

#### Siemens – Milestones of a 172-year history



1816 - 1892

Company founder, visionary and inventor



Werner von Siemens

1847

Pointer telegraph lays the foundation of Siemens as a global company 1879

World's first electric railway



1959

SIMATIC makes Siemens a leader in automation technology



1983

First magnetic resonance imaging scanner goes into operation



2012

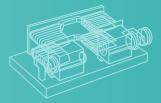
Test operation of the world's largest rotor for offshore wind turbines



2018

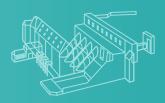
Charter of Trust; a joint initiative for a secure digital world





1866

The dynamo makes electricity part of everyday life



1925

Siemens electrifies the Irish Free State with a hydroelectric power plant



1975

Breakthrough of high-voltage direct current (HVDC) transmission



2010

TIA Portal takes automation a stage further



2016

MindSphere, the cloud-based operating system for the Internet of Things



2019

Start of first project for Siemensstadt 2.0



#### **Strategic Direction and Positioning of Siemens**



### Megatrends challenges that are transforming our world











**Digitalization** 

**Globalization** 

**Urbanization** 

Demographic change

**Climate change** 

#### **Trusted Technology Partner**







**Electrification** 

**Automation** 

**Digitalization** 







**Sustainability Thought Leader** 

#### Siemens aims to be net carbon-neutral by 2030





CO<sub>2</sub> saving realized up to now

41%

of CO<sub>2</sub> emissions reduced since the launch of Siemens' CO<sub>2</sub> neutral program



**Siemens Energy Efficiency Program** 

20 mil.

Euros savings expected annually from 2020 onwards as a result of investments in energy-efficiency projects



**Green power for Siemens** 

60%

of the electricity consumption of our sites globally is covered by renewables





# Innovation – that's how we shape the future

€ 5.7 bn

R&D expenditures<sup>1</sup>

45,200

R&D employees<sup>2</sup>

#### **Siemens is the European champion of patents**

6,850

Inventions<sup>1</sup>

3,750

Patent applications<sup>1</sup>

<sup>1</sup> In FY 2019; continuing operations

<sup>2</sup> Averaged in FY 2019. With beginning of FY 2018, part time employees are included to the full extent

#### **Siemens' Core Technologies for the Digital Future**



| Additive      | Autonomous              | Blockchain                     | Connected                      | Connectivity and Edge Devices |
|---------------|-------------------------|--------------------------------|--------------------------------|-------------------------------|
| Manufacturing | Robotics                | Applications                   | (e)Mobility                    |                               |
| Cybersecurity | Data Analytics,         | Distributed                    | Energy                         | Future of                     |
|               | Artificial Intelligence | Energy Systems                 | Storage                        | Automation                    |
| Materials     | Power Electronics       | Simulation<br>and Digital Twin | Software Systems and Processes |                               |















Data Artificial analysis intelligence

Simulation tools

Cloud and platforms

Secure networking

Cyber security

Design

Operate

Service

IoT – Consulting & Integration

Siemens Software

Siemens Digital Services

MindSphere – the open IoT operating system

Digitally optimized automation

Digitally optimized electrification

**Digital Twin (products and infrastructure)** 



~1.4 million

connected devices and systems via MindSphere

~500

digital offerings

€10 bn

invested in digital companies in the past ten years

39,600

employees in digital jobs at Siemens

**Top 10** 

Siemens is one of the top 10 software companies



## Our business activities have contributed to the development of Taiwan in many aspects

















- Around 20% of Taiwan's power capacity is generated by Siemens' equipment
- The island-wide power dispatch network uses Siemens' energy management system
- Assists TAIPEI 101 with energy-saving solutions, making it the world's tallest green building
- Equips 70% of the major semiconductor & TFT LCD manufacturers with automation solutions
- A leading supplier to Taiwan's rail transportation systems
- Siemens Healthineers (affiliate) leads in next-generation healthcare through trend-setting innovations
- Siemens Gamesa Renewable Energy (affiliate) erects the first two offshore wind turbines in Taiwan

#### Corporate Citizenship: Embracing our responsibility to society

SIEMENS
Ingenuity for life

Discover the Power of
Digitalization –
The Digital Escape











Campus science education programs educating our next generation the concept of Digitalization applied in Future of Manufacturing, Sustainable Energy and Intelligent Infrastructure through simple coding missions and puzzle-solving via the use of smart digital devices.



# Our portfolio matches Taiwan's 5+2 Innovative Industrial Plans and supports Taiwan's transformations







**Future of Manufacturing** 



next47 – innovation startup unit



**Sustainable Energy** 



Healthineers



**Machine Tools** 

Taiwan Government's innovative plans

**Smart Machinery** 

**Asia Silicon Valley** 

**Green Energy** 

**Biomedicine** 

National Defense and Aerospace







### MindSphere'

Commits to support the Asian Silicon Valley initiative with our open, cloud-based IoT operating system MindSphere





#### Thank you!





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