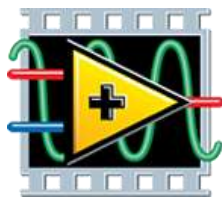


NIDays

WORLDWIDE GRAPHICAL SYSTEM DESIGN

CONFERENCE



NATIONAL INSTRUMENTS

LabVIEW™ 2012

Michael Neal

Senior Product Manager, LabVIEW

Graphical System Design

A Platform-Based Approach for Measurement and Control

Test



Monitor



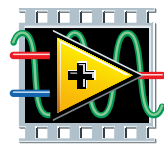
Embedded



Control



Cyber Physical



NATIONAL INSTRUMENTS

LabVIEW™



Desktops and
PC-Based DAQ



PXI and Modular
Instruments



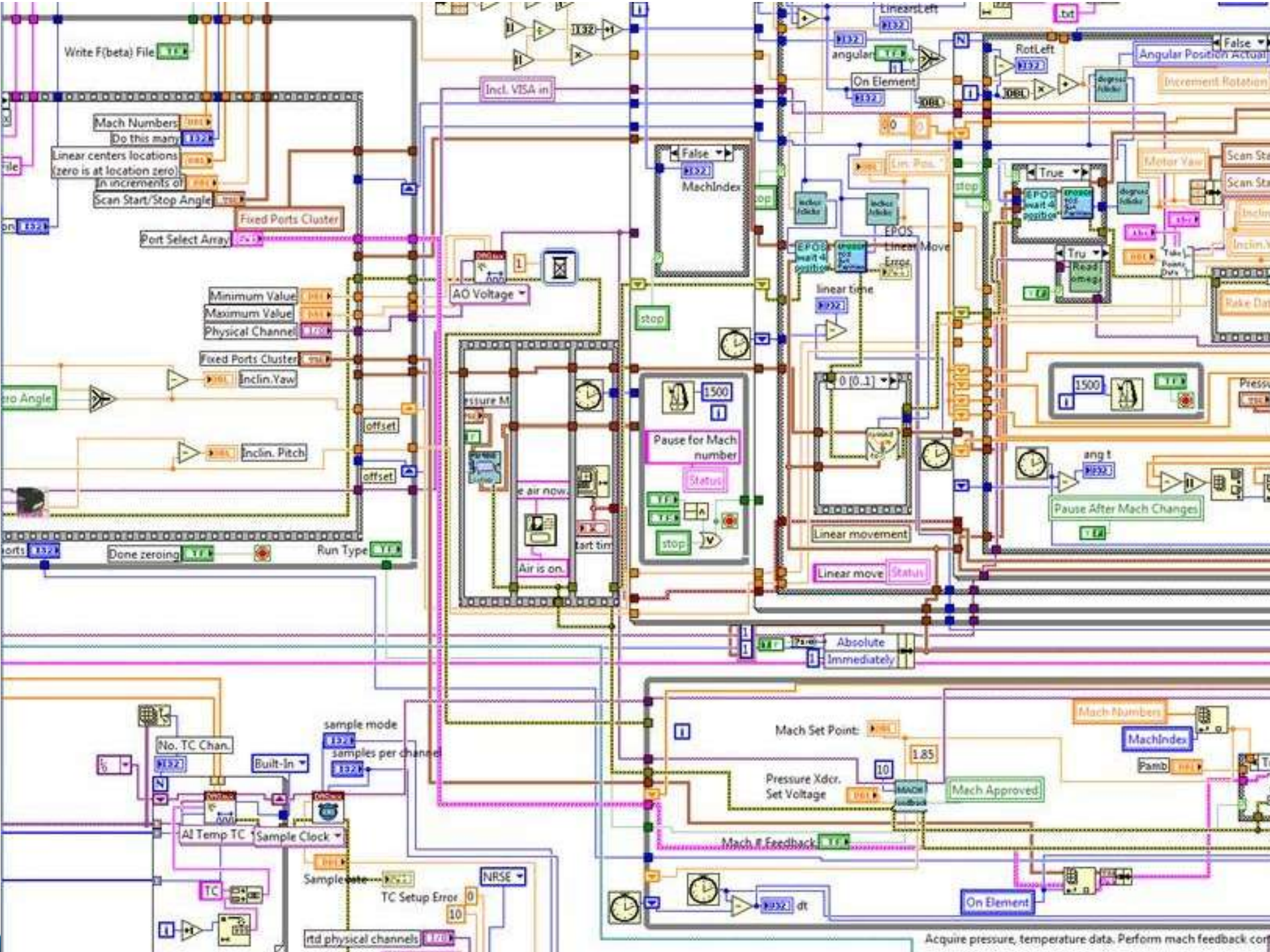
RIO and Custom
Designs

GPB
IEEE-488

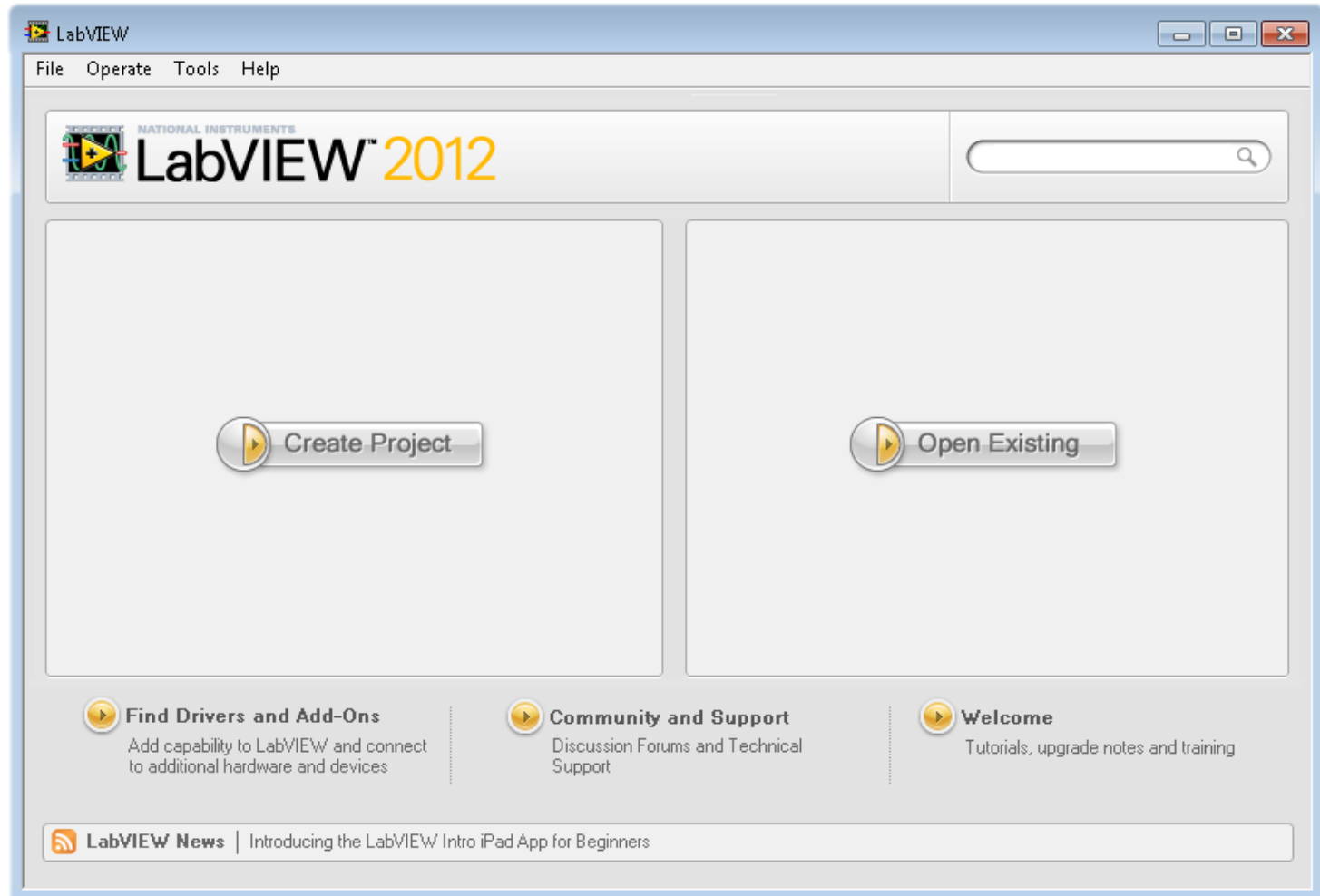
ETHERNET

HI-SPEED
CERTIFIED
USB

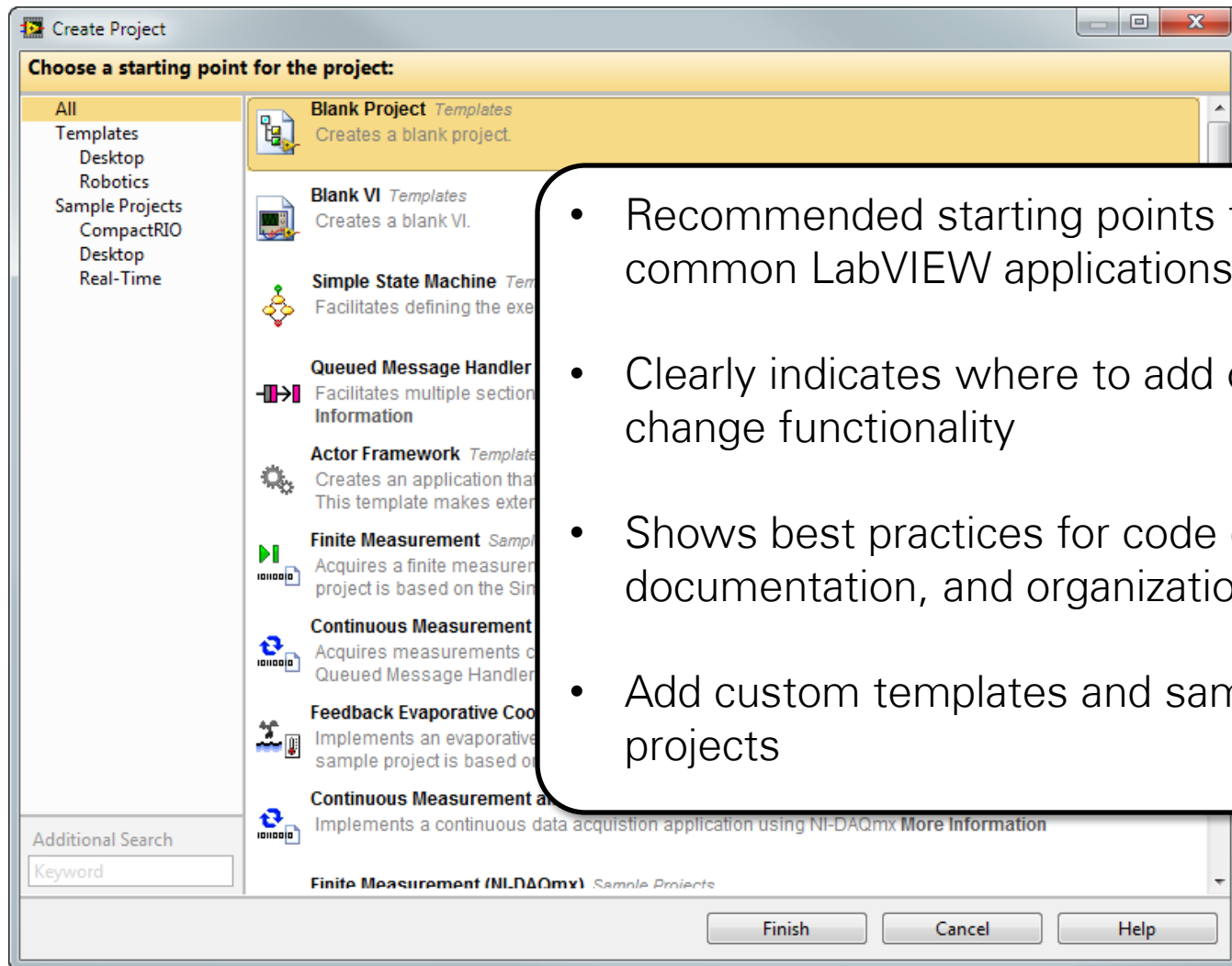
Open Connectivity
With Third-Party I/O



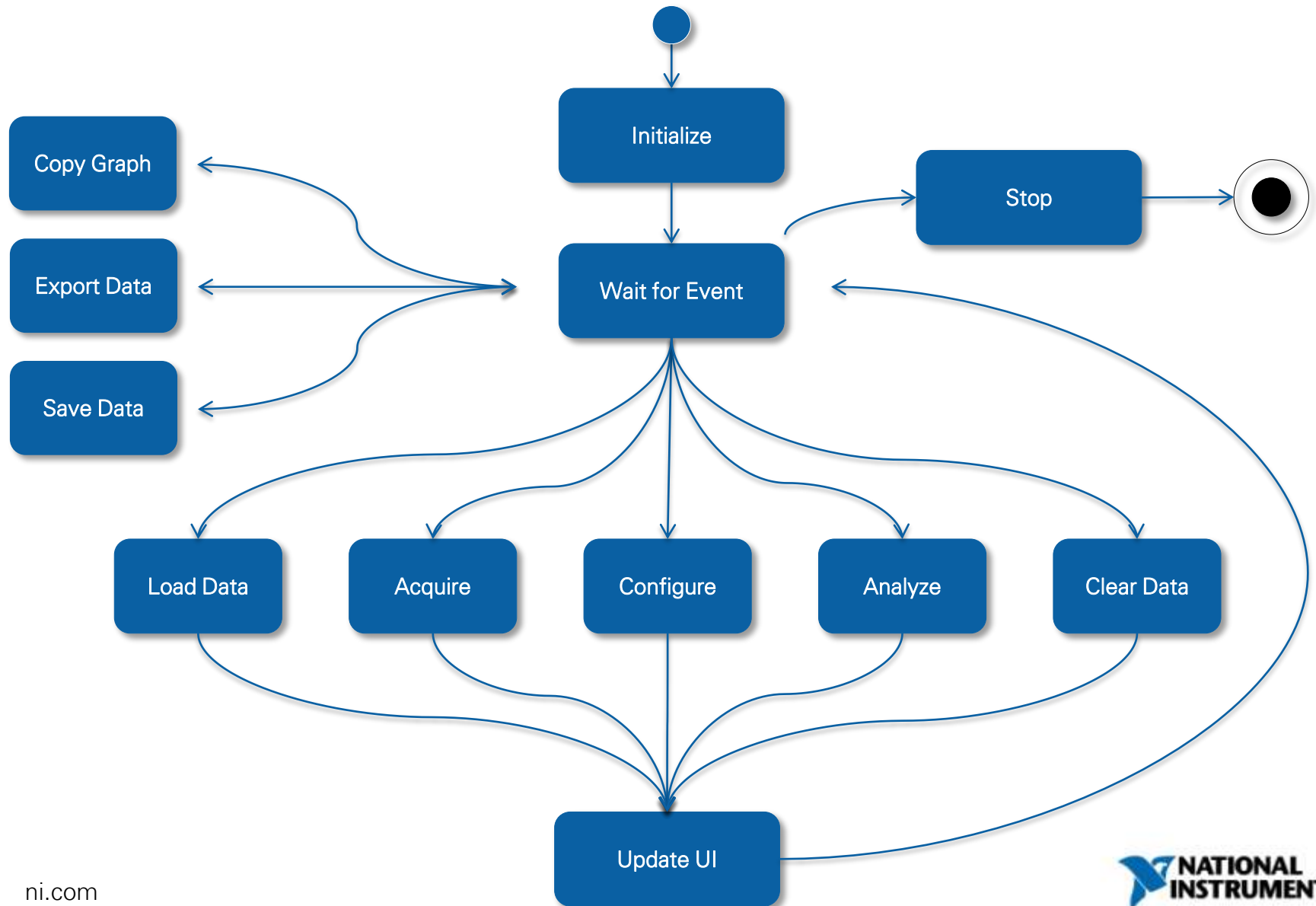
LabVIEW 2012 Getting Started Window



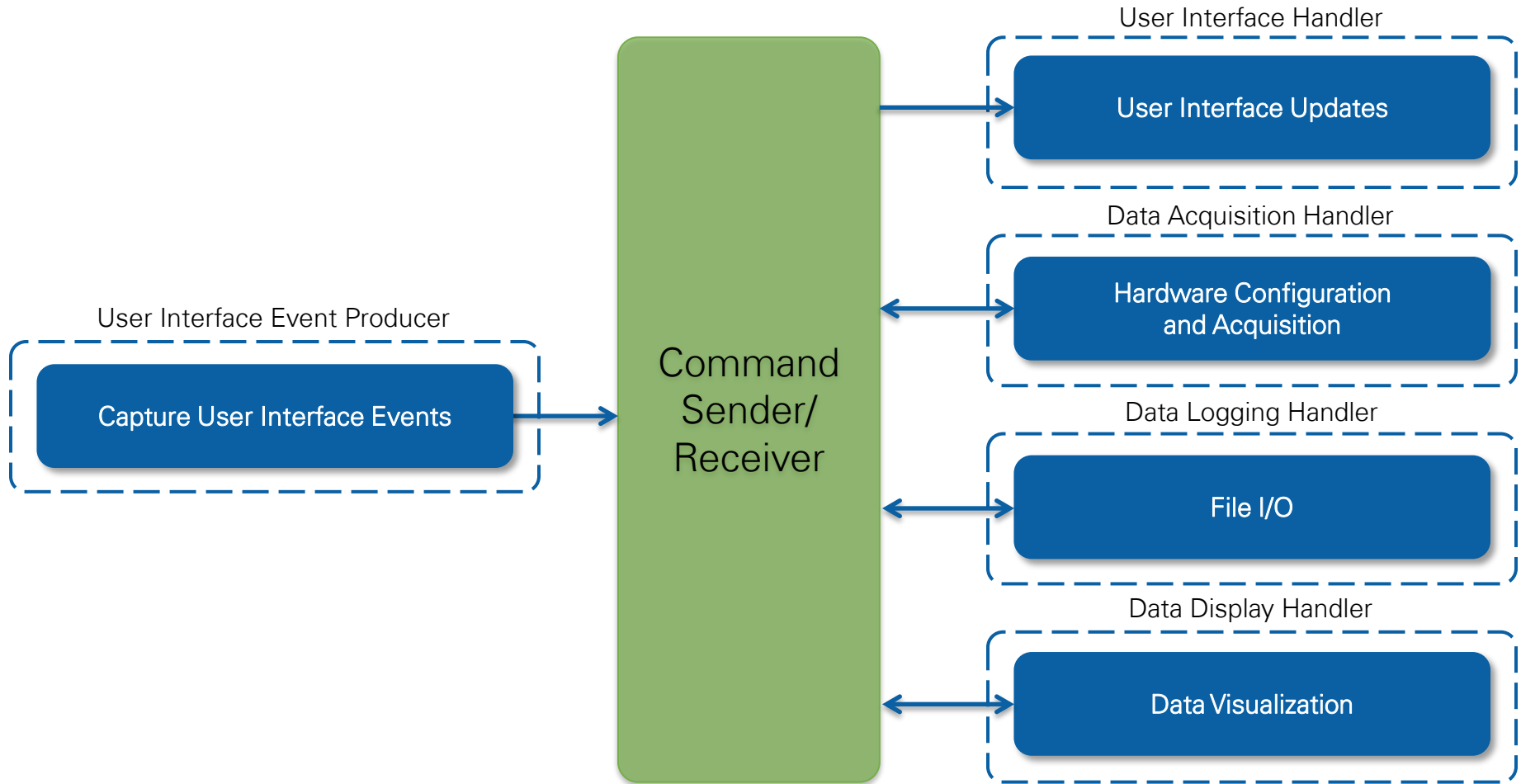
Introducing Templates and Sample Projects



Finite Measurement Sample Project State Diagram

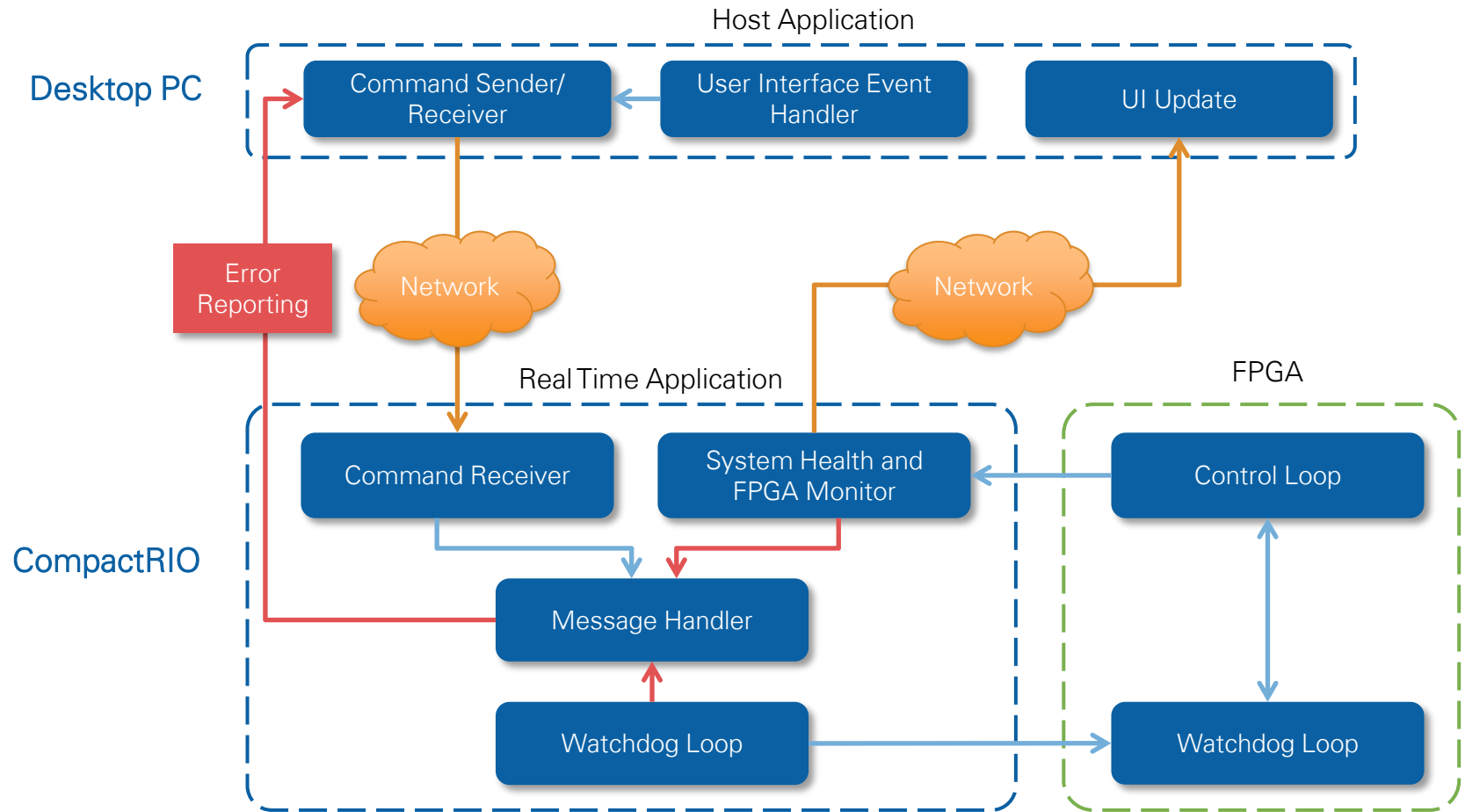


LabVIEW Continuous Measurement Architecture



Provides a **ready-to-run** starting point using a **scalable** architecture

LabVIEW FPGA Control Sample Project

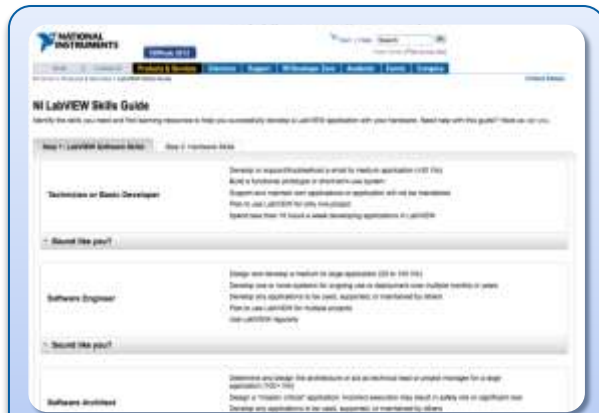


Provides a recommended starting point using a scalable architecture

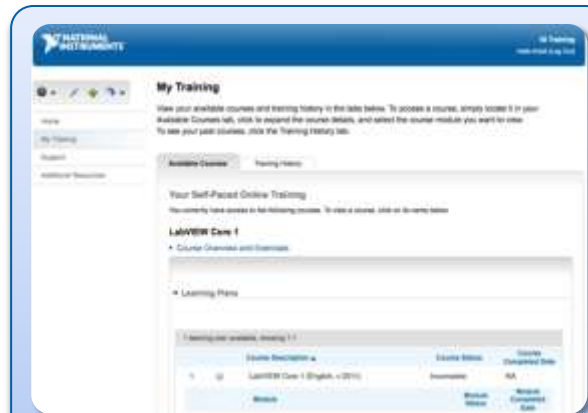
Training and Certification

Joeri Wingelinckx
Services Manager

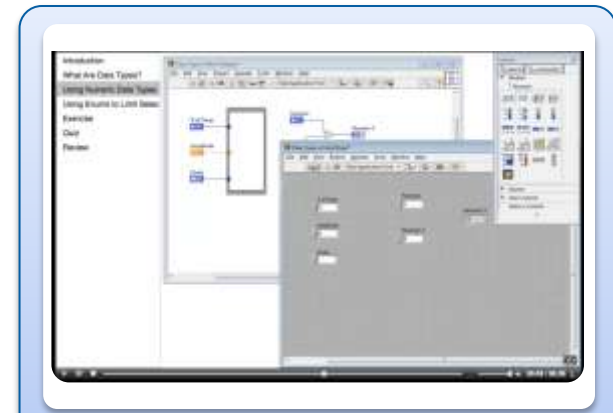
New Learning Resources



New LabVIEW Skills Guide

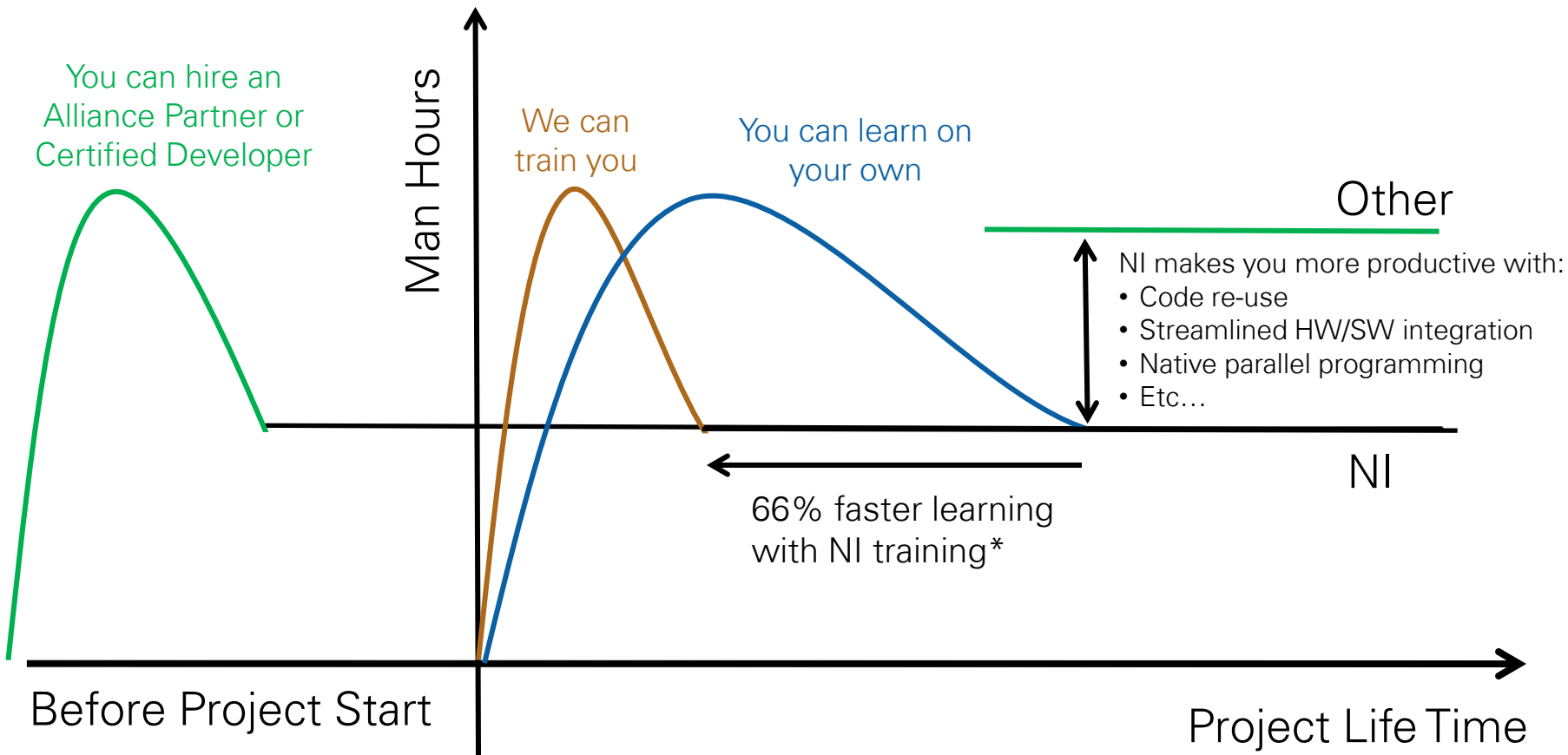


New Self-Paced Online Training



>25 Hours of Video Learning Content

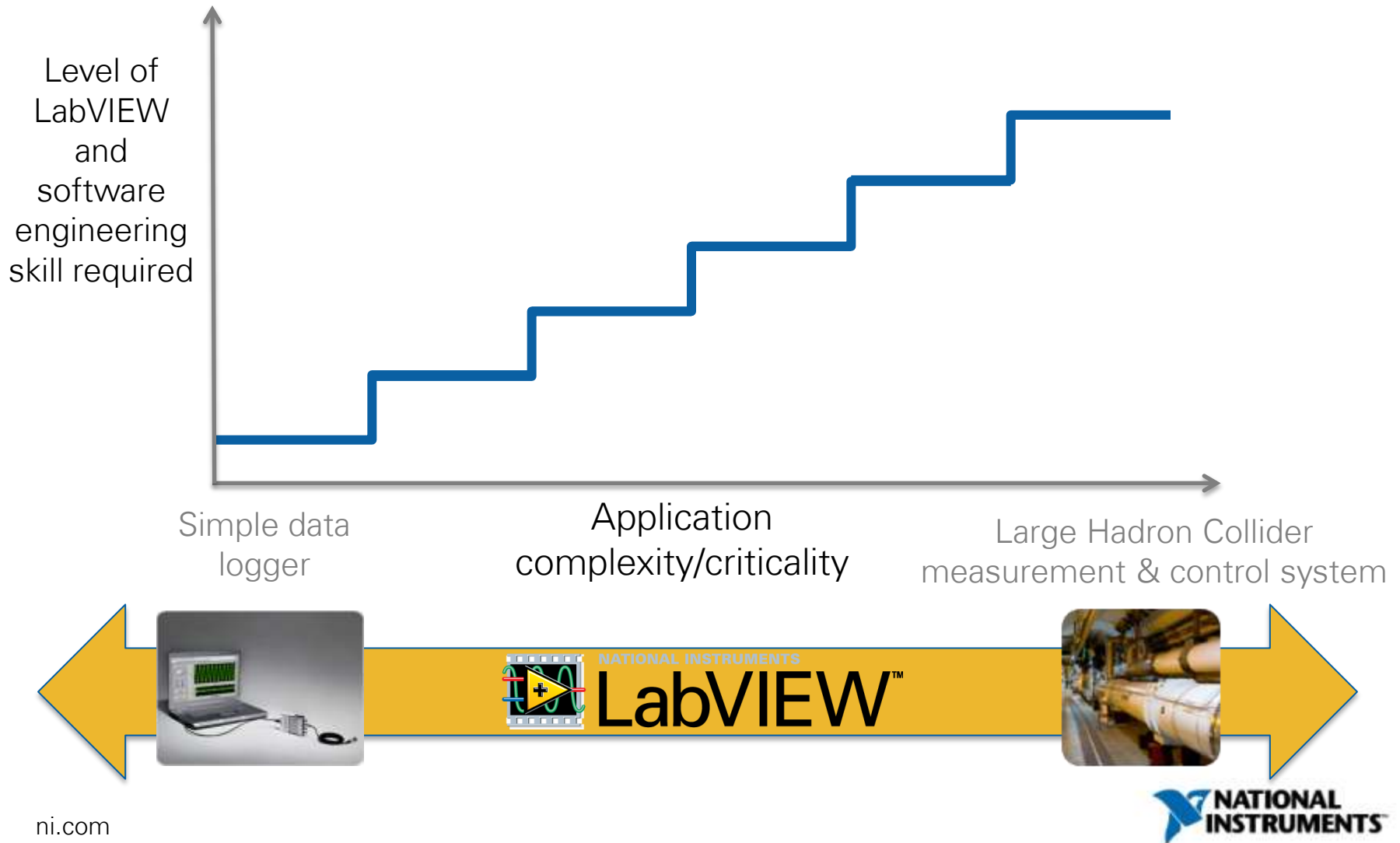
NI LabVIEW Will Make You More Productive ...but There is a Learning Curve



*Source: NI worldwide training customer survey, 2009, n = 640

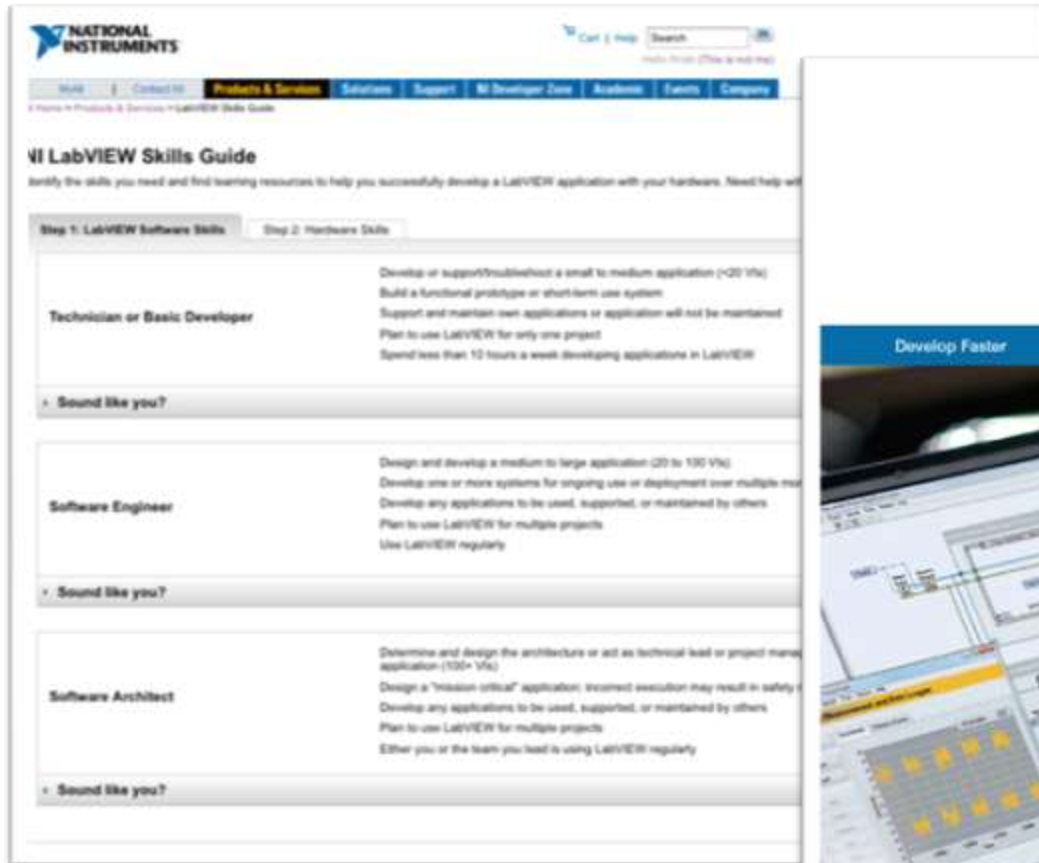
Harness the Power of LabVIEW

*In the hands of a capable developer,
LabVIEW offers virtually unlimited possibilities*



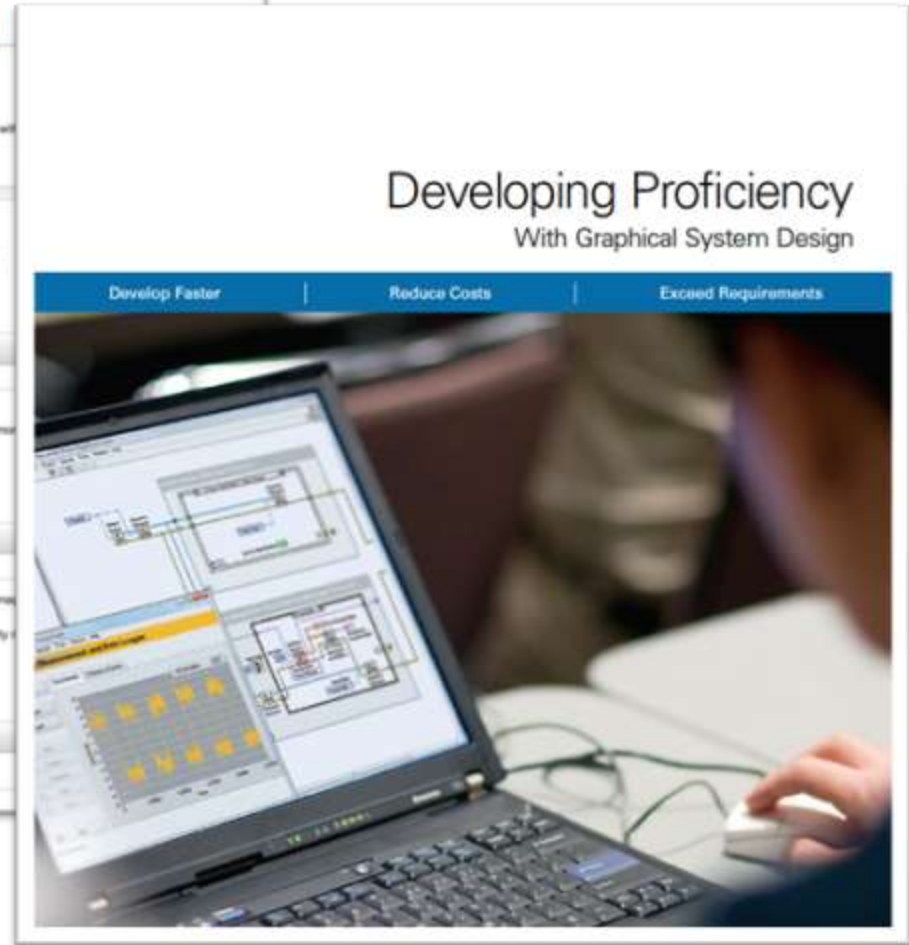
What Skills Do You Need to Maximize Success?

NI Offers Tools to Help You Find Out



Online LabVIEW Skills Guide

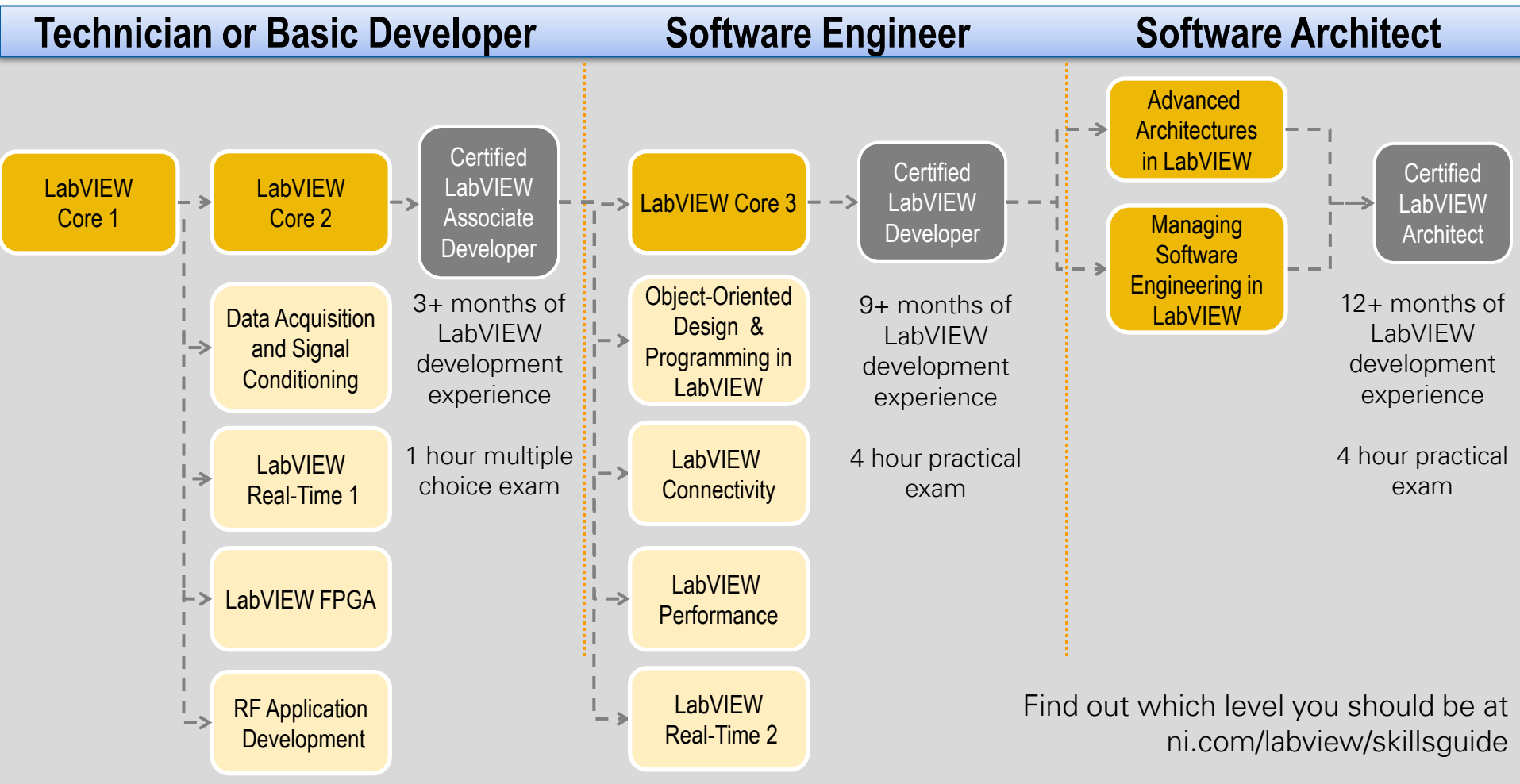
ni.com



Printed brochure

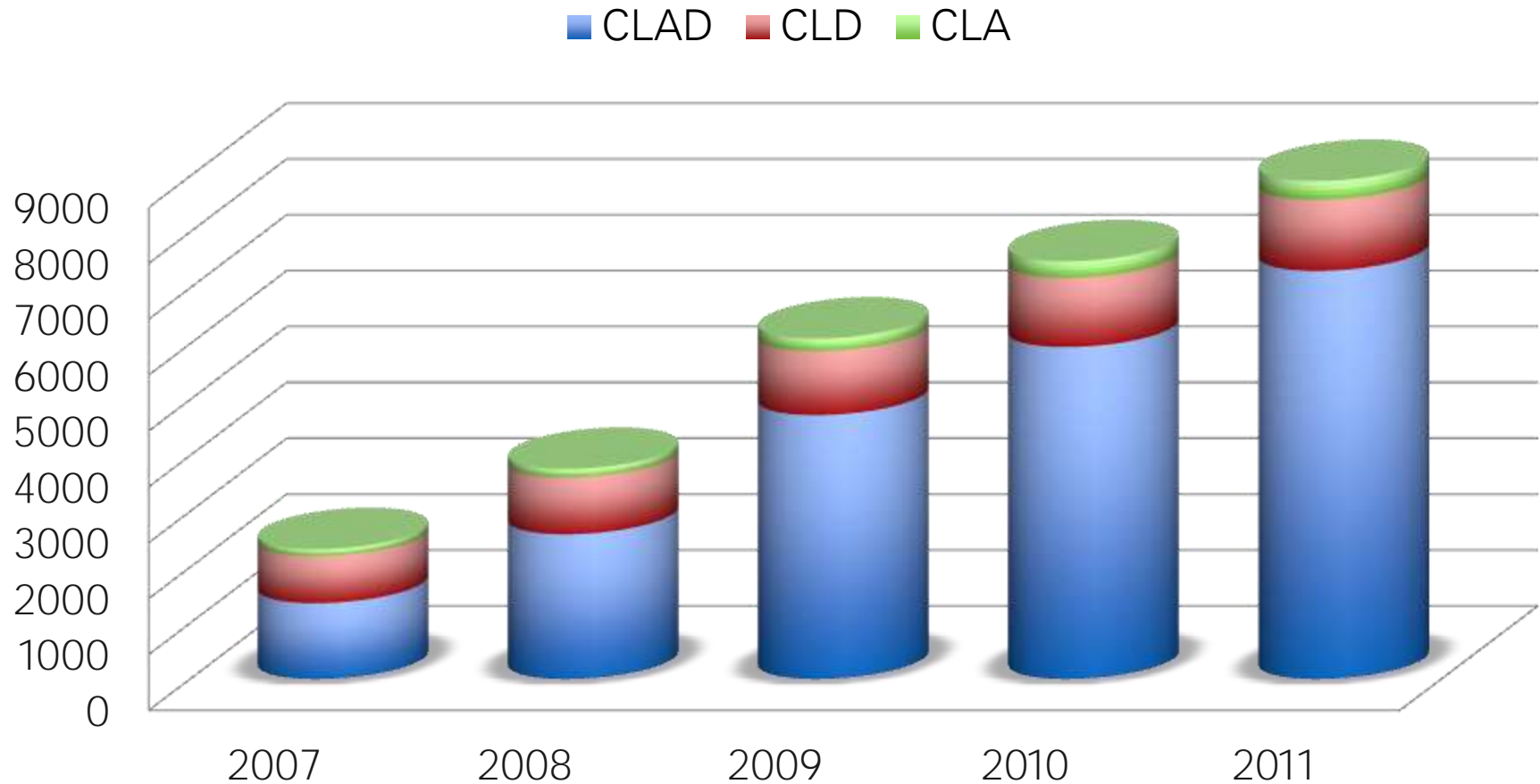


NI LabVIEW Training and Certification Path



Recommended course Optional course Optional certification

Certified LabVIEW Professionals



Self-Paced Online Training

24/7 access to LabVIEW Multimedia Training
Included with your Software Service Program (SSP)



Self-Paced Online Training – What is it?

- Online Multimedia Training
 - Access 24/7, English (subtitled)
 - Currently: LabVIEW Core 1-3
 - Each course split into 5-15 minute modules
- Covers same topics as instructor led classes
 - Concepts, Exercises, Quizzes
- Included with SSP (1 year full access)
 - Can be purchased separately (6 months or 1 year)
- Ideal for a quick refresher on technical topics or to prepare for an upcoming certification exam.



Training Formats

| Training Formats | Good | | Better | Best | |
|--|------------|--------|----------------|----------|--------|
| | Self-Paced | | Instructor-Led | | |
| | Course Kit | Online | Online | Regional | Onsite |
| Certified Instructor who can answer questions | | | ✓ | ✓ | ✓ |
| Access to relevant hardware | | | ✓ | ✓ | ✓ |
| Classroom setting | | | | ✓ | ✓ |
| Interact with other students | | | | ✓ | ✓ |
| Personalized training solutions | | | | | ✓ |
| Training needs assessments | | | | | ✓ ** |
| Avoid travel expenses | ✓ | ✓ | ✓ | | ✓ |
| Receive printed manual that accompanies the course (manuals may differ in format and content detail by course) | ✓ | | ✓ | ✓ | ✓ |
| Designed for self-paced learning | | ✓ | | | |
| Multimedia training platform (video, exercises, etc.) | | ✓ | ✓ * | | |
| Concept review quizzes | ✓ | ✓ | ✓ | ✓ | ✓ |
| Full day class(8 hours per day) | | | | ✓ | ✓ |
| Half day class (4 hours per day) | | | ✓ | | |
| Learn at your own pace, on your own schedule (24 hours / 7 days) | ✓ | ✓ | | | |

* Recorded video of the class can be reviewed

** Optional service available for team of engineers

LabVIEW User Groups

<http://www.ni.com/usergroups>

The screenshot shows the National Instruments LabVIEW User Groups website. The header includes the National Instruments logo and navigation links. The main content area is titled "LabVIEW User Groups" and features a map of Europe with blue location pins indicating various user groups. A sidebar on the left provides instructions on how to use the map and links to resources for starting or joining a user group. The bottom of the page includes a footer with copyright information and a "jive" logo.

Local User Groups:

- *LVUG.nl – Arnhem*
- *User Group at TU Delft*

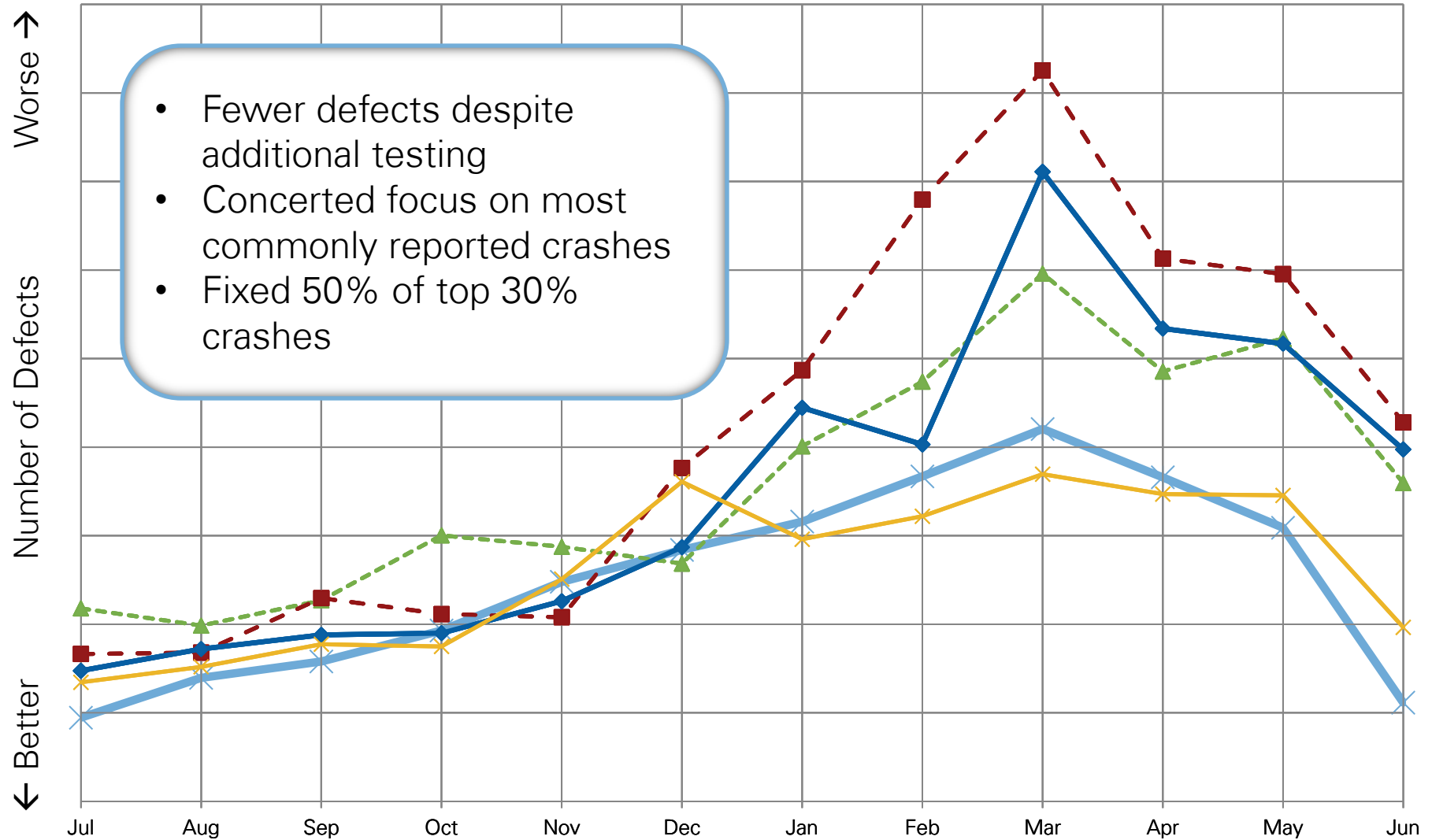


NATIONAL INSTRUMENTS

LabVIEW™

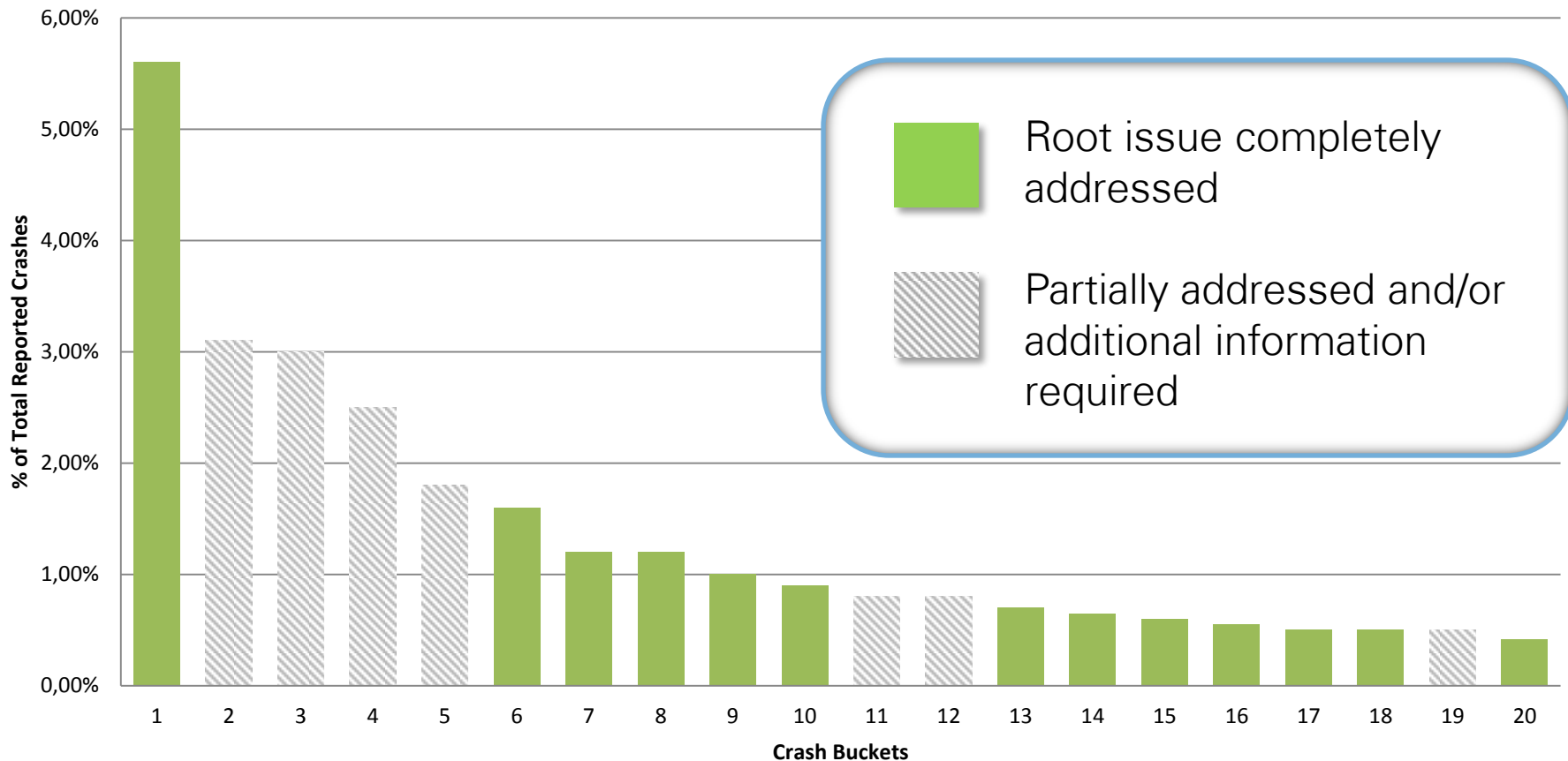
Get a demo of the Self-Paced
Identify the skills you need
LabVIEW Proficiency Booth

Pre-Release LabVIEW Defect Flow



Continuous Investment In Stability

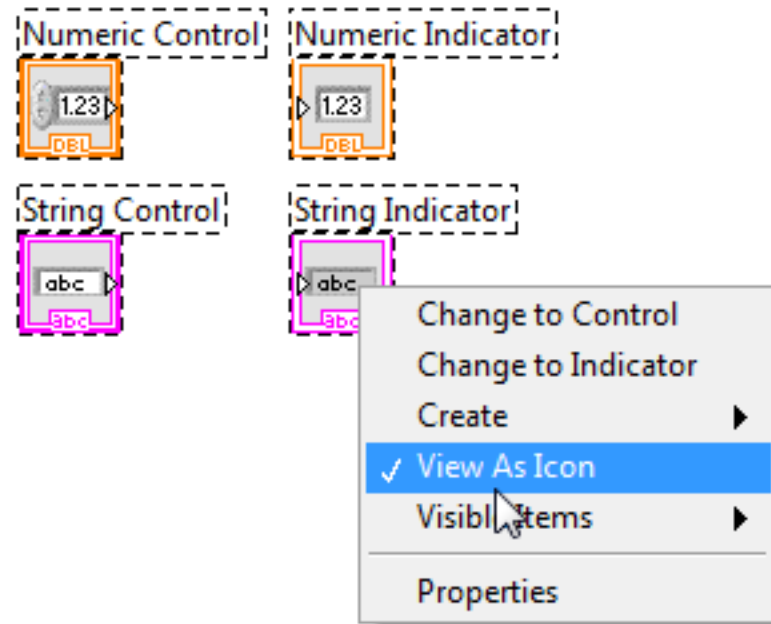
Top 20 LV 2011 NIER Reported Crashes (30% of all reported crashes)



Over half of the top reported crashes were fixed in 2012

Idea Exchange Features

- Pop-up Menus for Multiple Selected Objects

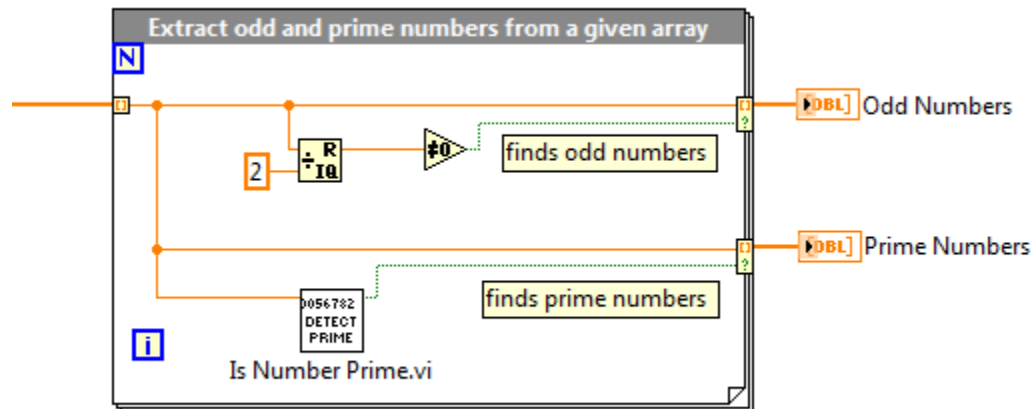


Save the time required to manually apply settings to multiple items

Idea Exchange Features

- Conditional Loop Tunnel

Simplified approach



Simplifies common coding practices for
conditionally building arrays

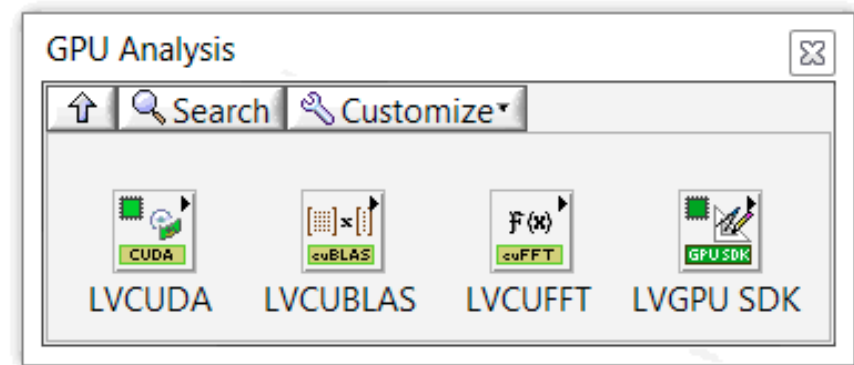
12 Productivity Enhancements From the LabVIEW Idea Exchange

- Subdiagram Labels
- Enumerated dialog enhancements
- Removing selected broken wires
- Icon Editor API
- Contextual Help for Data Coercion
- Event structure in Base version
- Conditionally writing values to loop output tunnels
- Concatenate indexing
- Right-click menu for multiple items
- Long file path truncation
- Separate label locations for controls and indicators
- String editing dialog box

LabVIEW GPU Analysis Toolkit

Support for NVIDIA® CUDA™ GPUs

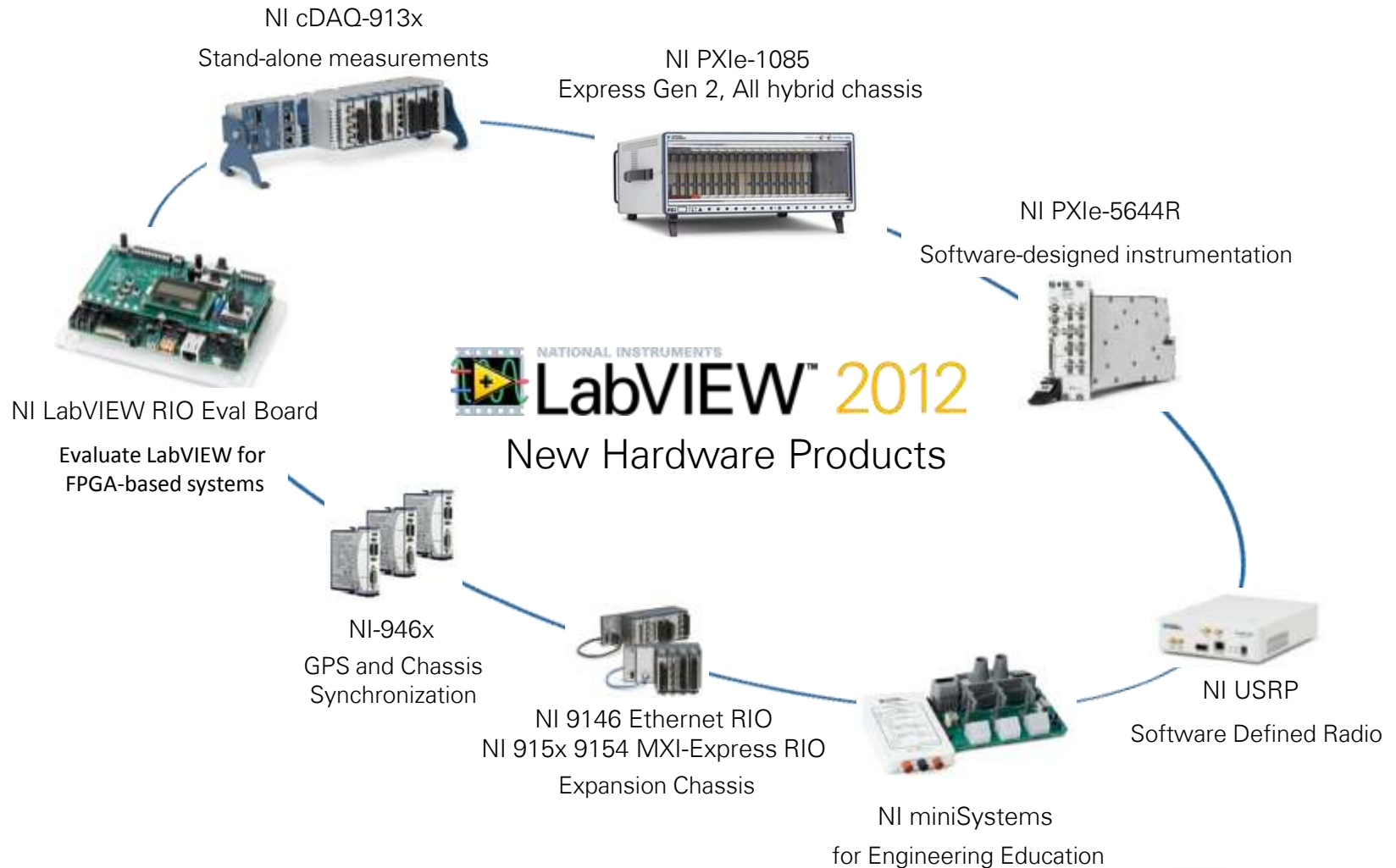
- Communicate with NVIDIA® CUDA™ GPUs from LabVIEW applications
- Quickly prototype GPU algorithms using cuBLAS and cuFFT functions wrapped in LabVIEW
- Access documentation on calling custom GPU code from LabVIEW
- Select GPU devices and manage resources using CUDA Runtime and Driver APIs



Fixed-Point



Unrivaled Integration with the Latest Technology



Possible LabVIEW 2013 Features

- Advanced block diagram commenting
- New Sample Projects
- Shipping example overhaul
- Automatic detection of drivers to include in installers
- Clearer Application Builder error reporting
- Improved Microsoft Excel integration
- Simplified creation and deployment of web services
- LabVIEW FPGA productivity enhancements
- Security enhancements on embedded targets

Use Cases for LabVIEW and Mobile Devices



Monitor and Control Measurement Systems



View Measurement Data Stored in the Cloud



Configure and Debug Hardware Devices



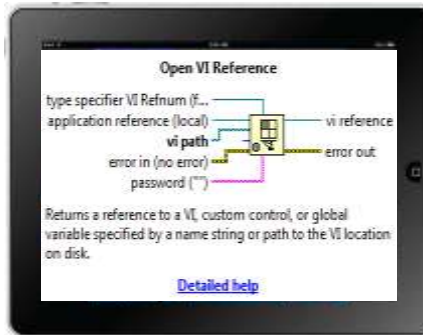
View, Run, and Edit LabVIEW VIs



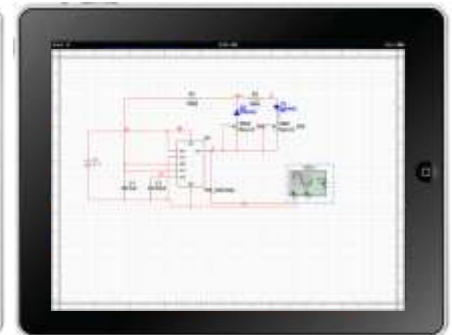
Learn STEM Concepts



Make Measurements in the Field

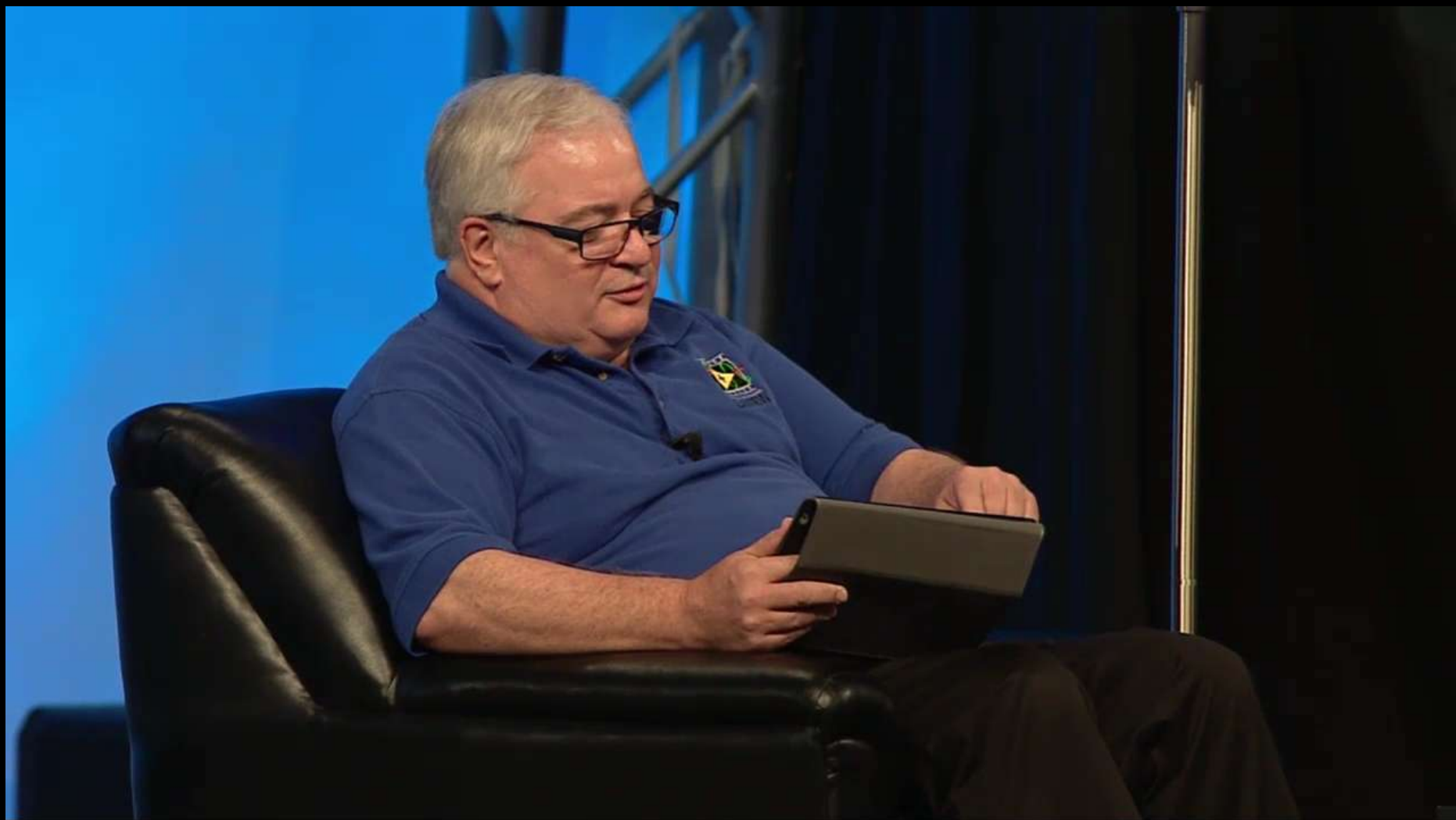


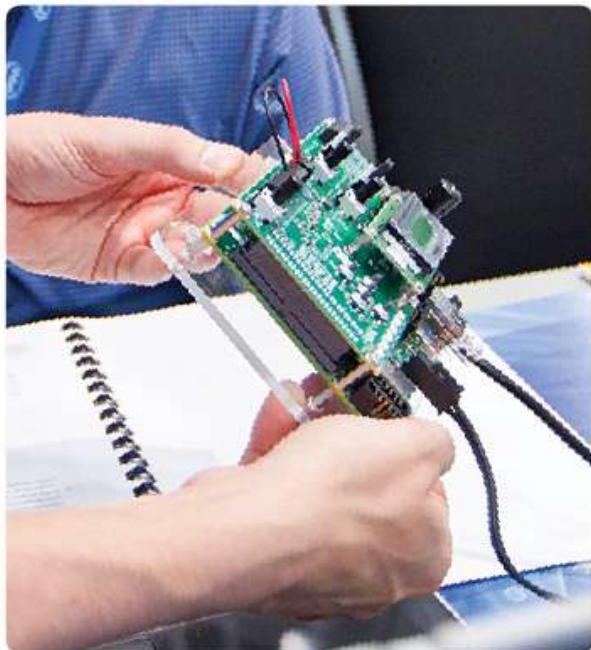
Aid LabVIEW Usage on the Desktop



View, Edit, and Simulate Circuits







NI Build Your Own Embedded System Workshop

December 11th | Brussels

Ask our staff for more information



What were your primary goals for attending this event?

| | |
|--|--|
| <input type="checkbox"/> Get an introduction in LabVIEW | <input type="checkbox"/> Networking with the local LabVIEW community |
| <input type="checkbox"/> Further increase my knowledge of LabVIEW | <input type="checkbox"/> Discuss project with NI and/or exhibitors |
| <input type="checkbox"/> Get an update about recent developments from NI | <input type="checkbox"/> Other, |

What did you expect from NIDays – The LabVIEW Conference before you came here? _____

Did NIDays meet your expectations? ☐ Yes ☐ No, because _____

Which session(s) was most interesting for you? _____

Was there a session that did not meet your expectations? _____

What presentation topics would you like to see next event? _____

Which features would you like to see in a future version of LabVIEW? _____

Would you recommend NIDays to others? ☐ No ☐ Yes, because _____

Would you be interested in presenting during next year's event? ☐ No ☐ Yes

Are you interested in learning more about:

- ☐ Additional LabVIEW training
- ☐ LabVIEW certification (Certified LabVIEW Associate Developer / Certified LabVIEW Developer / Certified LabVIEW Architect)
- ☐ Information about the following products: _____

Enjoy your day!

