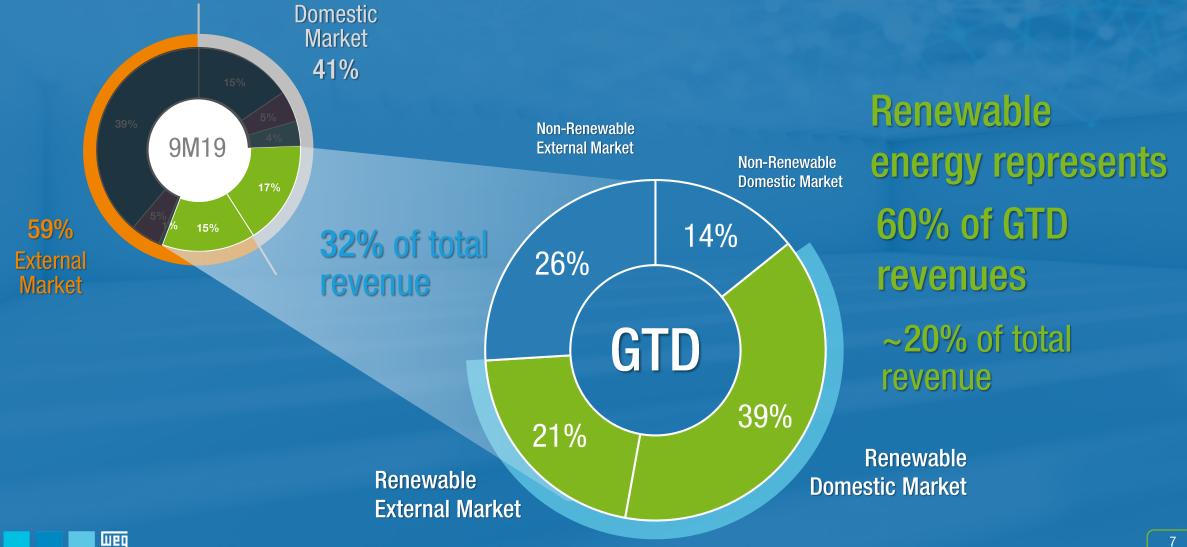








## Renewable energy is an important share of our business

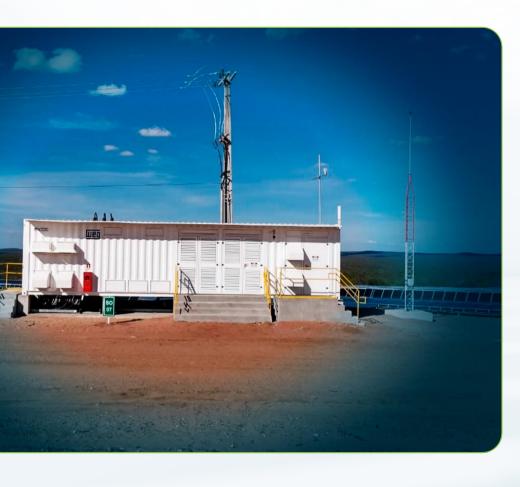




# SOLAR POWER GENERATION

## **Solar Power Generation**

## **Solar Power Plants**



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#### Products manufactured by WEG

- Central Inverters 1500V
- DC Strings Boxes, Protection and Control Switchboards
- Monitoring SCADA Systems
- High voltage Scope (Transformers, Substation e Transmission Lines)

#### WEG's scope

- Turnkey EPC solution (Engineering, Procurement and Construction)
- Complete products line for electrical equipment
- Central inverters assembled in containers
- Operation and Maintenance Services







## **Solar Power Generation**

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#### WEG as reference provider of turnkey solar PV plants in Brazil











## **Solar Power Generation**

#### **Brazilian Market: New opportunities**



#### **Solar Power Generation Auctions**



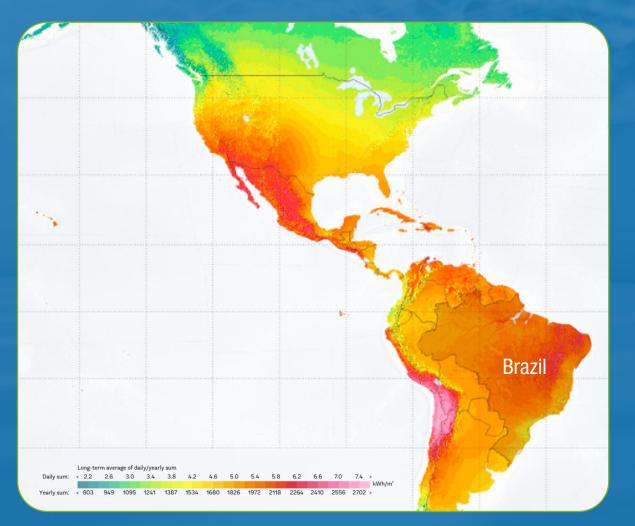


## Solar irradiation

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Brazil is one of the best countries in the world regarding solar irradiation

The worst location in Brazil has 30% more irradiation then the best location in Germany



Source: World Bank Group, funded by ESMAP, and prepared by Solargis



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Complete product portfolio and unique business model creates important competitive advantages



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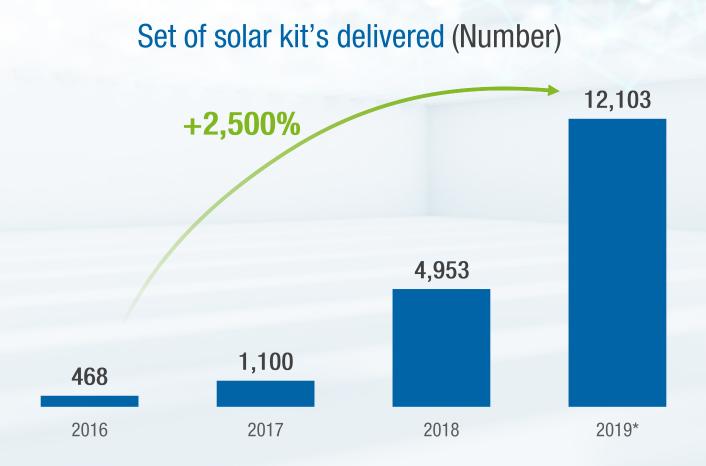
## New warehouse - Ready to address the growing demand



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The fastest growing segment in our business portfolio in recent years





\*2019 until October

ШEQ

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Innovative projects: floating solar PV in hydro power plants reservoir

- Use of the same infrastructure of the hydro plant (transformers and substation)
- Higher efficiency due to lower cell temperature, increasing energy generation by 8%
- Water evaporation reduction around 80%





## **Solar Generation**

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## Opportunities to continue expanding solar business outside Brazil

#### Mexico

Fastest growing market after Brazil

Investments of 100 MM USD in solar DG this year

Developing integrator partners and local suppliers, similar to the structure in Brazil

#### Colombia

- Establishing alliances with important Power Generation Companies
- Developing partners integrators
- Establishing direct agreements with suppliers of solar inverters and PV modules

#### South Africa

- Good opportunities for Solar Generation outside Brazil
- Zest (WEG Group) has already been trained by WEG Brazil to sell and supply Power Stations for Utility Scale
- WEG complies with local content rules

#### Argentina

- Opportunities to supply Utility Scale Power Stations, Transformers and electrical boards
- WEG complies with local content rules
- Similar business model as Brazil, working as a distributor
- The products are exported from WEG Brazil

## **Solar Generation**

## Key messages

Unique business model for solar distributed generation New central inverter improves our offer in solar power plant Innovative projects (floating solar PV) generates new drivers for growth





# WIND POWER GENERATION

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## Brazilian Market: federal auctions resumed, yet below historical average



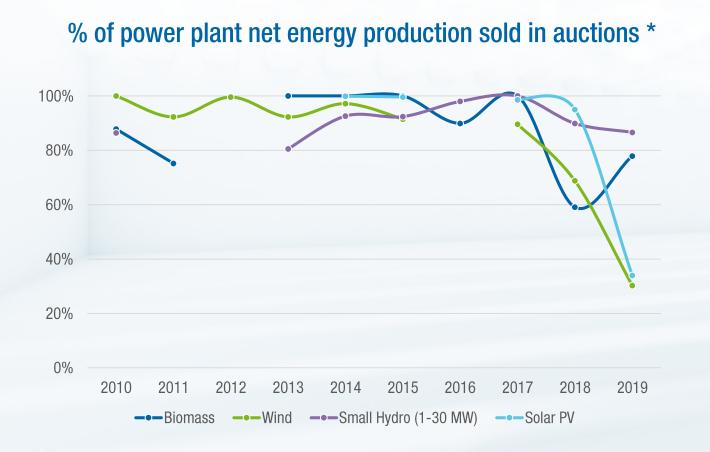
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**Brazilian Federal Actions Results** 



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#### Brazilian Market: free market is the new frontier for expansion



\* the remaining energy produced is sold in the non-regulated market or spot market





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## **Opportunities to continue expanding wind business outside Brazil**

#### India

- Third largest market (around 5 GW per year)
- Local-content requirement
- Manufacturing unit in Hosur can be quickly prepared to manufacture wind turbines
- Market signs that a lack of offer may occur in the short term
- WEG is a known brand locally



# Technology COLOCIONS!

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## New released 4.2 MW

- Technical evolution of the current product, minimizing development risks
- Direct drive, no gearboxes
- Permanent magnet synchronous generator
- Smooth grid interconnection
- Lean and reliable design

## Key messages

Solid track record of wind turbines installed in Brazil New 4.2MW wind turbine will increase our competitiveness Completely solution for operation and maintenance contracts





# BATTERY ENERGY STORAGE SYSTEMS

We have positioned ourselves to supply this market from the beginning

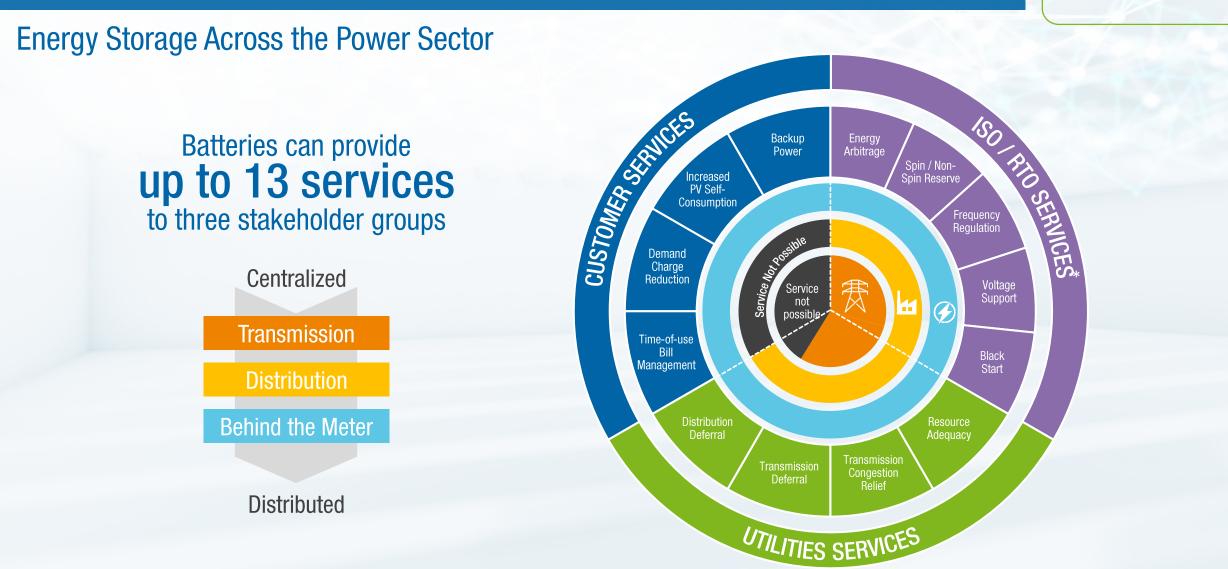
# A new emerging business in the world

First company to offer this solution in Brazil





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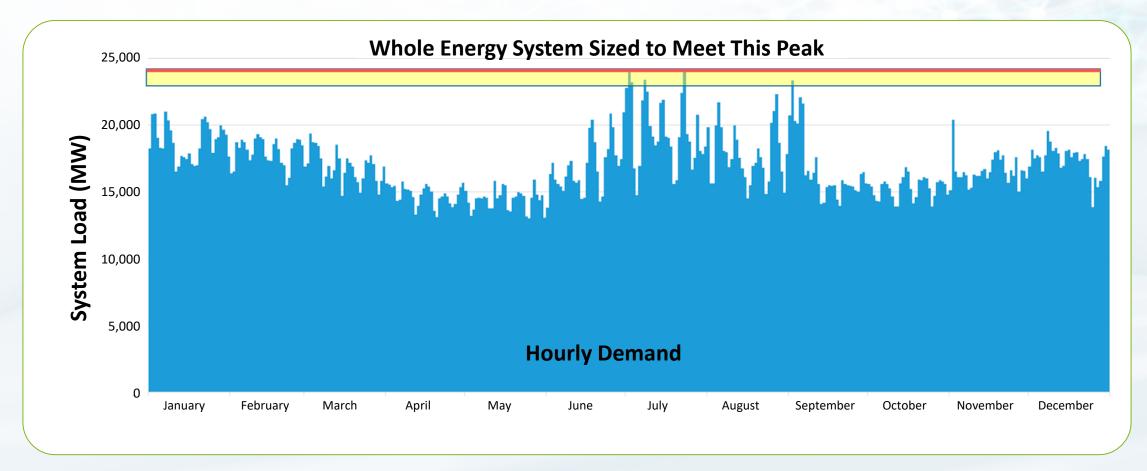




Graphic from Deloitte 2015 publication, "Energy storage: Tracking the technologies that will transform the power sector \*ISO – Independent System Operator and RTO – Regional Transmission Operator

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#### Transmission and distribution system is built for highest demand



#### Note: Highest peaks occur on hot summer days due to air conditioning loads

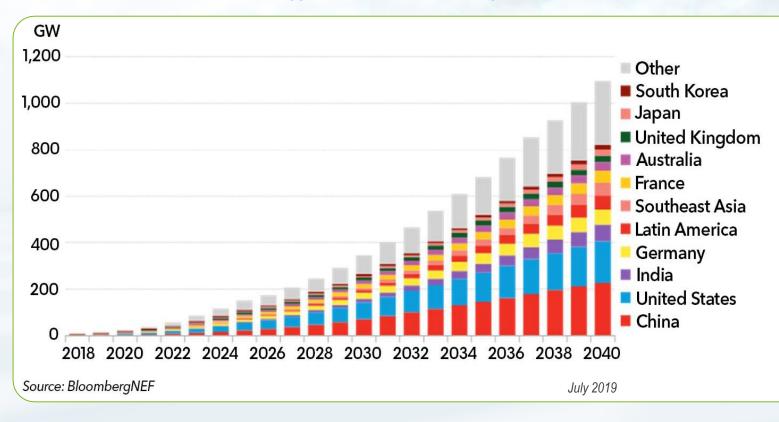


## **BESS Global Market**

## Expectation for global market growth

- 2018: 9 GW
  2040: 1,095 GW
- Estimated Global Investment
  US\$ 660 Bi
- Concentration in
  US and China
- Other important markets will be those where electrical grids are less developed, such as India, South Africa and Latin America

#### **Global energy cumulative storage installations**





## **BESS Global Market**

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#### Current addressable market

- -US
- Canada
- Brazil

## ■ Future opportunities

- Latin America
- South Africa
- India





Key messages

Market with good growth prospects in the coming years

Full turnkey solution for different applications

BESS should develop first where WEG already has a strong presence



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#### Key messages



Great prospects for distributed solar generation, in two different strategies:

- Distribution of equipment kits via partner integrators
- Direct supply of turnkey solutions for solar power plants

Consolidation in the supply of Central Inverters and EPC solution for Solar Plants in Brazil, expanding the business now to Latin America and South Africa

Wind generation is the best alternative for self-production and free market, with the new 4.2 MW wind turbine WEG is prepared to new supplies in Brazil and new markets such as Latin America and India

Full turnkey solution for BESS and strong presence in fast growing regions for this business

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# GLOBAL MARKET SEGMENTS

Gustavo lensen

## **Market Segments**

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#### **Process Industries**



## **Market Segments**

## **Process Industries**

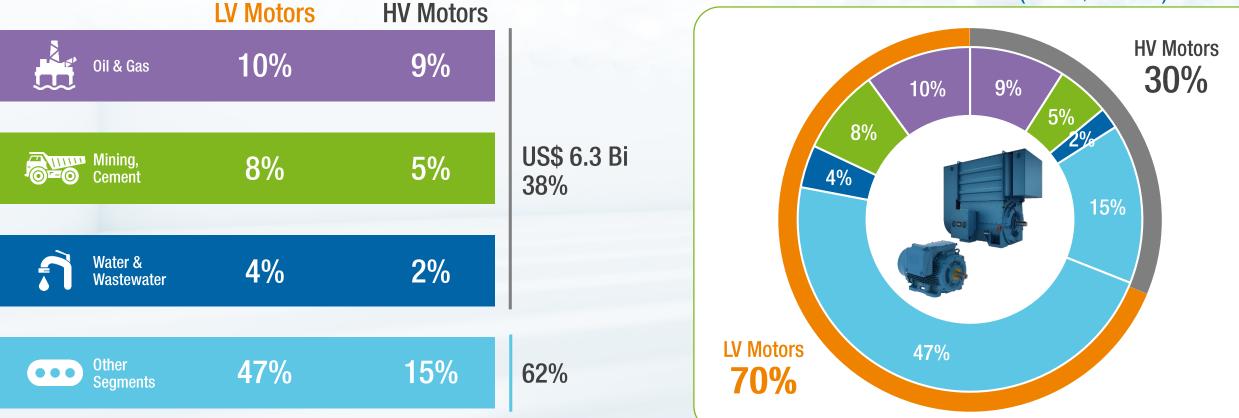


## **Market Segments**

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



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

Source: IHS 2018 (LV Motors), 2016 (HV Motors)

## **Market Segments**

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

**Bottom-up** Push Strategy Short term

#### **Supply Chain**

OF

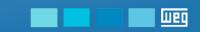
#### **Decision Chain**

Filduser

EbC.

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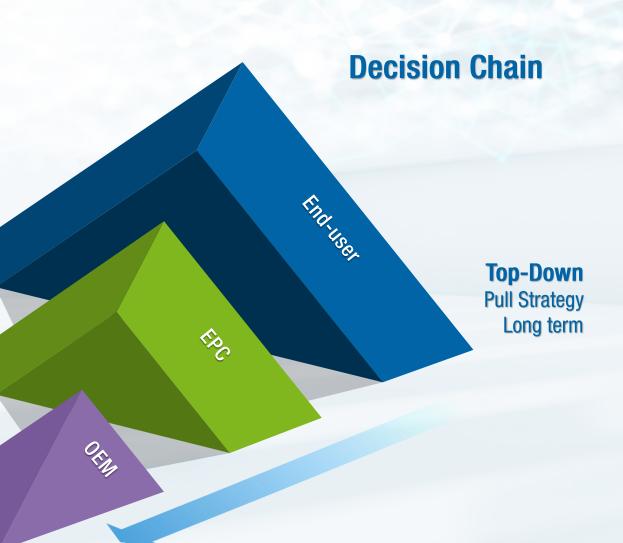
#### **Top-Down** Pull Strategy Long term



## **Market Segments**

#### **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

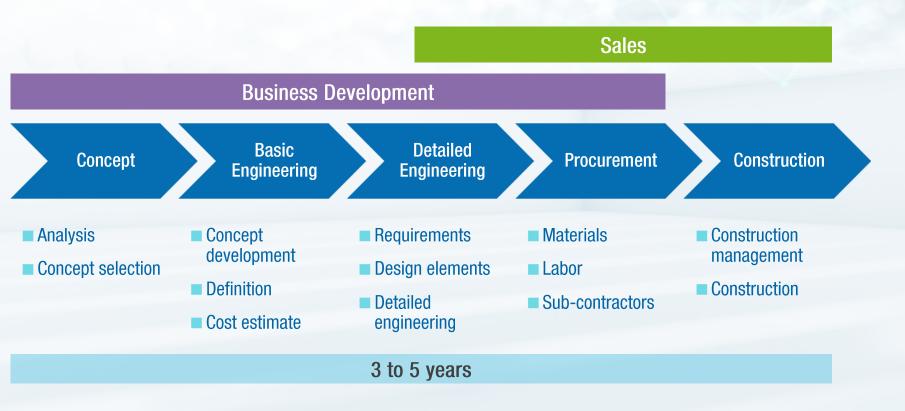




## Market Segments

#### **Typical Project Timeline**





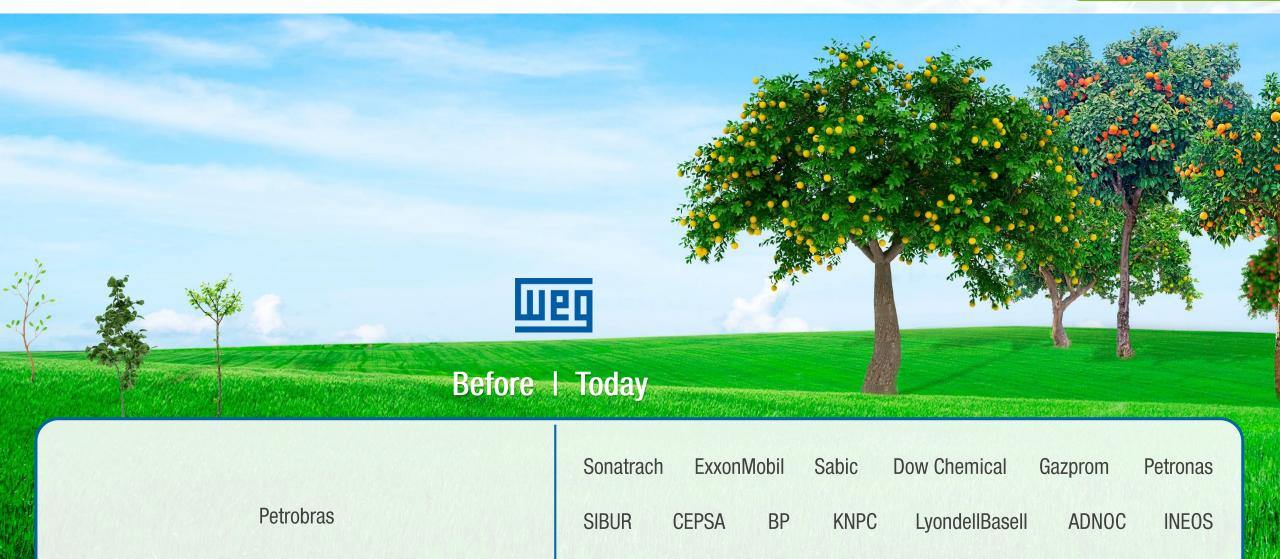




# OIL & GAS

## **OIL & GAS**

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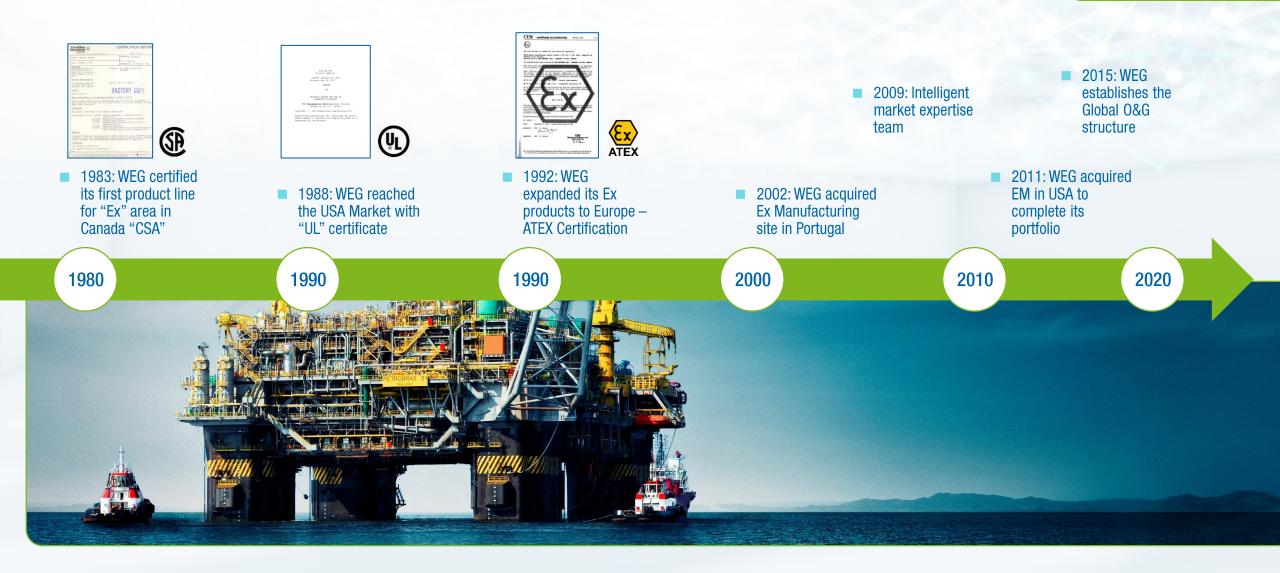


Petrobras Chevron Phillips 66 Equinor (Statoil) Repsol PDO 00C

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#### **Overview**



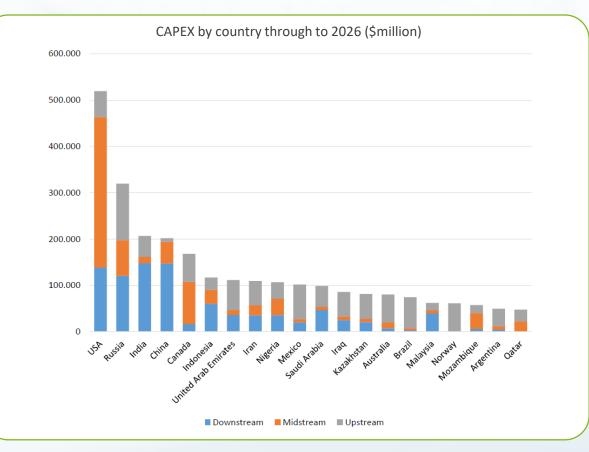




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#### Expectation for global market growth

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



#### 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





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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



The motors replacement program is part of an energy efficiency initiative by Arkema which dentified and evaluated equipment with the strongest impact on the group's energy ionsumption.



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



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#### 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





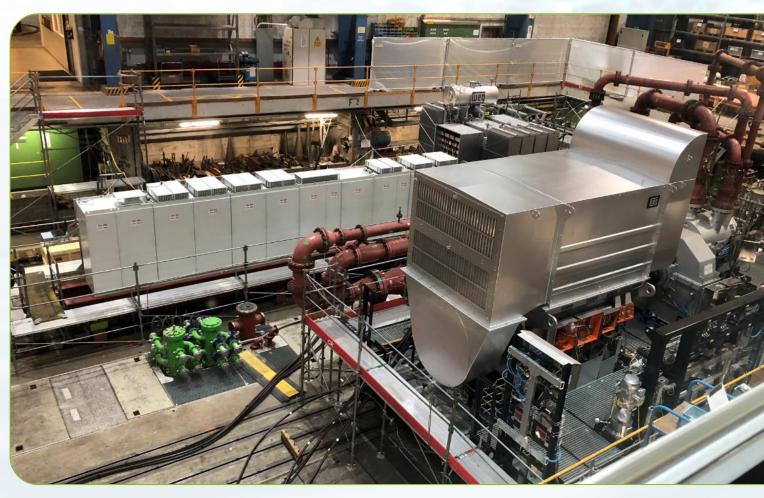




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#### Success Cases – Sonatrach Hassi Messaoud Peripheral Fields Development

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



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#### Success Cases – INEOS Lavéra

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



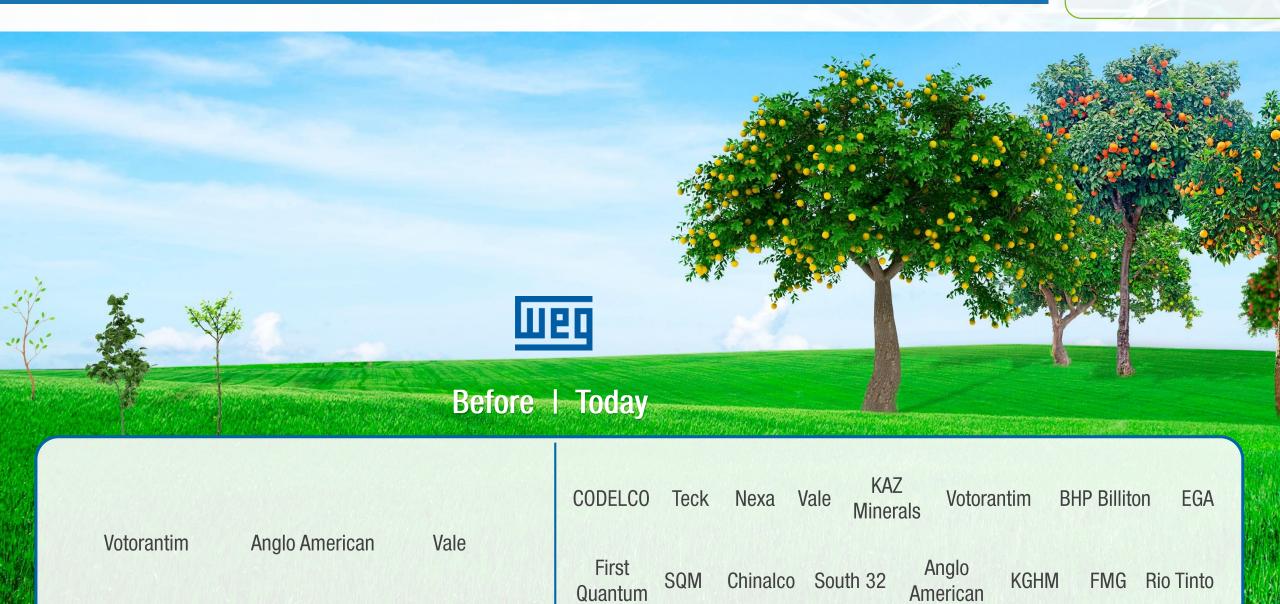


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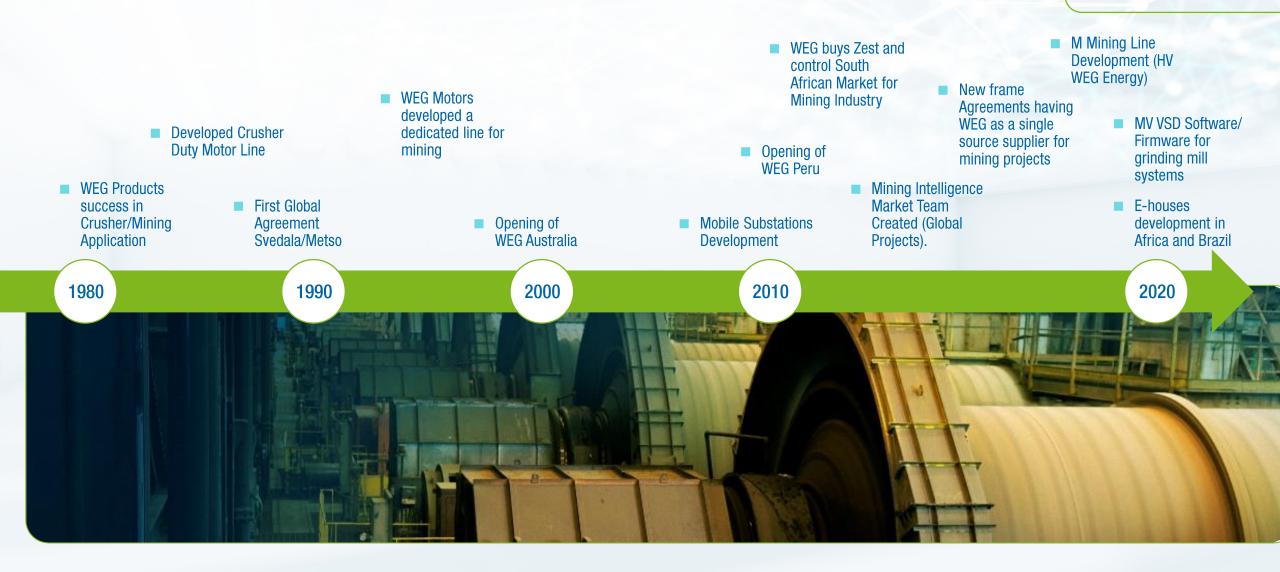
# MINING







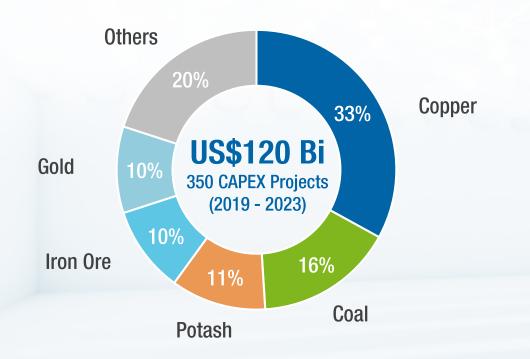






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#### Expectation for global market growth



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



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#### Products fitted to segment

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





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



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#### Success Cases

Chile: Quebrada Blanca Phase II – TECK Chile / usp 5 bi Panama: Cobre Panamá – First Quantum / usp 6.2 bi Canada: Jansen Potash – BHP Billiton / usp 12 Bi Canada: K+S – Legacy / usp 2.9 bi Peru: Quellaveco – Anglo American / usp 3.2 bi UAE: Al Taweelah Alumina Refinery – EGA / usp 2 bi New Caledonia: Vale Nickel Cobalt / usp 1.5 bi Mongolia: Tsagaan Suvarga – MAK / usp 0.5 bi Australia: Worsley Alumina / usp 3.2 bi





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#### **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







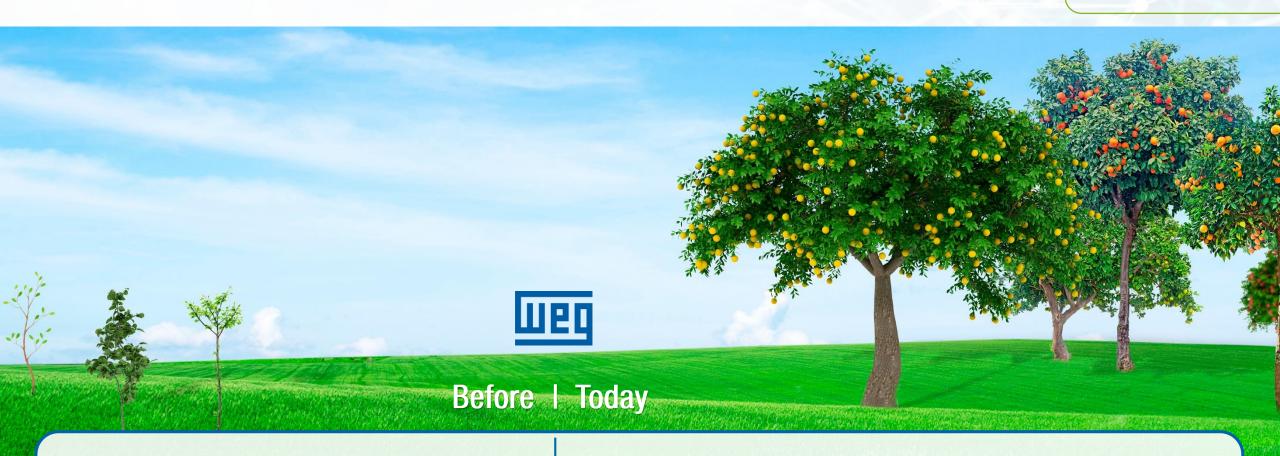
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# WATER & WASTEWATER

## WATER & WASTEWATER

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Sabesp	Sanepar	Copasa	
Southern Water	Thames Water	CEDAE	

Sabesp	Southern Water		SWPC	; Sai	nepar	Tedagua	SWCC	
CEDAE	Suez	Sacyr	Thames	Water	Veolia	Tecnicas F	Reunidas	
COPASA	Accior	a AD <sup>y</sup>	NEA PL	JB A	BENGOA	IDE	Aqualia	

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#### **Overview**



CAGR world desal market continuous demand water industry

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Middle East, Americas and Europe

**Dedicated Offices** Worldwide



**OEM** global accounts



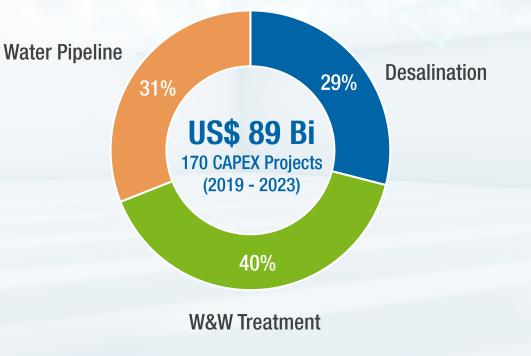
Complete products portfolio range

**Dedicated process** engineer expertise



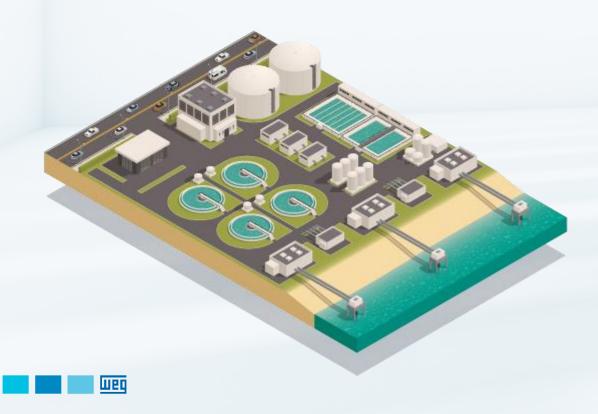
Expectation for global market growth

- 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







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# 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





## Water & Wastewater

Success Cases

## DESALINATION PLANT Canary Islands

High Voltage Switchgear Soft starters Motors





## Water & Wastewater

Success Cases

## AQUEDUCT EXTENSION PUMP STATIONS California

Low and High Voltage Motors





## **Market Segments**

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#### 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



# WEGDAY2019

# FINANCIAL PERFORMANCE

## André Luís Rodrigues

# WEG is a global company headquartered in Brazil

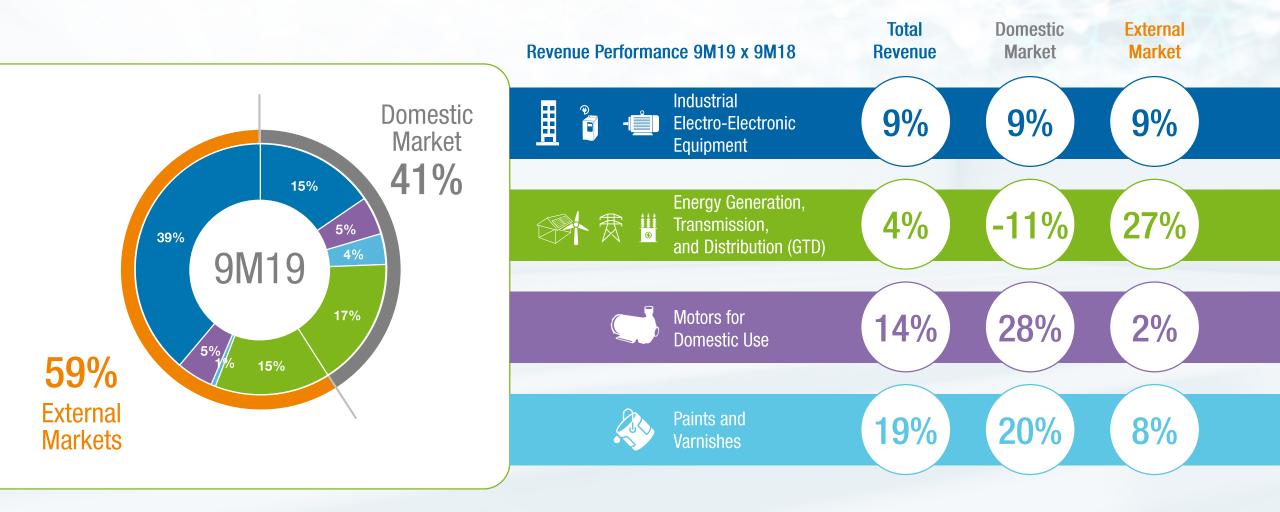
#### One of the world's largest manufacturers of electric electronic equipment



## **WEG Business**

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#### Diversified product line allows for strong growth across different market cycles



## Solid Growth Track Record

**WEGDAY2019** 

#### Business model allows us to find and explore growth opportunities, even under unfavorable macroeconomic conditions

9,569

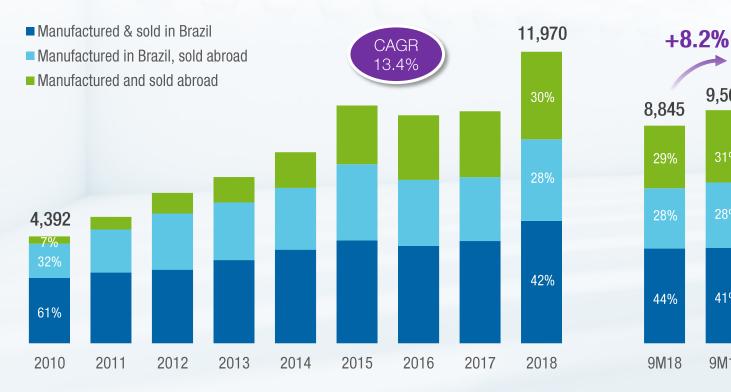
31%

28%

41%

9M19

#### **Net Operating Revenues** (R\$ million)





### **Strong Operating Returns and Disciplined Capital Allocation**

#### Resulting in stable above average ROIC over time







## **Operational Cash Flow**

**Operational Cash Flow (R\$ million)** 

#### WEGDAY2019

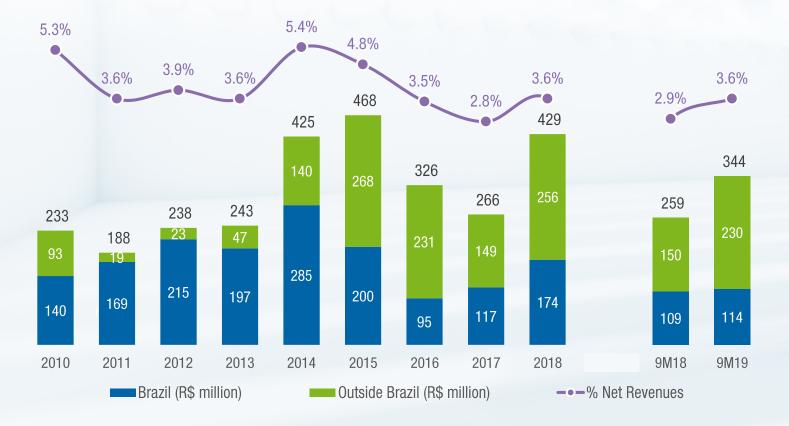
# Consistent cash generation on the back of higher discipline in working capital management





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#### Focused on increasing production capacity outside Brazil in recent years









### New foundry in Mexico





## WEG's and Mexico's most modern foundry Most relevant investments of 2019







#### New automation factory in China







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#### Expansion of electric motors factory in China





## 2<sup>nd</sup> expansion of Rugao electric motors factory







Low voltage electric motors factory in India





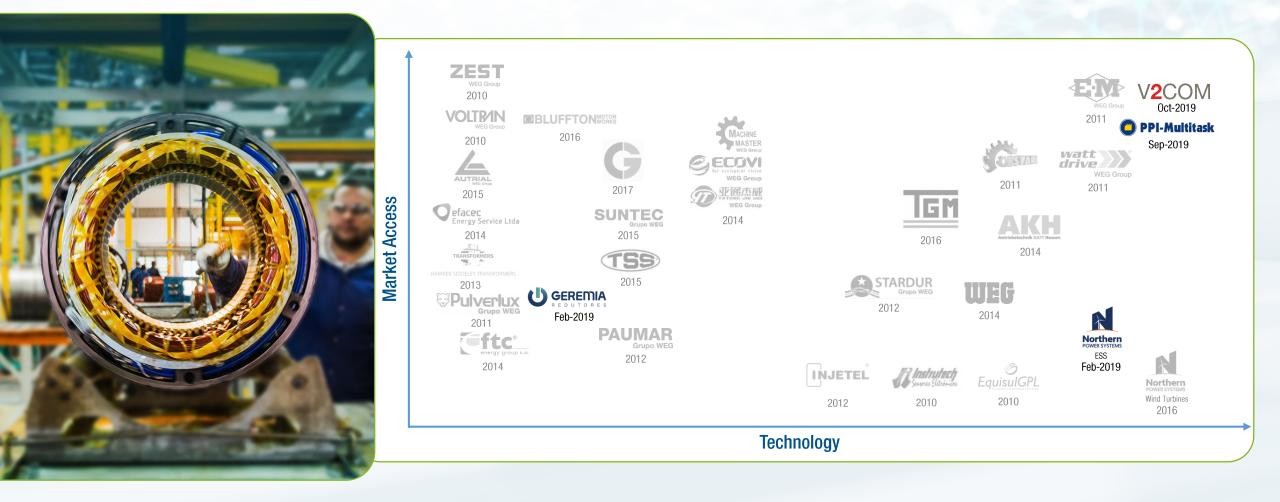
## **Begins operation in 2021**



## **Portfolio Strategy**

#### WEGDAY2019

#### Clear vision of attractiveness of opportunities and of the strategic fit





## **Acquisitions**



WEGDAY2019

Geremia: gearboxes, geared motors, speed and flexible couplings



Location: Bento Gonçalves, RS





## **Acquisitions**



### NPS: More synergy to our renewable energy solutions



Location: Barre, Vermont





Sole owner of all assets including patents, know-how and projects

#### **Bidirecional converters**



#### **Solutions**

- Mobile Battery Energy Storage
- Outdoor Solution No Container
- Container Solution
- Multi Megawatt Systems
- Hybrid Multi Megawatt Plant



## **Acquisitions**



# **PPI-Multitask**

- Founded in 1992
- Complete software solutions Industry 4.0
  - MES (Manufacturing Execution System)
  - Industrial automation systems integration and IoT
- Market segments: general industries, by offering solutions for accurate and real-time production monitoring

# V2COM

### Founded in 2002

- Solutions in hardware, software, connectivity and IoT platform services
- Complete telemetering solutions for power and smart grid systems
- Market segments: general industries, utilities and services provides of electricity, water, gas, among others



## **Financial Flexibility**

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**WEGDAY2019** 

### Allows us to pursue growth opportunities as they become available







## **Robust Dividend Flow**

#### Payout average 55% in the last 9 years





## **Consistent performance of WEGE3**

#### WEGDAY2019

#### Return above industry average







## **Sustainability at WEG**

#### **Environmental, Social and Governance**





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## **Financial Performance**

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Return above industry average for our shareholders

Continuous and sustainable growth

### Healthy EBITDA margin

ROIC above industry average



# WEGDAY2019



# LONG TERM STRATEGY AND DIGITAL BUSINESS

Harry Schmelzer Jr.

## **Global Strategy**

### Our journey to date

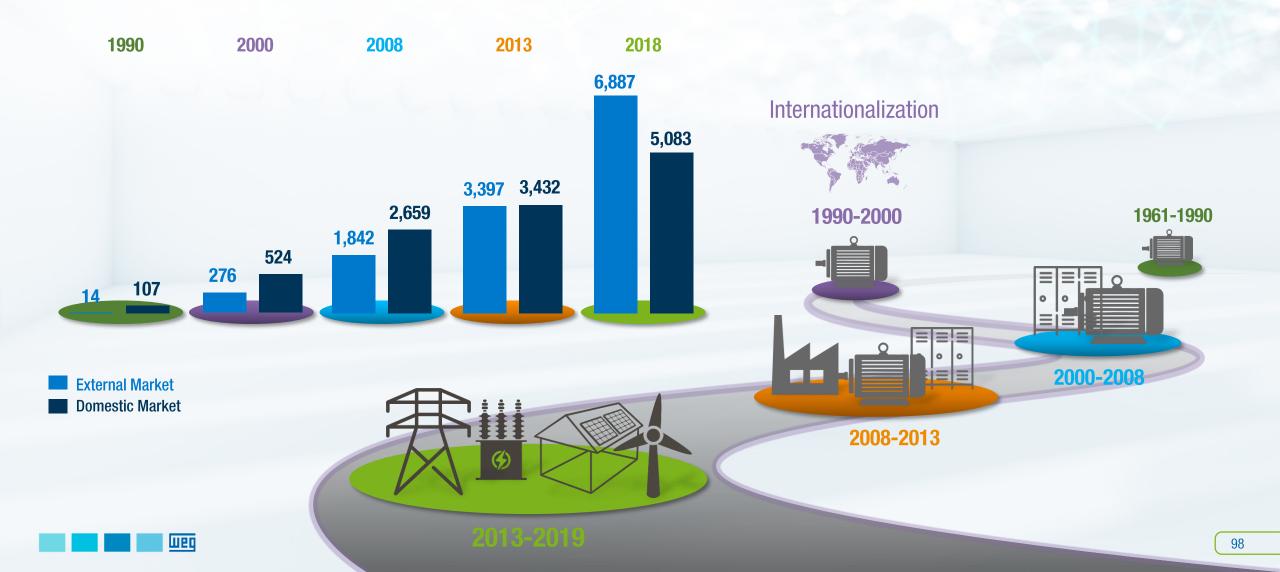
- 1961 1990: Domain of technology
- 1990 2000: Be the world's largest low voltage industrial electric motor manufacturer
- 2000 2008: To be a global reference in electric machines, with wide product line, providing efficient and complete solutions
- 2008 2013: Global solution in electric machines and automation for industry and power systems
- 2013 2019: Global solution in electric machines and automation for industry, infrastructure and power systems



## **Global Strategy**

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#### Internationalization Evolution – Net Revenue (R\$ million)

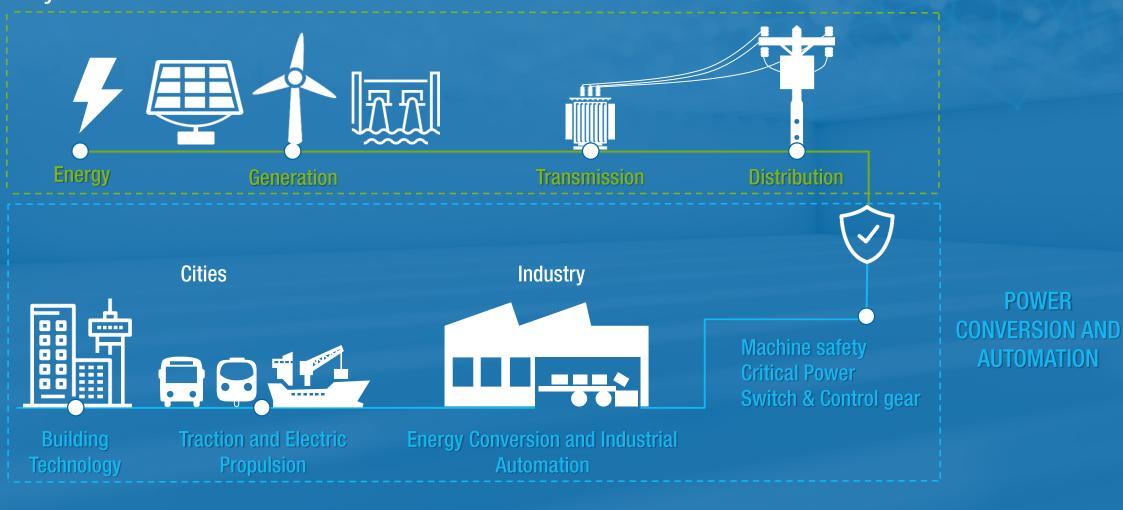


## "End to End" of the wire

#### **WEGDAY2019**

Global solution in electric machines and automation for industry, infrastructure and power systems

POWER



## **Business Portfolio**

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### We have been investing and following the major global trends

#### Renewable energy and sustainability







#### e-Mobility







#### **Energy storage**



#### Energy efficiency

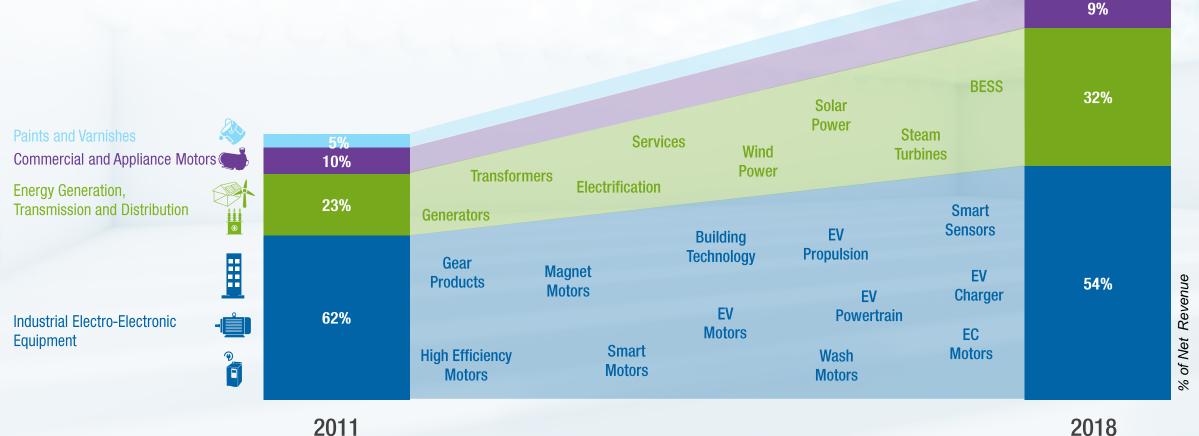


## **Business Portfolio Evolution**

**WEGDAY2019** 

5%

#### Enhanced business and product portfolio drives value creation



2018



## **Electric Motors Business Unit**

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#### New organization in place

#### TARGET

- Strengthen the Commercial and Appliance Motor Business by splitting the Motor Business Unit, aiming to:
  - Create competitiveness through focused and independent structure
  - Agility and continuous improvement of productivity
  - Closer relationship with customers and potential market
  - Improve value creation to the customer

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Commercial and Appliance **Motors BU** 



- **Commercial electric motors**
- Single phase electric motors
- Heating, Ventilating and Air Conditioning (HVAC)
- Appliance motors

## **Global Strategy**

### Our journey from 2019 on

1961 – 1990: Domain of technology

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- 1990 2000: Be the world's largest low voltage industrial electric motor manufacturer
- 2000 2008: To be a global reference in electric machines, with wide product line, providing efficient and complete solutions
- 2008 2013: Global solution in electric machines and automation for industry and power systems
- 2013 2019: Global solution in electric machines and automation for industry, infrastructure and power systems

2019 → Global solution in electric machines, automation and DIGITALIZATION for industry, infrastructure, E-MOBILITY and power systems WEGDAY2019



2000-2008

1961-1990

2013-2019

2019→

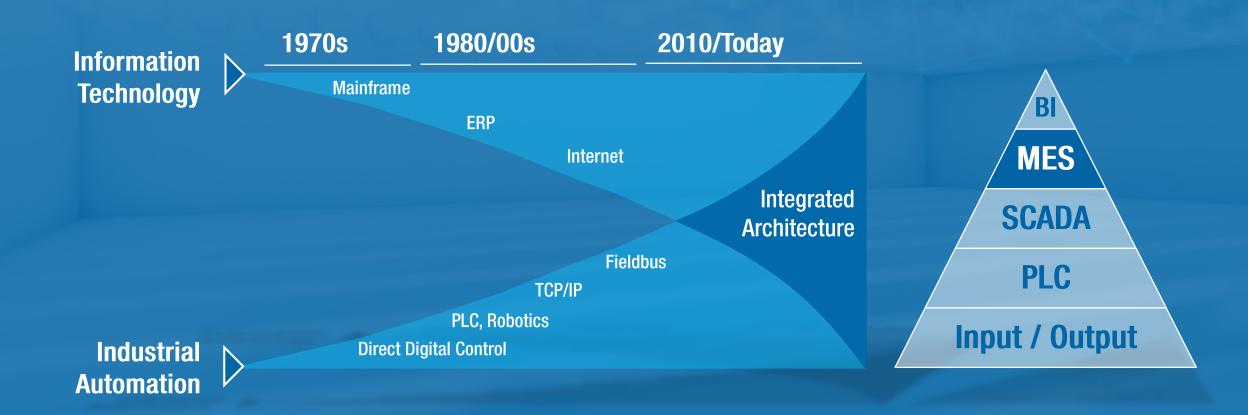
Internationalization

1990-2000

## **Industry 4.0**

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Digitalization and system integration for better management and performance

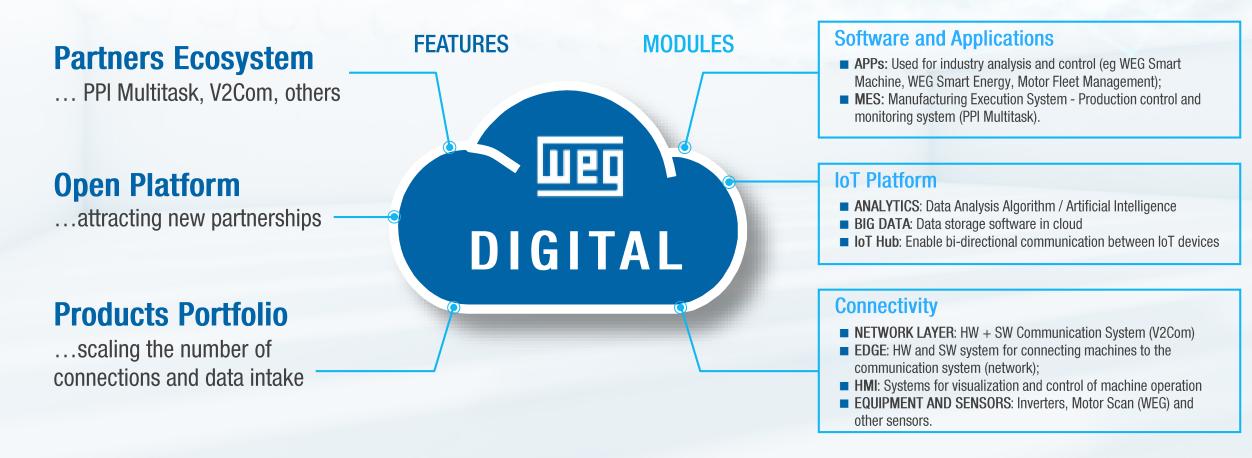




## **Industry 4.0**

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WEG Digital Business will offer its own IoT Platform, open for development of software applications by an ecosystem of partners, customers and WEG's businesses units, complemented by our products and systems



## **Succession Plan**

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#### **MOTOR BUSINESS**



Luis Alberto Tiefensee Motors Business MD

### **ENERGY BUSINESS**



Eduardo de Nobrega WEG China MD Former Energy Business MD



Alberto Y. Kuba Industrial Motors MD Former WEG China MD



**Julio Cesar Ramires** Commercial e Appliance Motors MD Former International Sales Motors Director



**João Paulo G. da Silva** Energy Business MD Former New Energies Director



**AUTOMATION BUSINESS** 

**Carlos José Bastos Grillo** Digital Business Director Former Energy Business Director



## Main drivers of our strategy

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**Product Portfolio Expansion** strategy, incorporating solutions for Electric Mobility and Digital Business

Strengthen our worldwide Motion Drive market positioning

Continue Automation and GTD Business Internationalization

Get closer to Customers

Improve Performance in our industrial units outside Brazil

**Corporate Services Optimization** 

**Maintain Lean Organization** 

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