



**Asia-Pacific
Economic Cooperation**

2021/CTI/CONF1/015

Smart City Solution - Yokogawa Community Energy Management System

Submitted by: Yokogawa Electric Corporation



**Conference on Promoting Smart Cities
Through Quality Infrastructure Investment
in Rapidly Urbanizing APEC Region
15 September 2021**

Smart city solution

Yokogawa Community Energy Management System

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Renewable Energy, Power & Water Business Center
Energy & Sustainability Business HQ
September 15, 2021

Corporate Information

Company Name

Yokogawa Electric Corporation

Founded

September 1, 1915

Incorporated

December 1, 1920

Paid-in Capital

43.4 billion yen

Sales

374.2 billion yen (consolidated)

Operating Income

31.6 billion yen (consolidated)

Ordinary Income

34.1 billion yen (consolidated)

Profit Attributable to

19.2 billion yen (consolidated)

Owners of Parent

R&D Investment/Sales

7.4 % (consolidated)

Number of Employees

17,715 (consolidated)

Capital Ratio

59.4 % (consolidated)

(Results of fiscal year 2020)



World Headquarters
Yokogawa Electric Corporation
(Japan)



OpreX™ Control and Safety System:
CENTUM VP



OpreX™ Control and Safety System:
広域分散監視 (SCADA) ソフトウェア
FAST/TOOLS

Global Business Expansion and Innovation



Tamisuke Yokogawa

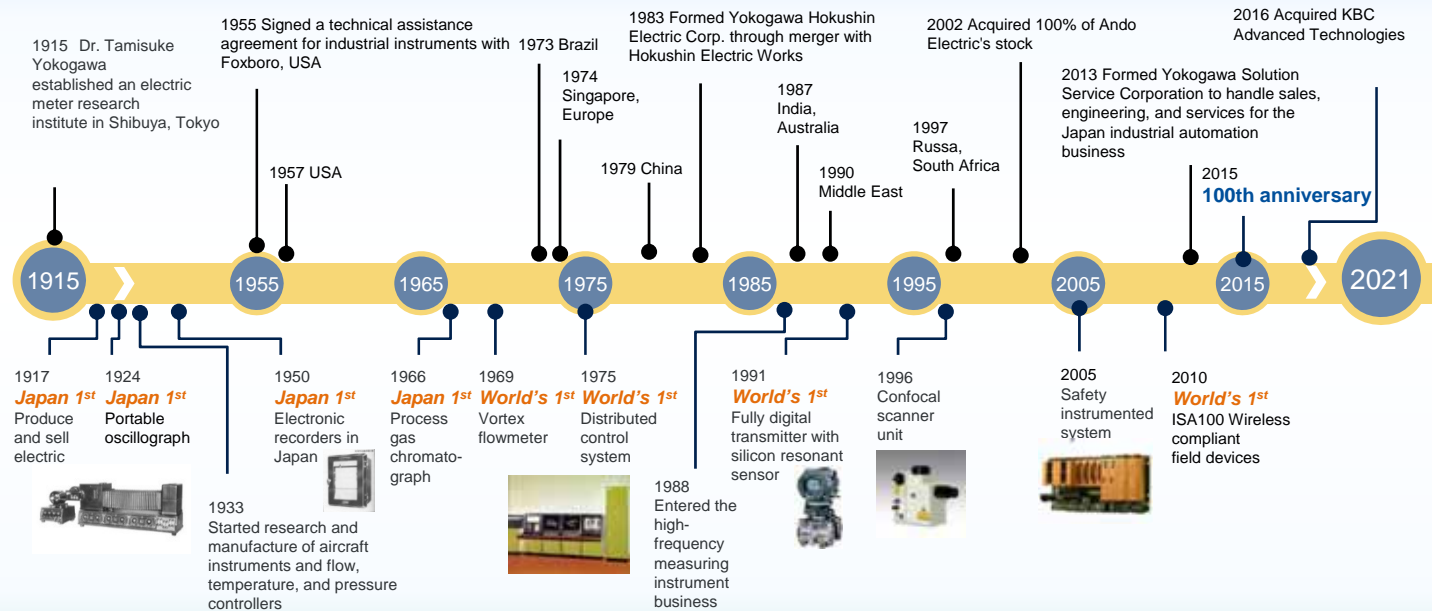
Founding principles

Quality first

Pioneering spirit

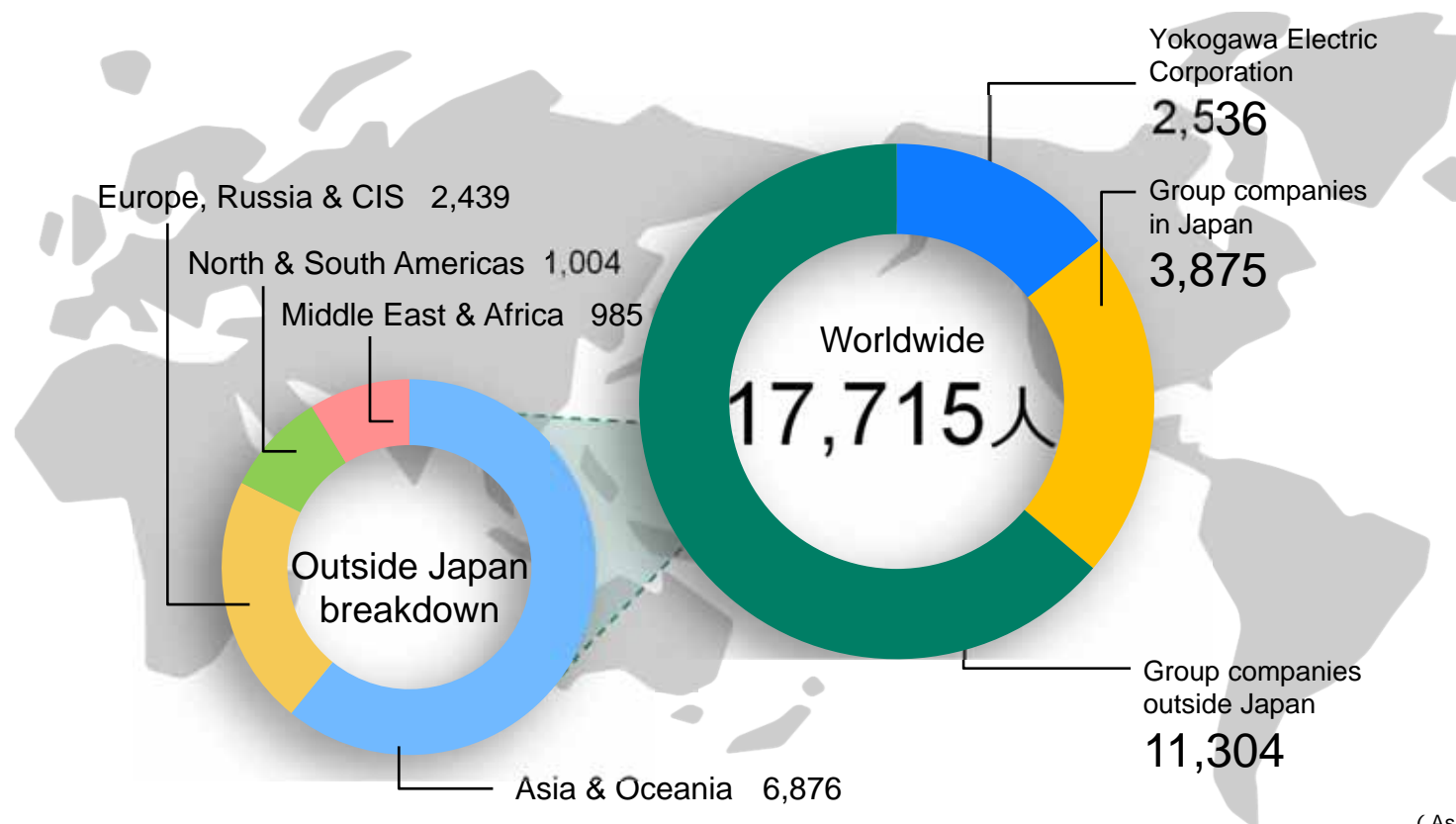
Contribution to society

Global Business Expansion



Innovation

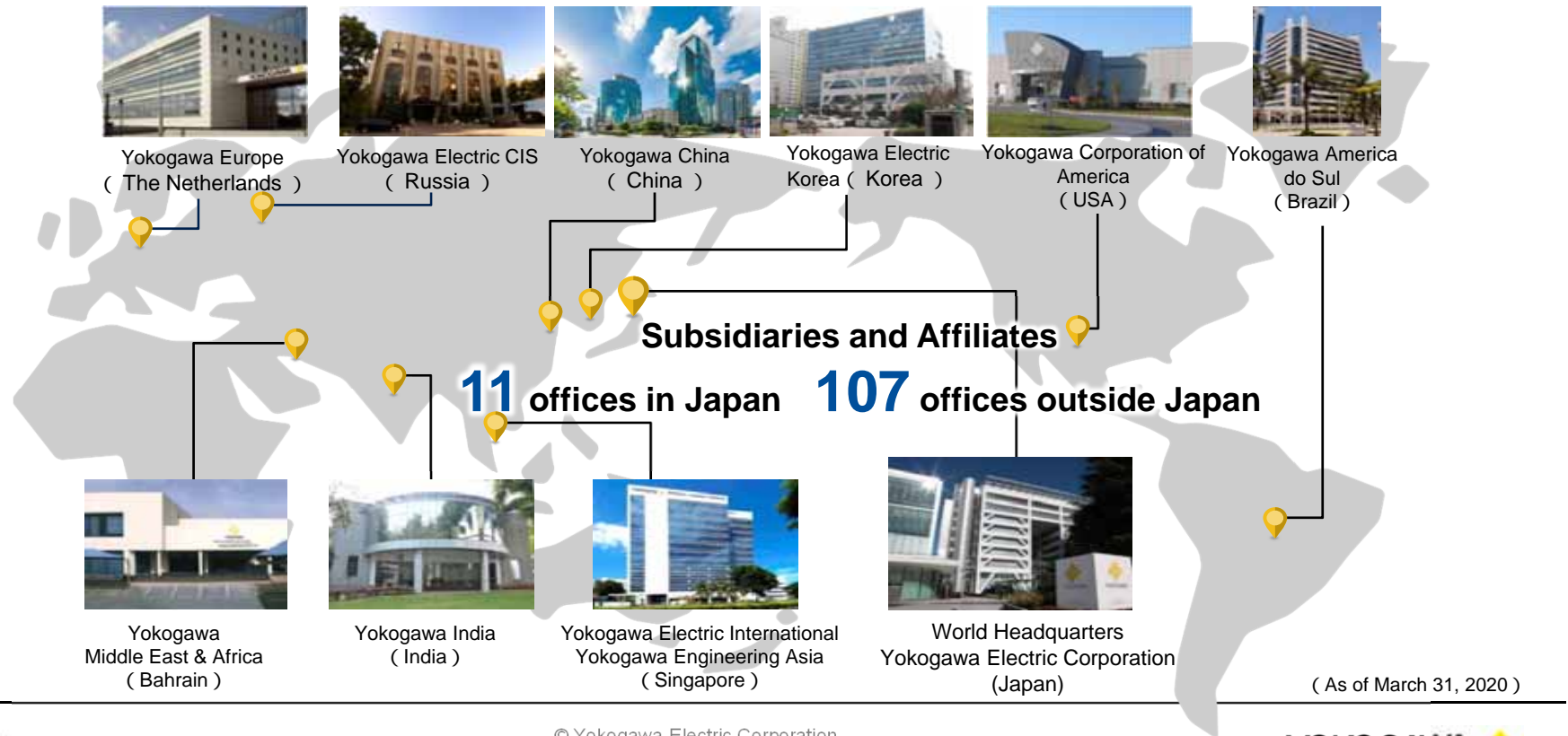
Yokogawa Employees Worldwide



(As of March 31, 2021)

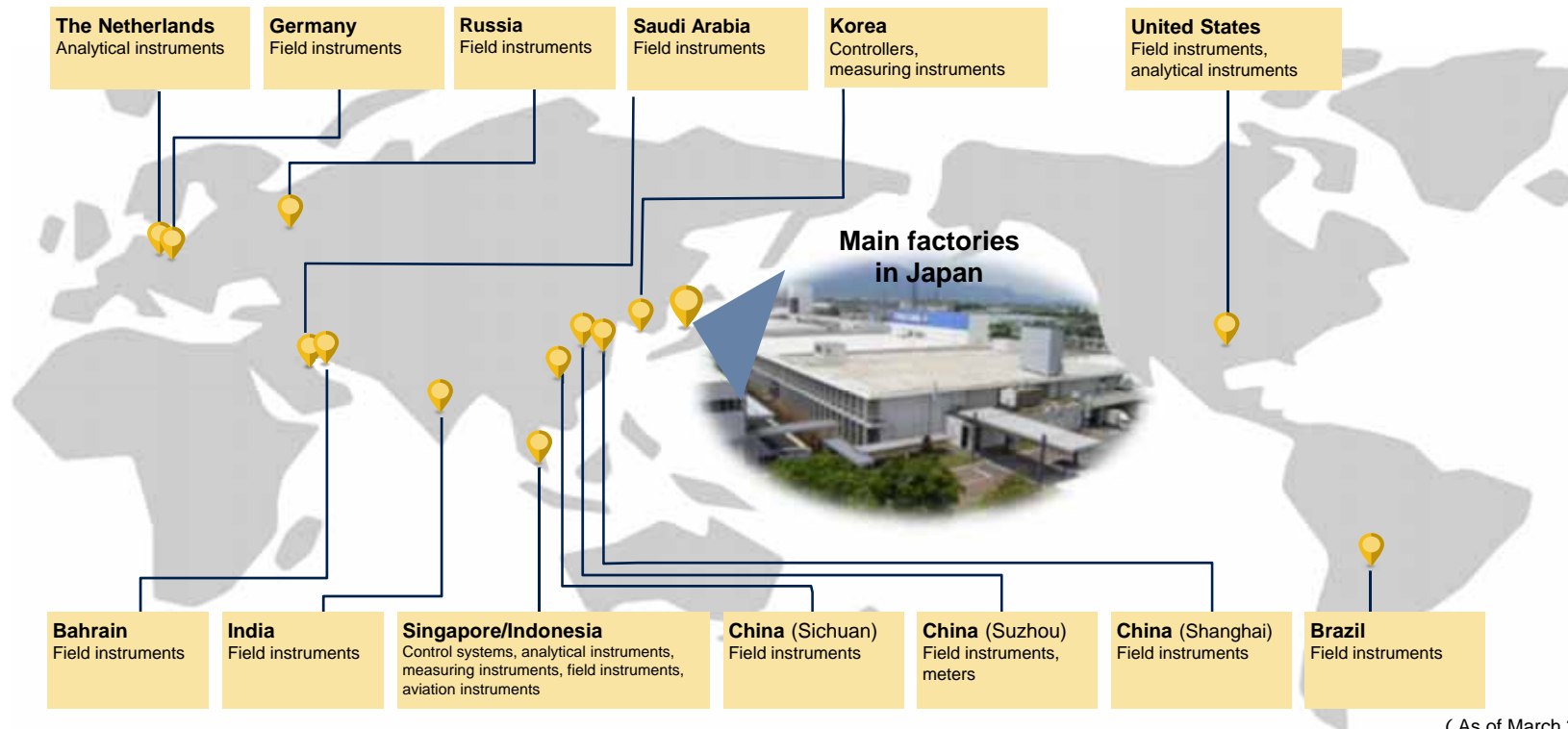
Worldwide Business Operations

Global network supporting business growth



Manufacturing Organization

Our manufacturing operations span 13 economies



(As of March 31, 2021)

Services Anywhere - global reach, local delivery



SERVICE OFFICES

180+



SERVICE PARTNERS

50+



ECONOMIES

200+



SERVICE ENGINEERS

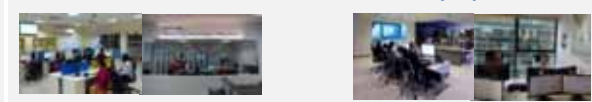
2500+



Regional Response Centers



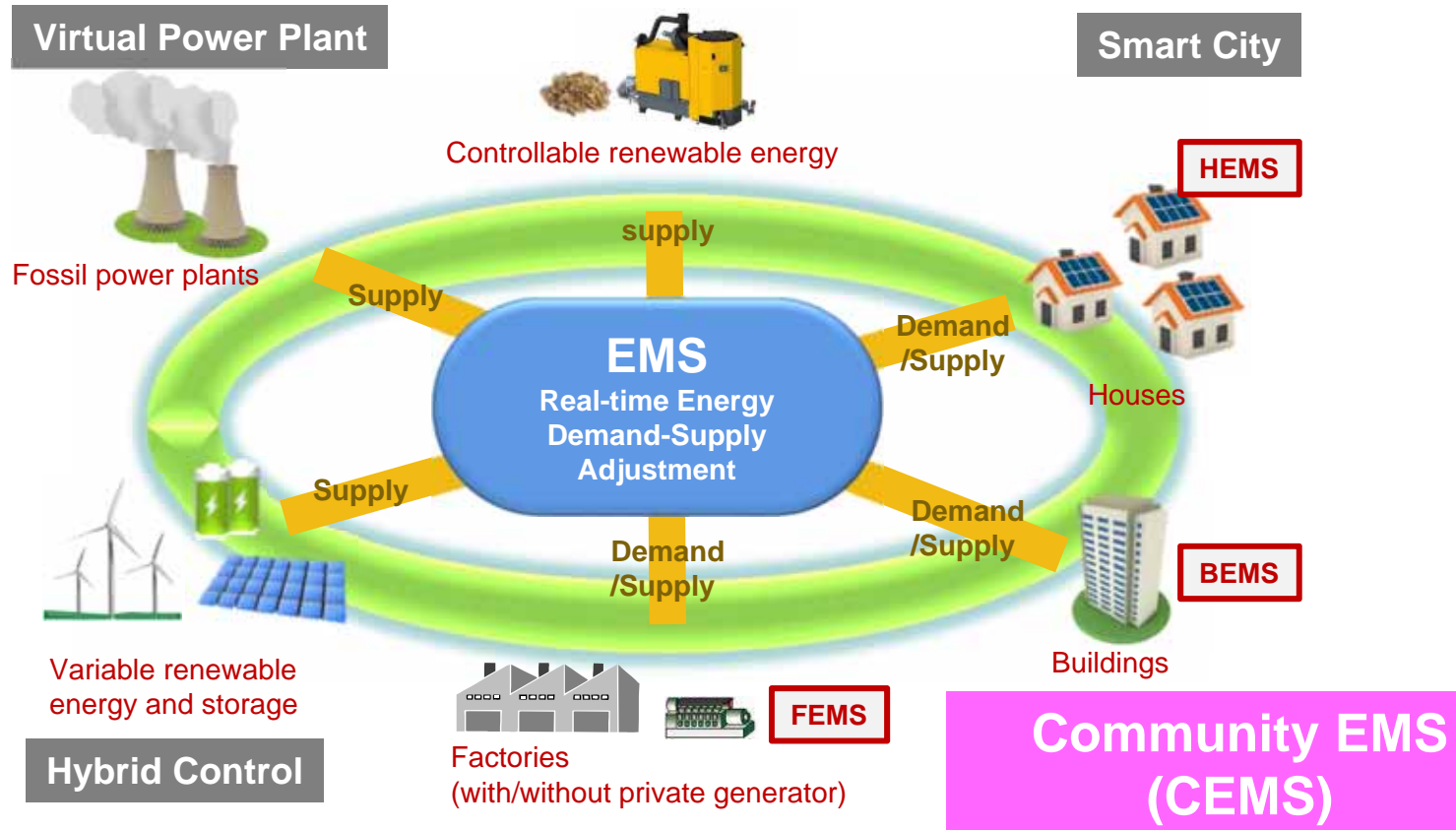
Security Competence Laboratory Security Operation Center



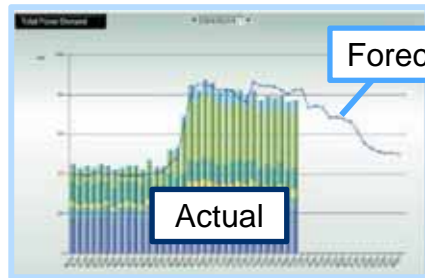
(As of April 1, 2021)

Yokogawa for CEMS

EMS to connect power suppliers and consumers

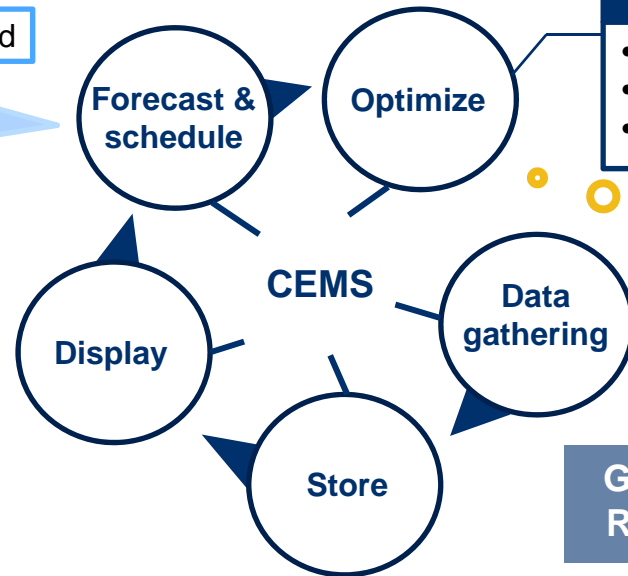


What does CEMS realize ?



Demand Forecast

- Demand Forecast from;
- Past demand history data
 - Weather forecast
 - Other events history data



Example

- Optimize electricity procurement costs
- Optimize income from electricity sales
- Maximize CO2 reductions

Capacity? Sell? Buy?
Excess? Lack?
Charge? Discharge?

Demand (Consumers)

STABILIZED POWER



BEST ENERGY MIX

Generation Resources



Battery



Wind turbine



Solar PV

Co-innovating tomorrow™



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