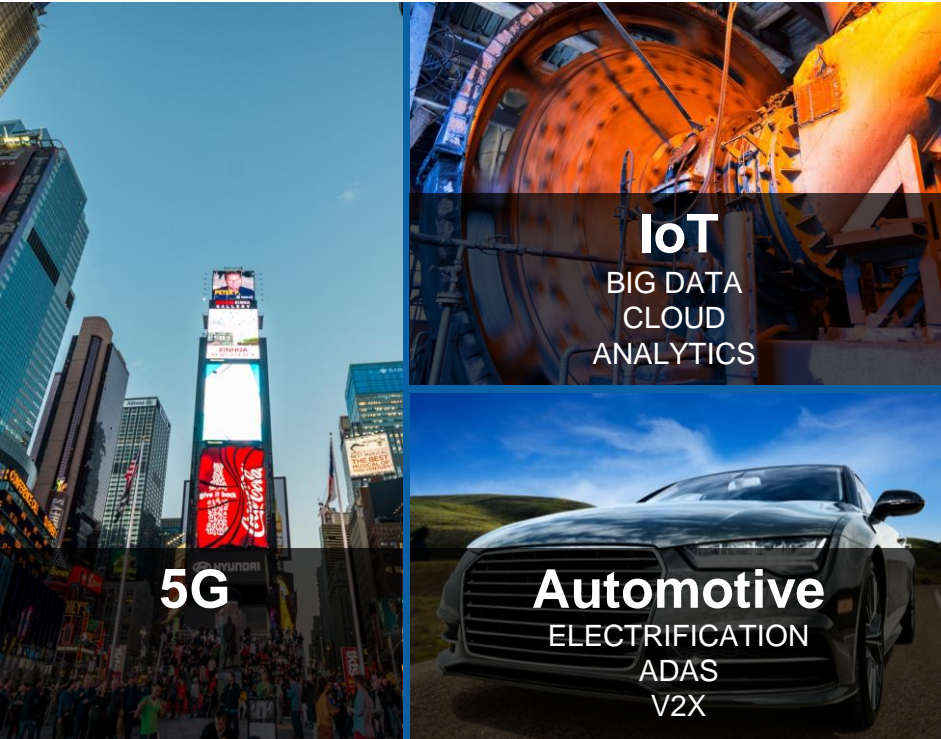




Powerful Possibilities. Real Solutions.



# Your World Is Rapidly Changing



INCREASING  
COMPLEXITY



COMPRESSED  
TEST TIMES



SMALLER  
TEAMS

# The Challenge of Managing Distributed Systems and Data



## MISSION STATEMENT

NI equips engineers and scientists with systems that accelerate productivity, innovation, and discovery.



# NI's Differentiated Approach











Improved Development Productivity  
Increased Operational Efficiency  
Better Interoperability  
Future-Proof Systems

A software-defined platform that accelerates the development and performance of automated test and automated measurement systems.

# NI PLATFORM



Systems and Data Management
Application Software
Programming Environment
Measurement IP
Device Drivers
 NI PRODUCTIVE DEVELOPMENT SOFTWARE
 NI MODULAR HARDWARE

 SystemLink	 DIAdem				
 NI VeriStand	 NI TestStand	 InsightCM	 InstrumentStudio	 FlexLogger	...
 LabVIEW	 LabWindows/CVI	MeasurementStudio for  Visual Studio			
LabVIEW FPGA	Wireless/Cellular	Sound/Vibration	Vision	Parametrics	Protocols ...
NI-DAQmx	NI-VISA	NI-RFmx	NI-SCOPE	NI-RIO	...

The mark LabWindows is used under a license from Microsoft Corporation. Windows is a registered trademark of Microsoft Corporation in the United States and other countries.



NI PRODUCTIVE  
DEVELOPMENT  
SOFTWARE

Application-Specific Hardware



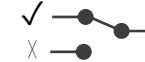
Semiconductor  
RF Port Module



Radar Target  
Simulation



Communication  
Buses



Fault Insertion



Switching/Loads/  
Signal Conditioning ...

I/O Modules



RF and  
Microwave



Analog



Digital



Networking



Switching



SDR ...

Modular Chassis and Controllers



PXI Systems



CompactDAQ Systems



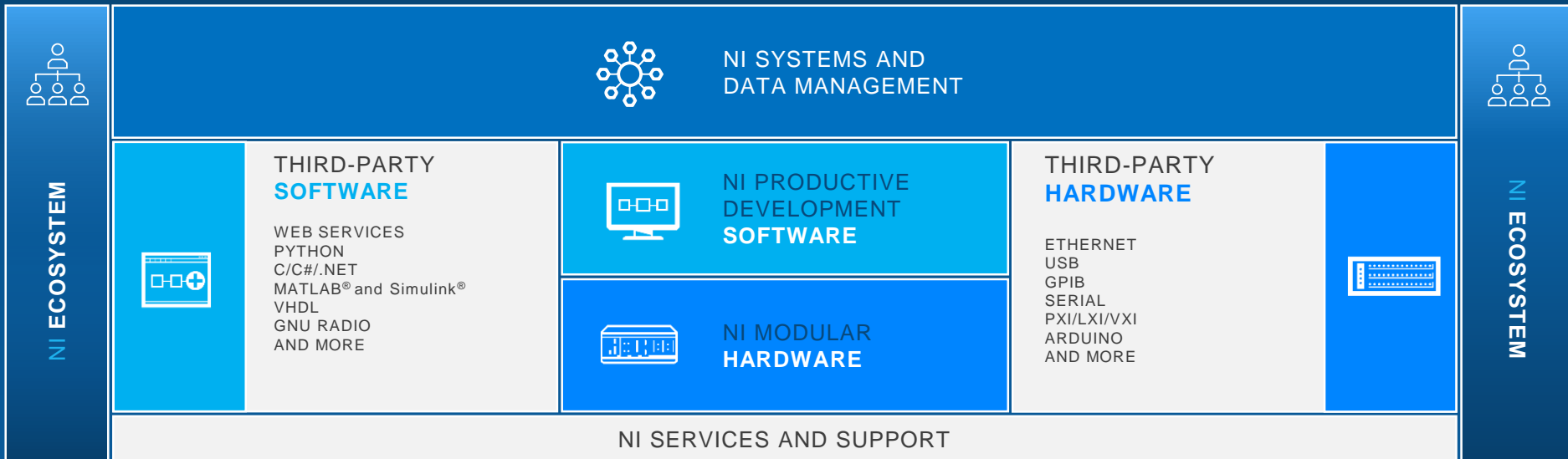
CompactRIO Systems ...



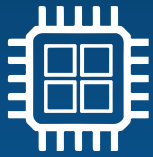
NI MODULAR  
HARDWARE



# NI PLATFORM



MATLAB® and Simulink® are registered trademarks of The MathWorks, Inc.



**SEMICONDUCTOR**



**TRANSPORTATION**



**AEROSPACE/DEFENSE/  
GOVERNMENT**



**PORTFOLIO**

**NI PLATFORM**



ON Semiconductor®



Honeywell ← EMBRAER



SIEMENS



THALES



nationalgrid



SEMICONDUCTOR



TRANSPORTATION



AEROSPACE/DEFENSE/  
GOVERNMENT



PORTFOLIO

NI PLATFORM



# Using Our Platform to Create a Semiconductor ATE System

NI Service and Support			Ecosystem	
Technical Support	Training	Repair and Calibration	Load Board Development	Test Programs
Installation and Bring-Up		On-Site Maintenance		

## Products Designed for Semiconductor ATE Systems



System Enclosure



Standard Docking and Interfacing



Semiconductor Test System Software

## General-Purpose Products



PXI



FPGA-Enabled I/O



▶ LabVIEW™ ✓ NI TestStand™ ||| DIAdem™

Test and Data Management Software



**NXP**

**2X**



ON Semiconductor®



**\$60,000**



**BROADCOM.**

**5X**

# Using Our Platform to Create an Automotive HIL System

## NI Service and Support

Technical Support

Training

Repair and Calibration

Startup Assistance

## Ecosystem

System Integration

Fault Insertion

Load Board Development

Custom Signal Conditioning

Software Integration

## Products Designed for Hardware-in-the-Loop (HIL) Systems



Software

SLSC

Test Rack Infrastructure

Automotive Network Interfaces

## General-Purpose Products



PXI



FPGA-Enabled I/O



▶ LabVIEW ✓ NI TestStand ||| DIAdem

Test and Data Management Software



95%



39,000



90%



“This system dramatically reduced workload and was a huge advantage for Mazda. **Testing time and required man-hours were reduced by 90 percent compared to our old methods**, resulting in hundreds of millions of yen saved per year.”

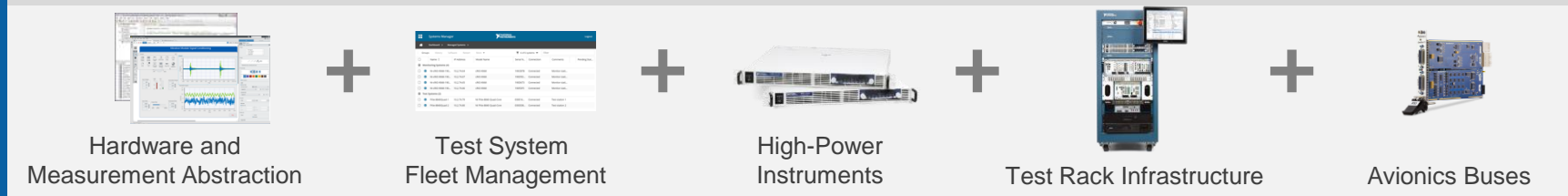
—Tomohiko Adachi, Senior Principal Engineer



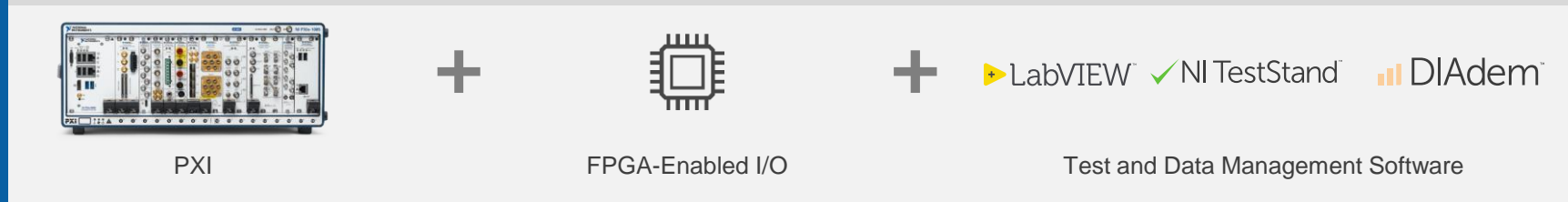
# Using Our Platform to Create an Aerospace ATE System

NI Service and Support		Ecosystem	
Technical Support and Training	Repair and Calibration	Cabling and Mass Interconnects	Test Adapters and Fixture Design
Life-Cycle Planning	Obsolescence Management	Test Program Set (TPS) Development	

## Products Designed for Aerospace ATE Systems



## General-Purpose Products





**Honeywell**  
THE POWER OF **CONNECTED**

**40%**



 **EMBRAER**

**25,000**



 **AIRBUS**

**10X**



“Standardization on a common test platform has reduced test cost by 40 percent.”

—Mark Keith, Chief Engineer

**Honeywell**

# Using Our Platform to Drive Discovery in Academic Research

## NI Service and Support

Technical Support and Training

Repair and Calibration

Installation and Bring-Up

Research Grant Program

## Ecosystem

System Integration

Custom Signal Conditioning

Software Integration

## Products Designed for Hardware-in-the-Loop (HIL) Systems



CompactRIO



FPGA-Enabled I/O



▶ LabVIEW™

NI VeriStand™

Software

## General-Purpose Products



PXI



FPGA-Enabled I/O



▶ LabVIEW™

||| DIAdem™

Test and Data Management Software

# Using Our Platform for Advanced Wireless Research

NI Service and Support		Ecosystem	
Technical Support and Training	Repair and Calibration	Industry-Standard IP	
Installation and Bring-Up	Research Grant Program	Open Application Frameworks	System Integration

## Products Designed for Software Defined Radio



USRP



FPGA-Enabled I/O



LabVIEW  
Communications

App  
Frameworks

Software

## General-Purpose Products



PXI

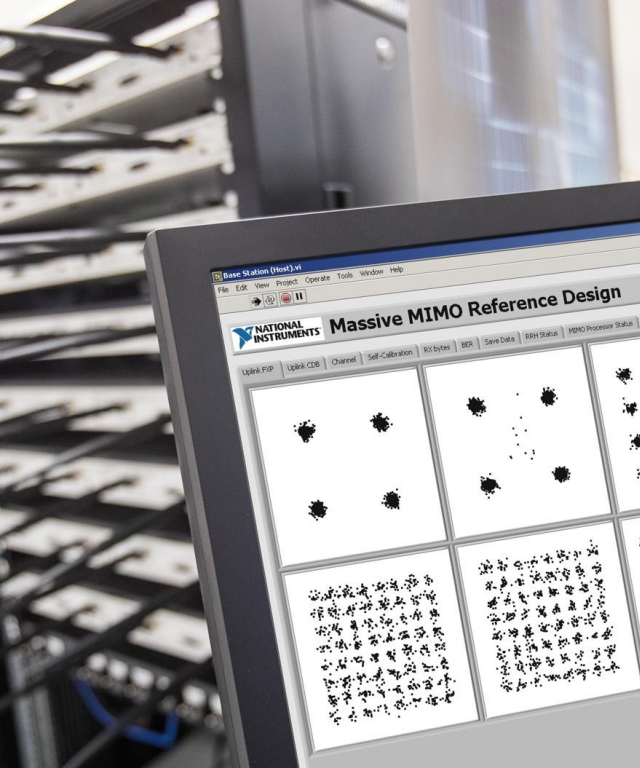


FPGA-Enabled I/O



LabVIEW™ DIAdem™

Test and Data Management Software



128



CLEMSON UNIVERSITY  
SCE&G ENERGY  
INNOVATION  
CENTER

3X



TECHNISCHE  
UNIVERSITÄT  
WIEN  
Vienna | Austria

10,000





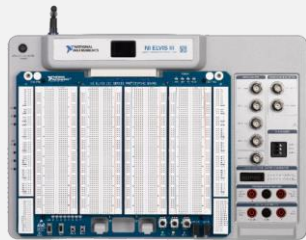
“The real drive and the race [to 5G] is because we’re running out of bandwidth in 4G. Customers are demanding more, and the operators are struggling to deliver it. Whoever gets there first is going to open up huge societal and economical benefits.”

—Andrew Nix, Dean of Faculty of Engineering, University of Bristol

# Using Our Platform to Educate Next-Generation Innovators

NI Service and Support		Ecosystem	
Technical Support and Training	Student Software Access	Programmability With Third-Party Software	
Installation and Startup Assistance	Curriculum Design Support	Student-Centric Courseware	Course Mapping and Integration

## Education-Targeted Solutions



NI ELVIS



Laboratory Experiment by  
Texas Instruments, Quanser, and Emona

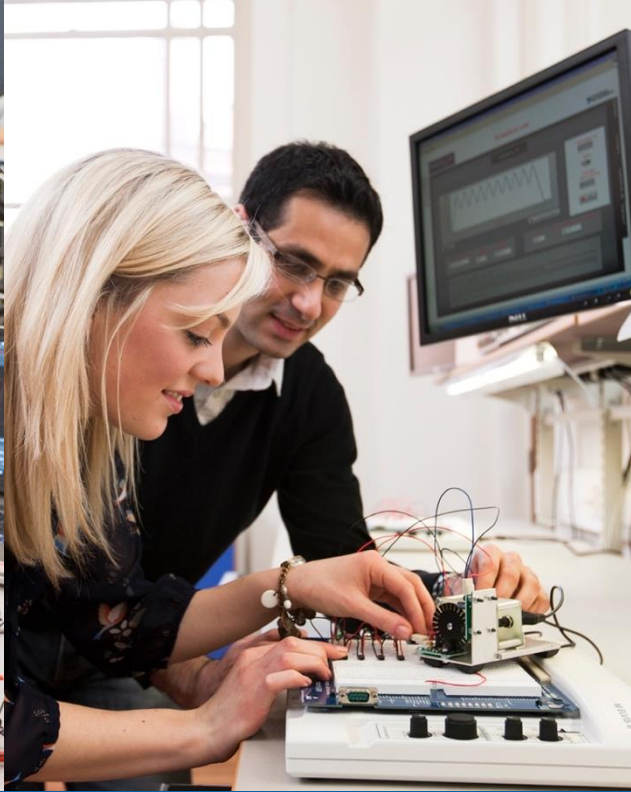


LabVIEW

Multisim

Software





16



67% to 98%



5 Years



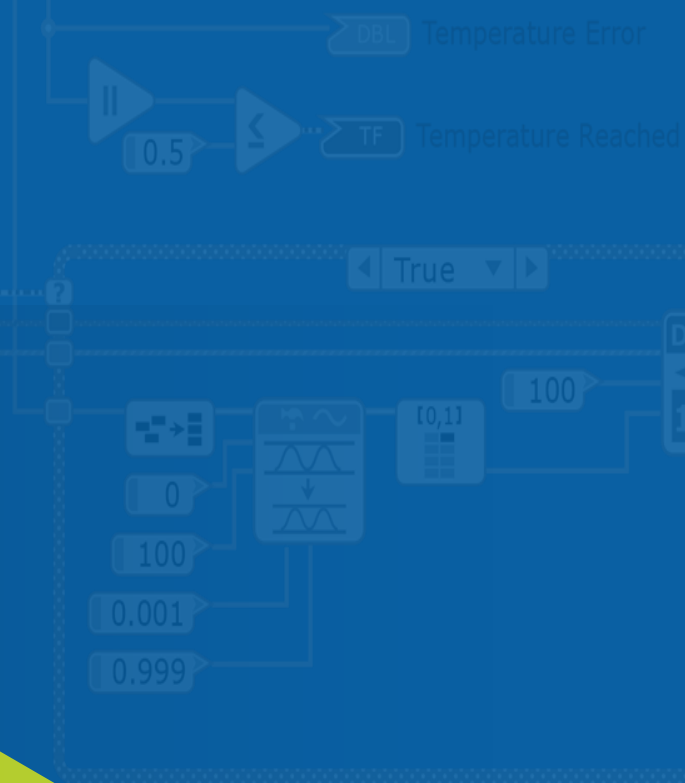


“We are now teaching undergraduate engineers hardware, electronics, and measurement skills that are transferable to future modules and into industry. Alongside this core objective, a dramatic transformation in module feedback occurred as well. The overall approval rating increased from 14 percent to 89 percent—undoubtedly, NI myDAQ was a significant influence.”

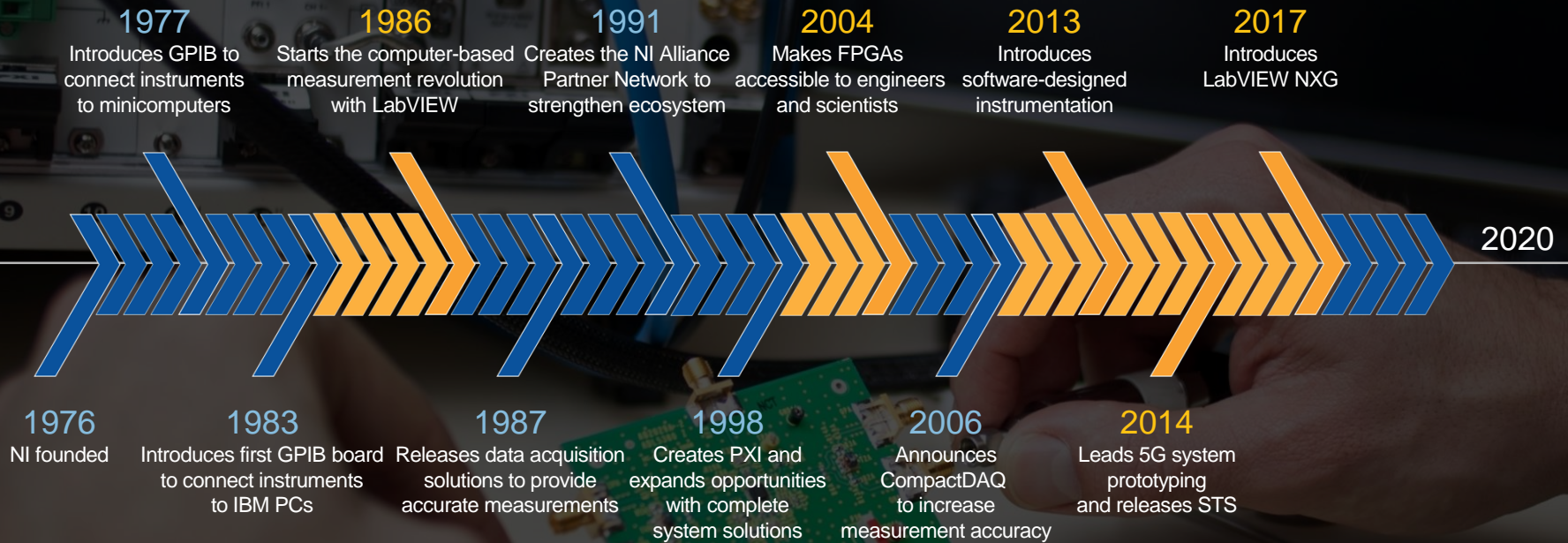
—Martin Levesley, School of Mechanical Engineering



Powerful Possibilities. Real Solutions.



# Accelerating Engineering for More Than Four Decades





OPERATIONS IN  
50+ COUNTRIES

**\$1.36**

BILLION  
IN 2018

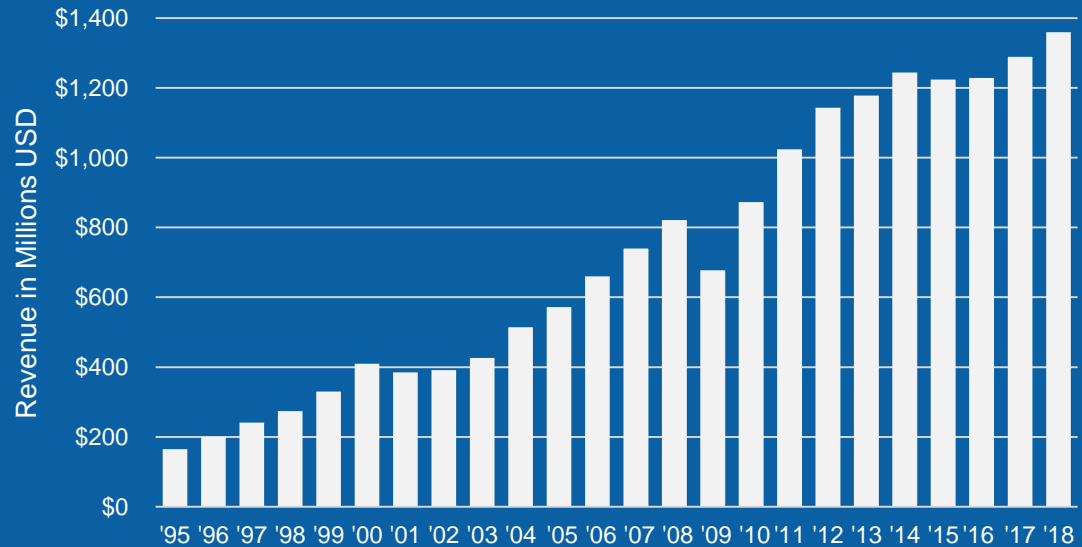


35,000+  
CUSTOMERS WORLDWIDE



16%  
INVESTMENT IN R&D

## Long-Term Track Record of Growth



# Software

## Empowering Hundreds of Thousands of Loyal Application Software Developers

### ▶ Continue **Software Leadership**

by combining user-defined IP development with LabVIEW NXG and unmatched integration with NI hardware and third-party software and hardware

### ▶ **Expand User Base**

with higher-level application software for targeted customer segments and significantly enhanced enterprise capabilities

### ▶ **Invest in Future Growth**

with an agile and flexible software platform to more rapidly deliver customer value from NI and our partner ecosystem



# Modular Instruments

Modular hardware is more than just a form factor. It's a system with which NI has a long engineering and innovation history.

- ▶ System-level capabilities such as timing and synchronization
- ▶ Highest-performance, optimized measurement IP
- ▶ System-level integration of NI and third-party hardware

