PACSystems™ for Smart Solutions

Emerson MAS Systems & Solutions
InJu.An(inju.an@emerson.com)

EMERSON

2020 AT-A-GLANCE

FOUNDED
1890

HEADQUARTERS IN
ST. LOUIS, MO USA

WORLDWIDE

83,500
EMPLOYEES

200
MANUFACTURING LOCATIONS

TWO BUSINESS PLATFORMS

AUTOMATION SOLUTIONS
$11.2B IN SALES

COMMERCIAL & RESIDENTIAL SOLUTIONS
$5.6B IN SALES

$16.8 BILLION
IN GLOBAL SALES FISCAL YEAR 2020

$2.4B
ANNUAL SALES FROM SOFTWARE PORTFOLIO

64 YEARS
CONSECUTIVE YEARS OF INCREASED DIVIDENDS

NYSE:
EMR

INNOVATION

EMERSON EMPLOYEES HELD
21K
ACTIVE PATENTS WORLDWIDE IN 2020

#176 FORTUNE 500
AMERICA'S LARGEST CORPORATIONS BY REVENUE

RECOGNITION - 2020

TOP 50 EMPLOYERS
WOMEN ENGINEERS MAGAZINE

BEST EMPLOYERS FOR DIVERSITY
FORBES MAGAZINE

INDUSTRIAL IOT COMPANY OF THE YEAR
IOT BREAKTHROUGH

EMERSON KOrEA 32yesrs ESTABLISHMENT

1988
ESTABLISHED

650 EMPLOYEES

205+ SALES

220+ PROJECT ENGINEERS

92+ SERVICE ENGINEERS

TRUSTED PARTNER AS SERVING

2,000+   **4,000+**
CUSTOMERS THROUGH PROJECT EXPERIENCE

5 RECOGNITION GOVERNMENT AWARDS

2020 Minister Commendation for the contribution to development of Korea industry through foreign investment
MINISTRY OF TRADE, INDUSTRY & ENERGY

2020 Industrial Service Medal for the contribution to employment equality
MINISTRY OF EMPLOYEMENT & LABOR

2019 Family Friendly Certified Corporations
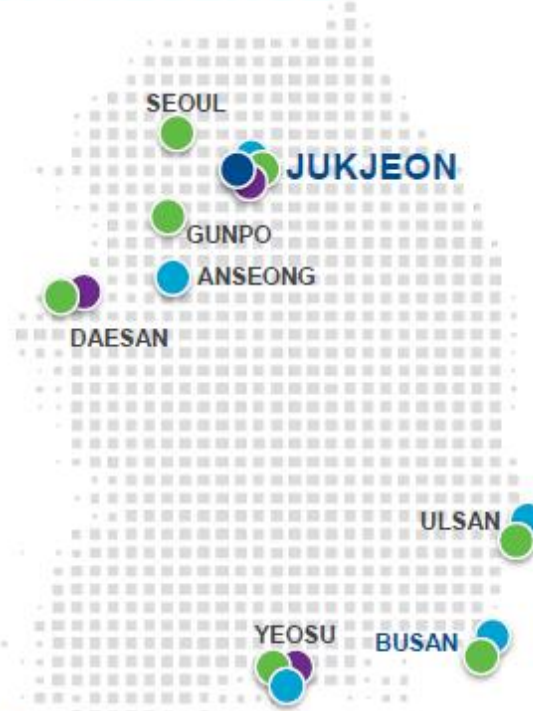MINISTRY OF GENDER EQUALITY & FAMILY

2018 Prime Minister Commendation for the contribution to development of Korea industry through foreign investment
MINISTRY OF TRADE, INDUSTRY & ENERGY

2011 Minister Commendation for the contribution to development of Korea industry through foreign investment
MINISTRY OF KNOWLEDGE ECONOMY

KOREA PRESENCE

SEOUL
JUKJEON
GUNPO
ANSEONG
DAESAN
ULSAN
YEOSU   BUSAN

- **Head office**
- **Sales office**
- **Service center**
- **Manufacturing & Assembly center**

JUKJEON HEAD OFFICE AT A GLANCE

Solutions Center

Training Center

Digital Plant

AUTOMATION SOLUTIONS

Improving Process and Industrial Manufacturing Performance with Measurable Results

Industries Served include

Oil and Gas/Refining

Chemical

Power

Food and Beverage

Metals and Mining

Water and Wastewater

Life Sciences

Automotive

Electronics

Core Expertise & Key Brands

Industrial Internet of Things
- Plantweb

Systems and Asset Management
- DeltaV
- Ovation

Measurement Instrumentation
- Rosemount
- Micro Motion

Fluid Control & Pneumatics
- ASCO   • PACSYSTEMS™
- AVENTICS

Valves, Actuators and Regulators
- Bettis   • KTM
- Fisher   • Vanessa
- Keystone

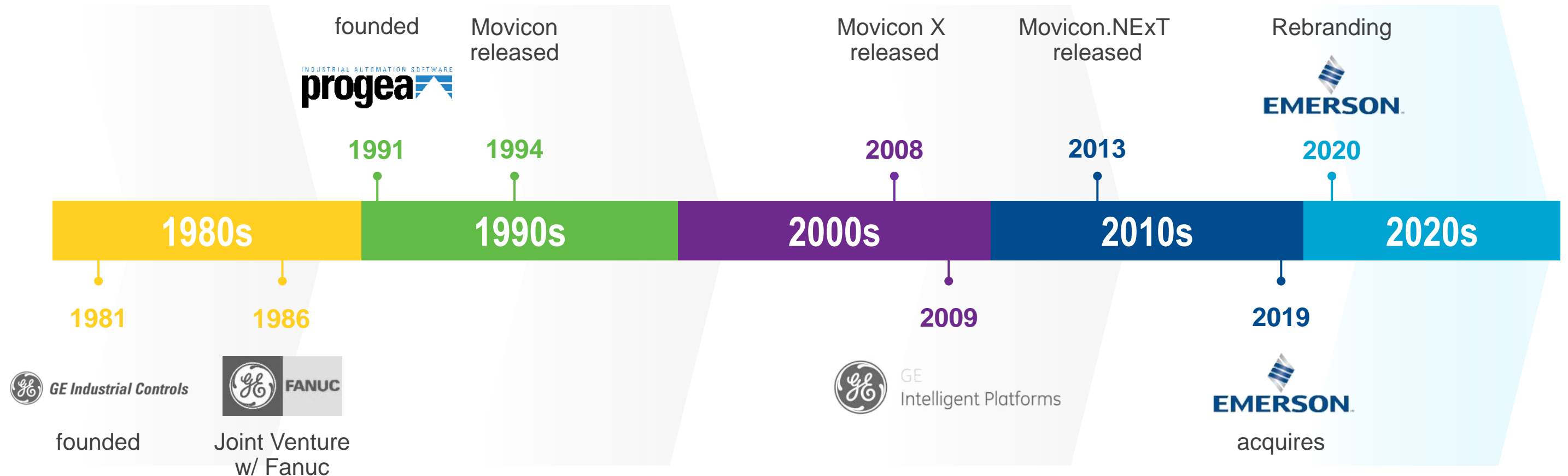Welding, Assembly and Cleaning
- Branson   • HTE

Electrical and Lighting
- Appleton   • SolaHD

Industry Services and Solutions

Building a Comprehensive Automation Capability

30+ Years of Automation Expertise & Innovation

	founded	Movicon released		Movicon X released	Movicon.NExT released		Rebranding

progea
INDUSTRIAL AUTOMATION SOFTWARE

EMERSON

	1991	**1994**		**2008**	**2013**		**2020**

1980s	1990s	2000s	2010s	2020s

1981	**1986**		**2009**		**2019**	

GE Industrial Controls

GE FANUC

GE Intelligent Platforms

EMERSON

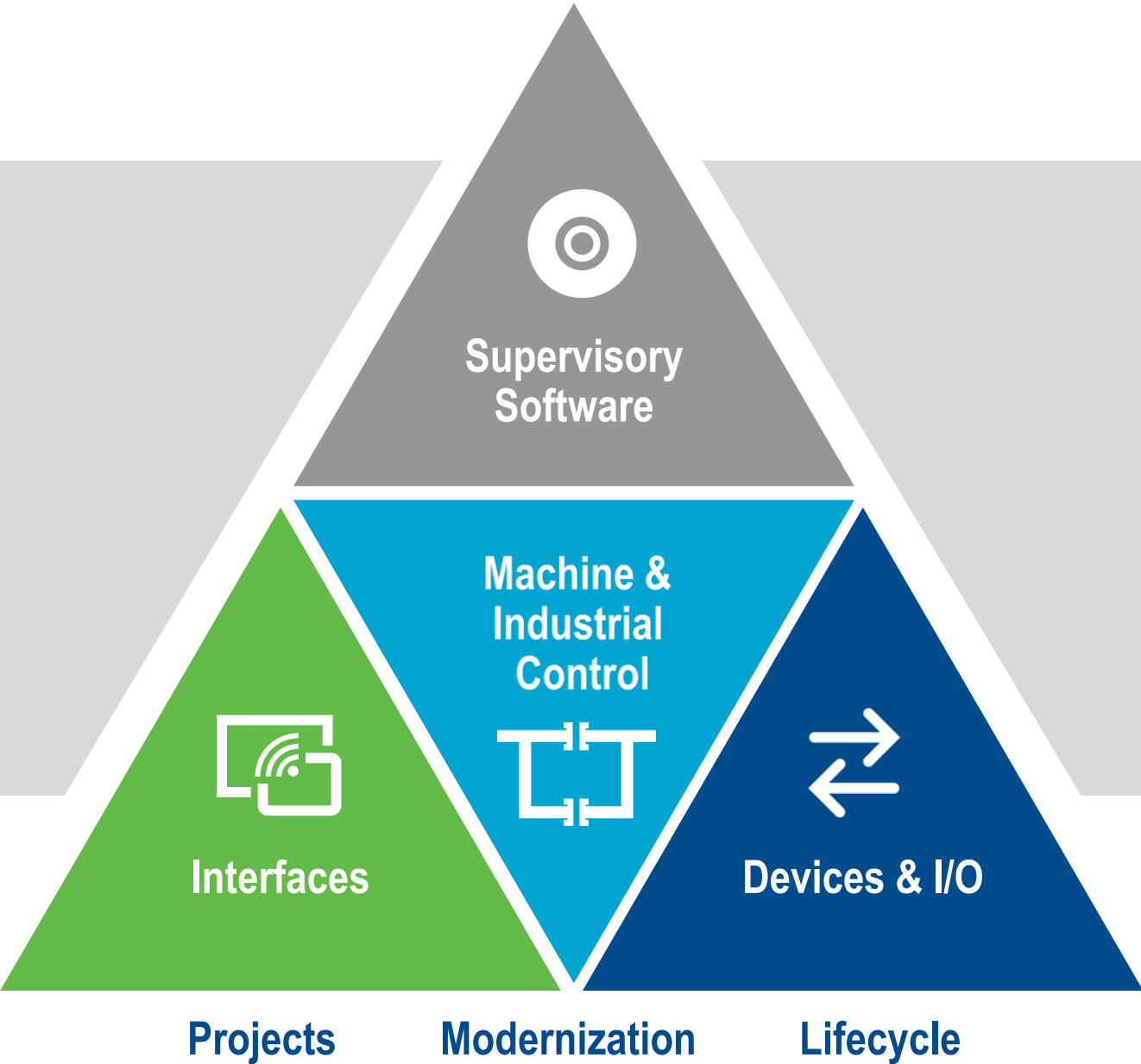| founded	Joint Venture w/ Fanuc				acquires	

70+ Active Automation Patents

World's 1st **Remote I/O with Genius**

World's 1st **Open PLC with 90-70**

World's 1st **Programmable Automation Controller with Rx7i and Rx3i**
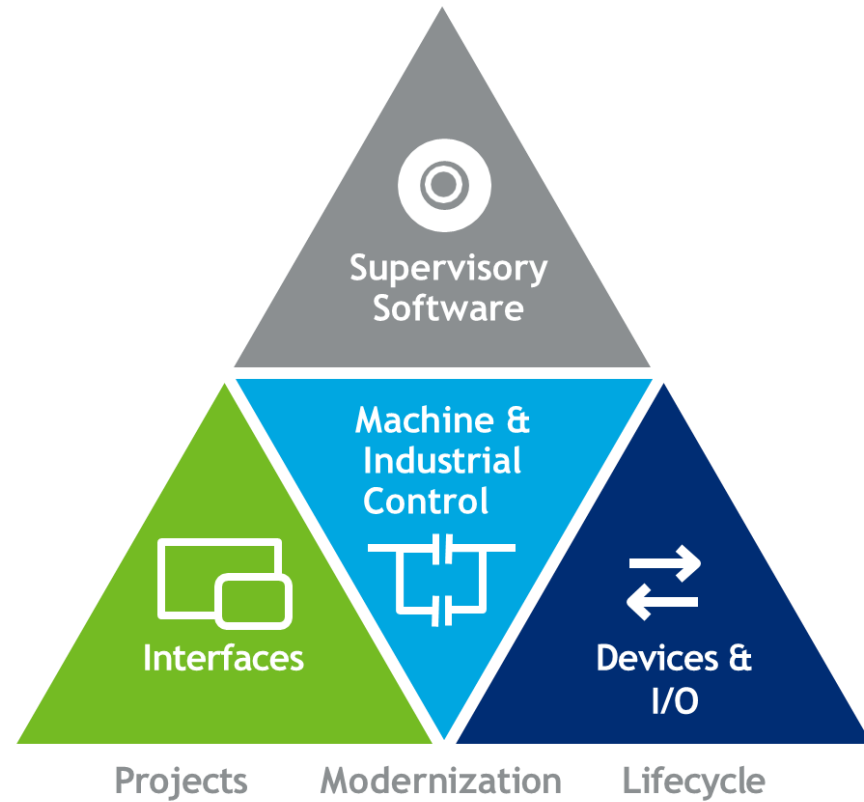
World's 1st True **Edge Controller**

Our Industrial Automation & Controls Portfolio

Supervisory Software

Machine & Industrial Control

Interfaces

Devices & I/O

Projects   Modernization   Lifecycle

Connectivity is at our core – reaching beyond conventional standards to anticipate trends and reimagine the intersection of control, software, interfaces and devices to meet your future industrial automation and control needs.

From the control room to the plant floor, PACSystems redefines the industrial edge.

In automation controls applications across all industries, ranging from process to discrete, expansion and diversification are driving the need for flexible, scalable control solutions. PACSystems solutions allow end users and OEMs to bring their operations into the modern world at a realistic and affordable pace, scaling and upgrading to meet the needs of today's buying trends and production realities. With connectivity at its core, the PACSystems devices and architecture reaches beyond conventional standards to anticipate trends and re-imagine the intersection of control, software, interfaces and devices to meet your future industrial automation and control needs.

Supervisory Software

Machine & Industrial Control

Interfaces

Devices & I/O

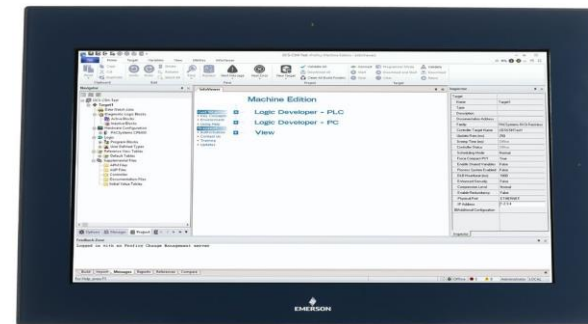Projects   Modernization   Lifecycle

Supervisory software

Drive productivity and speed development with secure, collaborative and integrated control software. Program and configure PACSystems devices using native tools, open standards, and a fully integrated development environment. Apply version control and authenticate and secure communications using a common set of configuration tools.

Machine and industrial control

Tackle a diverse range of application requirements with the robust, reliable line of PACSystems industrial controllers. Delivering deterministic, high-speed control (from as low as 24 to over 32,000 I/O points), these best-in-class controllers are interoperable with most industry standards, redundant and secure by design, and operate without compromise in the most demanding conditions.
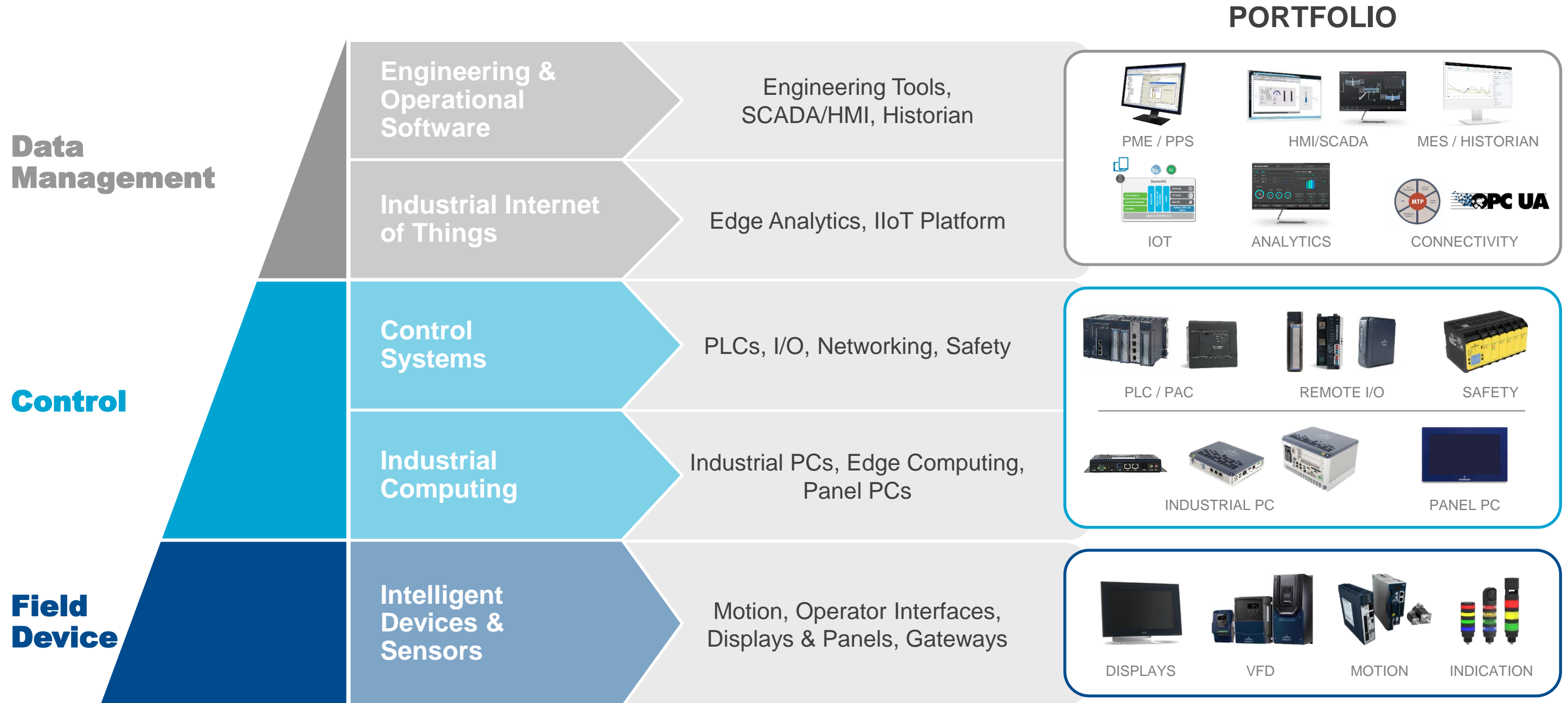
Interface

Give your operators fast, clear access to data with the PACSystems line of rugged industrial displays. The comprehensive portfolio of modular HMIs and touchscreen devices combines the ease of use of consumer-grade technology with the industrial-level durability needed for harsh environments. The modular design allows for easy scalability while built-in daisy chaining capability helps simplify connectivity and reduce costs.

Devices(Motion and Safety and I/O)

Reap the benefits of best-in-class connectivity and continuous uptime with PACSystems PROFINET-based devices and I/O portfolio. Mix and match a variety of industrial I/O as well as other industrial devices to meet your unique application demands. The right I/O for the right job reduces component cost and installation time and optimizes ROI.

OUR INDUSTRIAL AUTOMATION & CONTROL PORTFOLIO

PORTFOLIO

Data Management

Engineering & Operational Software — Engineering Tools, SCADA/HMI, Historian

Industrial Internet of Things — Edge Analytics, IIoT Platform

PME / PPS • HMI/SCADA • MES / HISTORIAN
IOT • ANALYTICS • CONNECTIVITY

Control

Control Systems — PLCs, I/O, Networking, Safety

Industrial Computing — Industrial PCs, Edge Computing, Panel PCs

PLC / PAC • REMOTE I/O • SAFETY
INDUSTRIAL PC • PANEL PC

Field Device

Intelligent Devices & Sensors — Motion, Operator Interfaces, Displays & Panels, Gateways

DISPLAYS • VFD • MOTION • INDICATION

PACSystems™ Control Systems

HIGH-PERFORMANCE, SECURITY , CONNECTED CONTROL

Scalable
Small, compact applications to large, redundant systems with 32k I/O per controller

Open & Interoperable
IEC 61131-3 programming languages, native C-block support, multiple protocol options (PROFINET, DNP3, IEC-61850, IEC-104, HART, EGD, SRTP, Modbus, OPC-UA)

Deterministic
400µs scans, single-scan switchover and high-speed coordinated multi-axis motion

Security
Achilles certification, secure-boot, secure firmware upgrades & TPM

Industrial IoT Company of the Year (2018 & 2019)

Digital Transformation

- ☑ Turns data into actions & performance improvement
- ☑ Focuses on priority areas with a roadmap
- ☑ Measurable performance

GE Intelligent Platforms is now known as **Emerson Machine Automation Systems**

Emerson once again wins 'Industrial IoT Company of the Year' award

Tony Pallone

03 January 2019

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...reakthrough Awards, an annual ...on that honors the top ...s, products and people in the ...e internet of things (IoT) market, ...nized global automation ...y and software company ...as "Industrial IoT Company of ...for 2019. This marks the ...onsecutive year that Emerson ...ved the distinction.

...e important aspects of ...s approach to driving industrial ...implementation for ...uring industry customers is its ...l and scalable Plantweb digital ...m portfolio of technologies, software and services. Plantweb is designed to help companies turn ...data into actionable information and performance improvement. By focusing on priority areas with a ...roadmap tailored to business needs and readiness, Plantweb aims to reach performance standards ...easured in terms of optimized production, improved reliability, enhanced safety and minimized energy usage.

Source: IoT Breakthrough