



ENGINEER  
NEXT

NIDays

The image features a background of diagonal stripes in various shades of blue, green, and orange. The text 'ENGINEER NEXT' is prominently displayed in white, with 'ENGINEER' in a smaller font above 'NEXT'. A yellow graphic element, resembling a stylized 'X' or a folded ribbon, is positioned between the two words. To the left of 'NEXT', the word 'NIDays' is enclosed in a white rectangular box, tilted to match the angle of the main text.

# Introducing NI ATE Core Configurations

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Applications Engineering Specialist

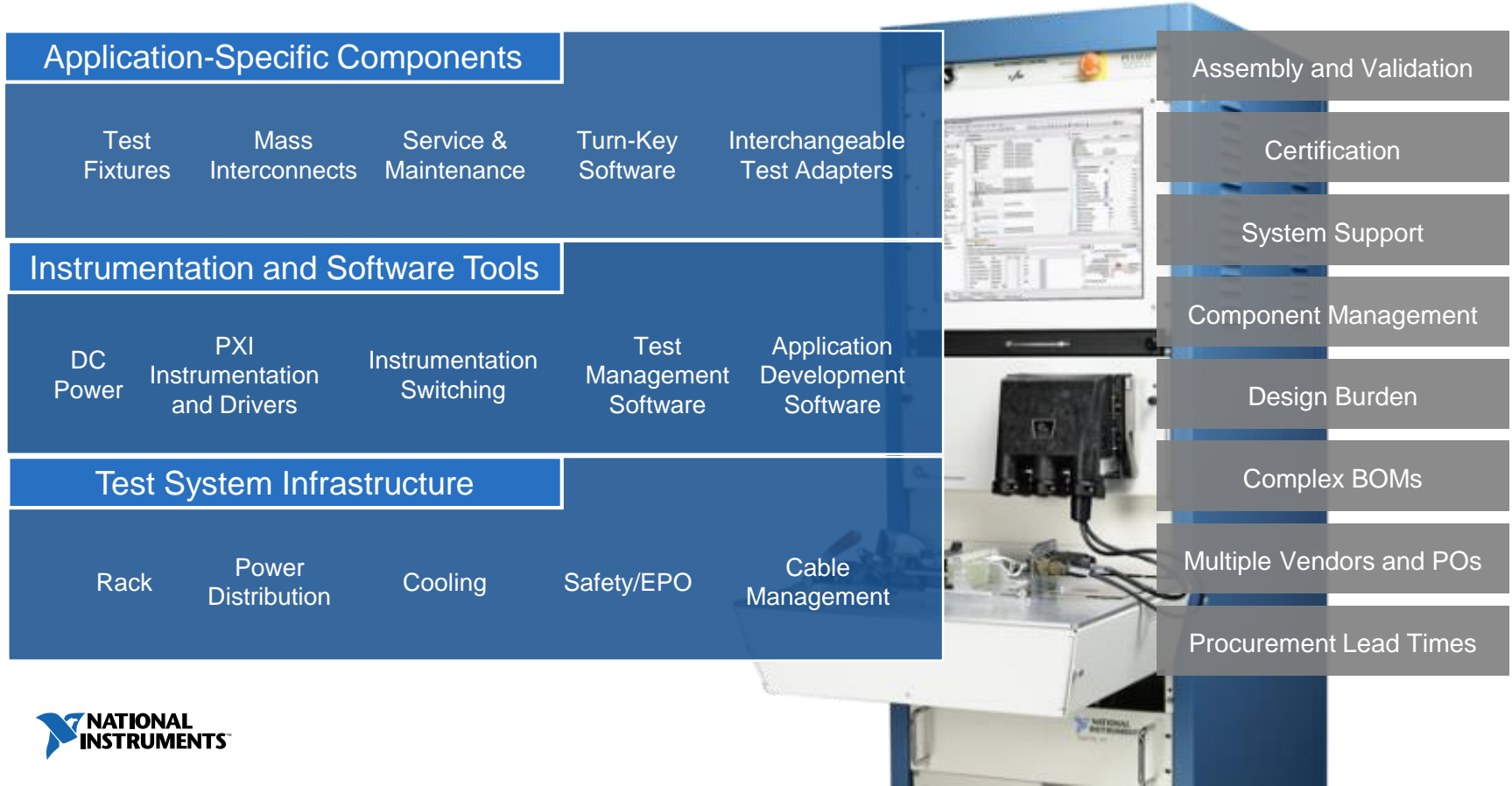
NI Switzerland

# Agenda

- ATE System Development: Then and Now
- Anatomy of an ATE Core Configuration
- Customizing Your ATE System
- System Completion and Deployment

# ATE System Development: Then and Now

# ATE Systems Require More Than Instrumentation





# NI ATE Core Configurations

Standardized Starting Point for ATE Systems

## Mechanical Infrastructure

19" Rack, Removable Doors, 3 Sets of Mounting Rails

## Power Infrastructure

Power Entry Panel, Power Distribution, Integrated Fans

## Safety Infrastructure

Emergency Power Off, Temperature Monitors



# Anatomy of an ATE Core Configuration



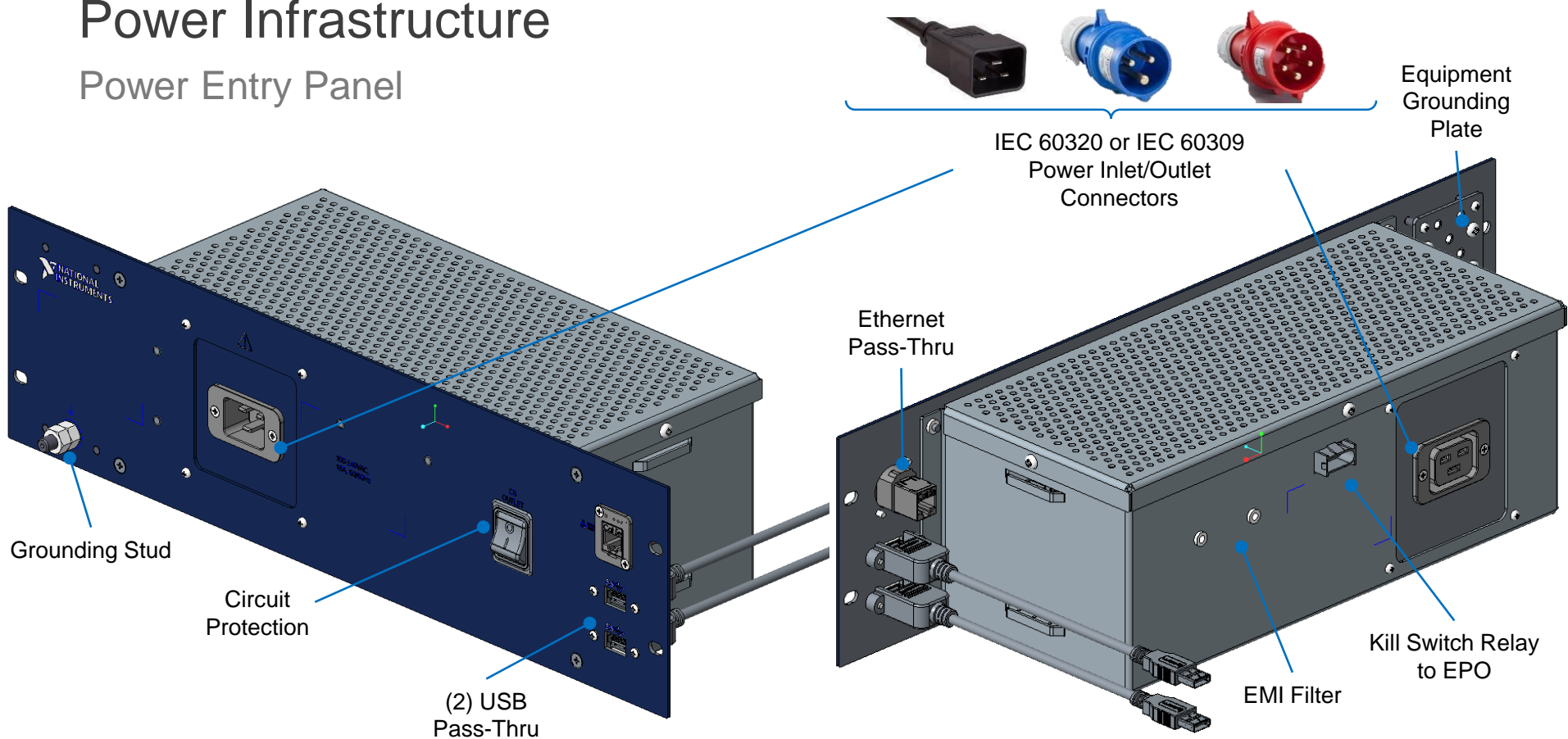
# Mechanical Infrastructure

- Rear Locking Door
- Removable Side Walls
- Top Fan Kit
- Three Sets of Mounting Rails
- Cable Management Tracks
- Brushed Cable Inlet
- Filtered Air Inlet Panel
- Full-Rotation Industrial Casters



# Power Infrastructure

## Power Entry Panel



# Power Infrastructure

## Power Distribution Units

- Power distribution units allocate AC and DC power to instrumentation and rack components
- Co-developed with Marway to meet the needs of ATE systems
- Available for for both single-phase and three-phase power systems
- Features include power sequencing, remote inhibit, and EPO connections

RMX-10050 Single-Phase PDU



RMX-10051 Three-Phase PDU



# Safety Infrastructure

## Emergency Power-Off and Thermal Shutdown

### On/Off Switch

*Enables/disables AC and DC power from PDU*

### Thermal Shutdown Switch

*Kills facility power to system at user-defined temperature*

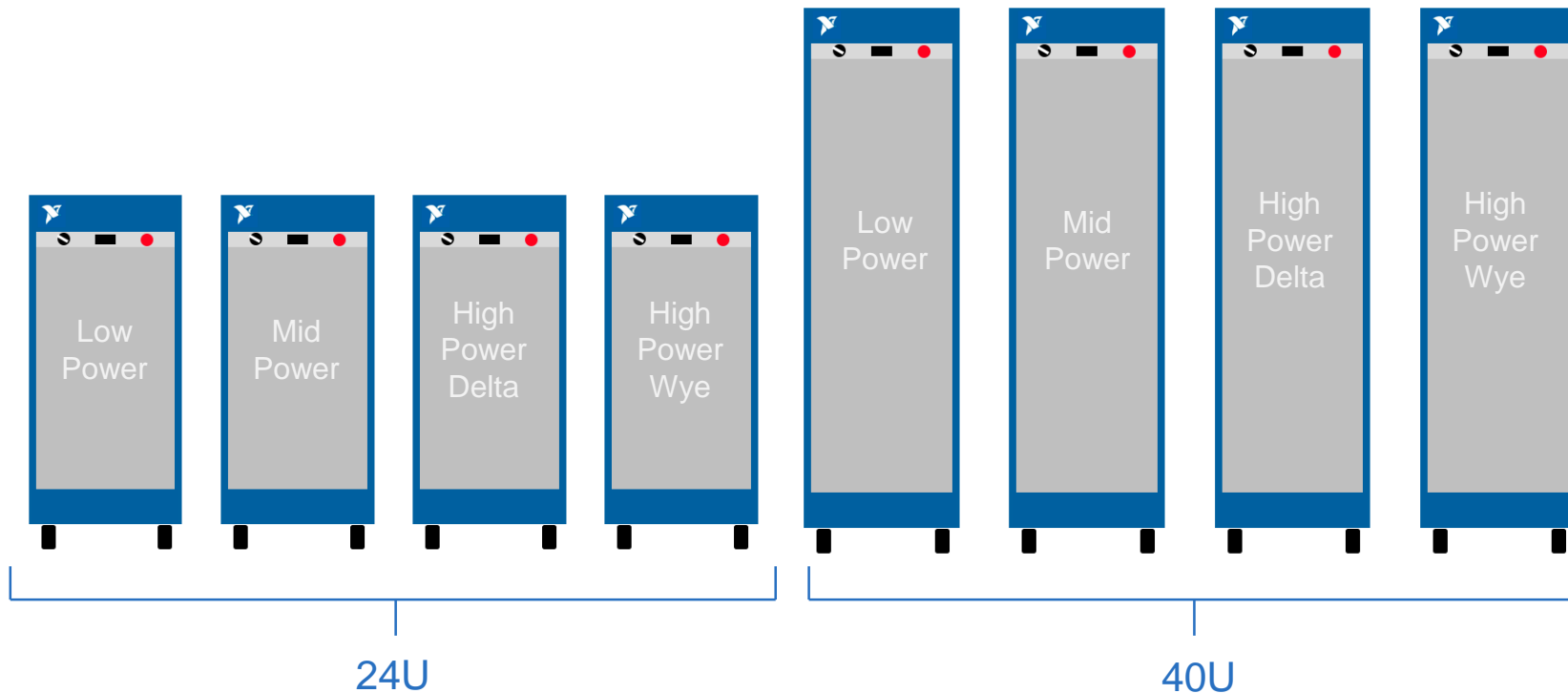
### Emergency Power-Off

*Kills facility power to the system when pressed*



# The Eight ATE Core Configurations

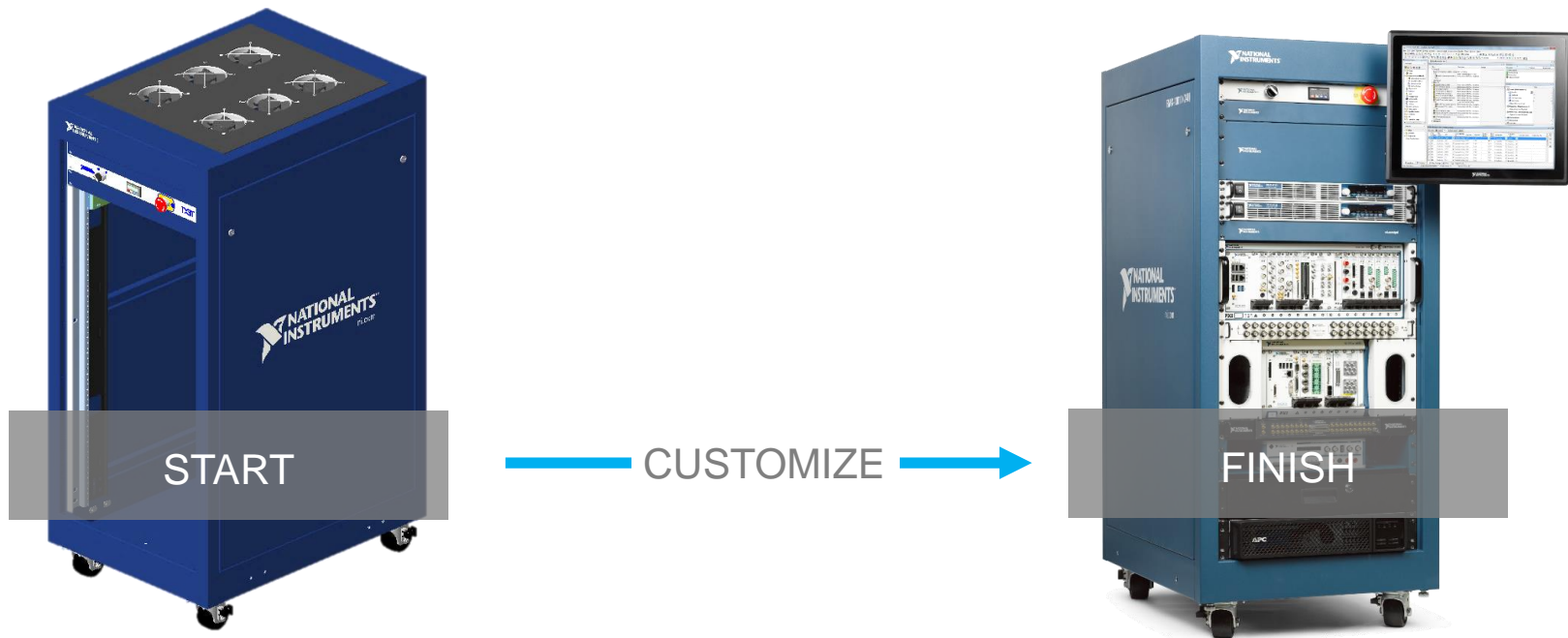
2 Height Options, 4 Power Profiles



# Customizing Your ATE System

# Standardized Core, Customized System

Outfit an ATE Core Configuration with Instrumentation and Accessories



# Customize with Instrumentation, Accessories, and Software

## INSTRUMENTATION



PXI



Switch Load and Signal Conditioning



CompactRIO

## APPLICATION HARDWARE



RAID Arrays



Programmable Power Supplies



Rackmount Controllers

## SYSTEM ACCESSORIES



MKD Units



Displays/HMIs



UPS



# Flexible Display Options



## 1U Flip-Up Drawer

*MKD-1117*

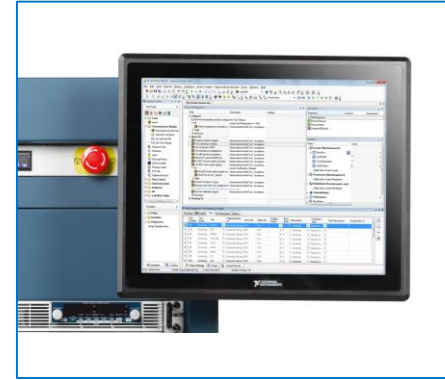
- 17" 1280 x 1024 LCD
- 105-key English keyboard and touchpad
- VGA, USB, PS/2 conn.



## Flush-Mounted Touch Screen

*TSM-1017*

- 17" touch screen LCD
- 1280 x 1024 resolution
- Flush 10U footprint



## Side-Mounted Screen

*TSM-1017 or 22" Monitor*

- 3U plate with mounting arm
- Options for 17" touch screen or 22" standard monitor

# Accelerated Configuration

- The NI PXI Advisor expedites the configuration of ATE systems
- Add optional accessories such as uninterruptible power supplies, displays, filler panels, and spare components
- Position and orient your instrumentation and hardware accessories
- Add ballasts for a balanced system
- Get a system report providing the weight, size, power, and thermal details of your configuration

Currently NI internal – public release in development



The screenshot shows the 'ATE Core Configuration' tab in the NI PXI Advisor. The interface includes a navigation bar with tabs for Controller, Modules, Chassis, ATE Core Configuration, Software, Services, and Summary. Below the navigation bar, there are two sub-tabs: '1. ATE Core Configuration' and '2. Customize Rack Layout'. The '2. Customize Rack Layout' sub-tab is active, and it contains a message: 'You can change the selections based on your requirements. Click 'Next' to proceed.' Below this message are 'Back' and 'Next' buttons. The main configuration area is titled 'ATE Rack Accessories and Options' and is divided into several sections: 'Chassis Placement', 'HMI Display', 'Mains Voltage', and 'Rack Accessories'. Each section has a 'Price Per Unit' column. The 'Chassis Placement' section includes 'Rack Location' (12U), 'Mounting Direction' (Front Rail), and 'Alignment' (Flush). The 'HMI Display' section includes 'HMI Display Type' (22" Flat Panel Monitor (3U, Adjustable Mounting Arm)) and 'Rack Location' (21U). The 'Mains Voltage' section includes 'Mains Voltage Option' (100-120V, 50/60Hz). The 'Rack Accessories' section includes a list of RU positions (RU24 to RU8) with their respective configurations. The 'RU8 Position' is currently selected, and its configuration is 'Empty Slot'.

ATE Rack Accessories and Options	
<b>Chassis Placement</b>	Price Per Unit
<input checked="" type="checkbox"/> Rack Location: 12U	
<input checked="" type="checkbox"/> Mounting Direction: Front Rail	
<input checked="" type="checkbox"/> Alignment: Flush	
<b>HMI Display</b>	Price Per Unit
<input checked="" type="checkbox"/> HMI Display Type: 22" Flat Panel Monitor (3U, Adjustable Mounting Arm)	\$ 465
<input checked="" type="checkbox"/> Rack Location: 21U	
<b>Mains Voltage</b>	Price Per Unit
<input checked="" type="checkbox"/> Mains Voltage Option: 100-120V, 50/60Hz	
<b>Rack Accessories</b>	Price Per Unit
<input checked="" type="checkbox"/> RU24 Position: EPO Panel and ENET Switch	
<input checked="" type="checkbox"/> RU23 Position: High Power Distribution Unit	
<input type="checkbox"/> RU22 Position: Occupied	
<input type="checkbox"/> RU21 Position: Occupied	
<input type="checkbox"/> RU20 Position: Occupied	
<input type="checkbox"/> RU19 Position: Occupied	
<input checked="" type="checkbox"/> RU18 Position: Empty Slot	
<input type="checkbox"/> RU17 Position: Empty Slot	
<input type="checkbox"/> RU16 Position: Empty Slot	
<input type="checkbox"/> RU15 Position: Empty Slot	
<input type="checkbox"/> RU14 Position: Empty Slot	
<input type="checkbox"/> RU13 Position: Keypad for airflow	
<input type="checkbox"/> RU12 Position: 1U Vented Shelf	
<input type="checkbox"/> RU11 Position: 1U Fan Kit	
<input type="checkbox"/> RU10 Position: Filler Panel	
<input type="checkbox"/> RU9 Position: 1U Keyboard Drawer	
<input type="checkbox"/> RU8 Position: 2U Locking Drawer	
<input checked="" type="checkbox"/> RU8 Position: Equipment Support "L" Brackets	
<input checked="" type="checkbox"/> RU8 Position: Empty Slot	

# Hardware Services

- Rack/ Accessories
- Rack Fan Kit
- Cables

Redundancy

Spares

*Customer  
managed  
spares*

NI Managed  
Spares

*Partner with NI on a  
tiered sparing model  
at a location of your  
choice*

Option in **Premium Plus  
Service Program**

Advanced  
Replacement

*Express shipment of a  
replacement product  
within one business  
day of the request*

Included in the **Premium  
Service Program** for HW

Standard  
Repair

*10 days for repair\*  
plus standard  
return shipping*

Included in the **Standard  
Service Program** for HW

minutes

hours

1 day

3-5 days

2-3 weeks

# System Completion and Deployment

# Streamlined Deployment

- Minimized lead times through standardization
- Free, expedited global shipping
- Reusable shipping crates for multiple shipments
- Serviceability with certified subassemblies and field-replaceable components



# NI Alliance Partner Network

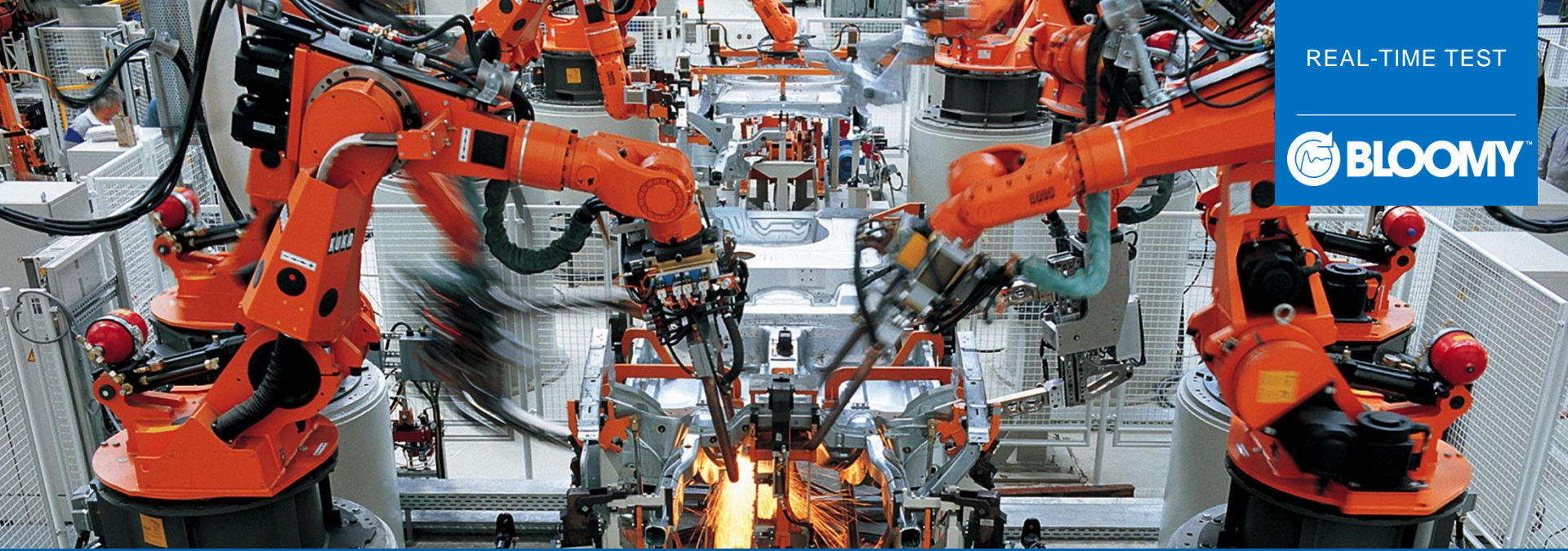
1000+ Alliance Partners

NI Offices  
NI Alliance Partners

Source: [ni.com/findapartner](https://ni.com/findapartner)







REAL-TIME TEST



“Through NI’s ATE Core Configurations, we were able to accelerate the design, procurement, and deployment phases of our project to arrive at a full solution much more quickly. The time and budget saved by starting with a standardized core infrastructure allowed us to focus on the design aspects unique to our application without reinventing the wheel.”

—Roy Walker, Business Unit Manager, Bloomy, Inc.  
[ni.com/innovations](http://ni.com/innovations)



# NI ATE Core Configurations



## Faster Development

Standardized starting point for test system design



## Simplified Procurement

Simplified BOM and vendor management



## Flexible Configuration

Customized instrumentation and hardware



## Streamlined Deployment

Expedited delivery and global certification



Learn more at  
[ni.com/ate-core-configurations](https://ni.com/ate-core-configurations)



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