



Welcome to NIDays

THE LabVIEW Conference

Jack Bering

Sales Manager NI Denmark

Thank you!



FLEXSTAND Operator Interface



FLEXSTAND SPC Tool



FLEXSTAND Test Framework



FLEXSTAND Logger



One application,
multiple targets

Modules

The hardware connected

Plug-ins

The I/O boards



USB



CompactDAQ
Modular USB



PXI / PXIe



RealTime

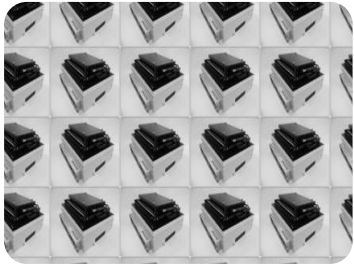


Other
HW/protocols

Modbus-RTU
Ethernet
CAN

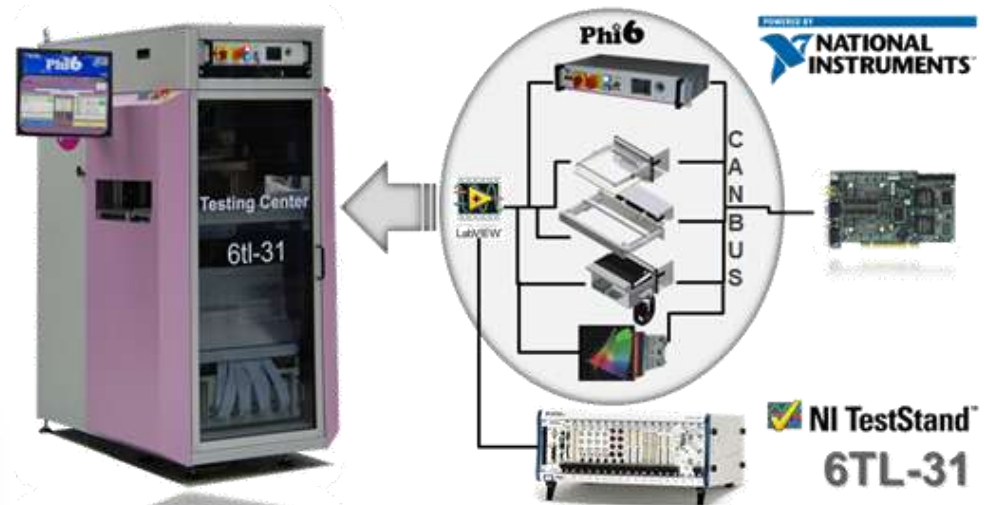


Columbia, Tools for Electronics Test.



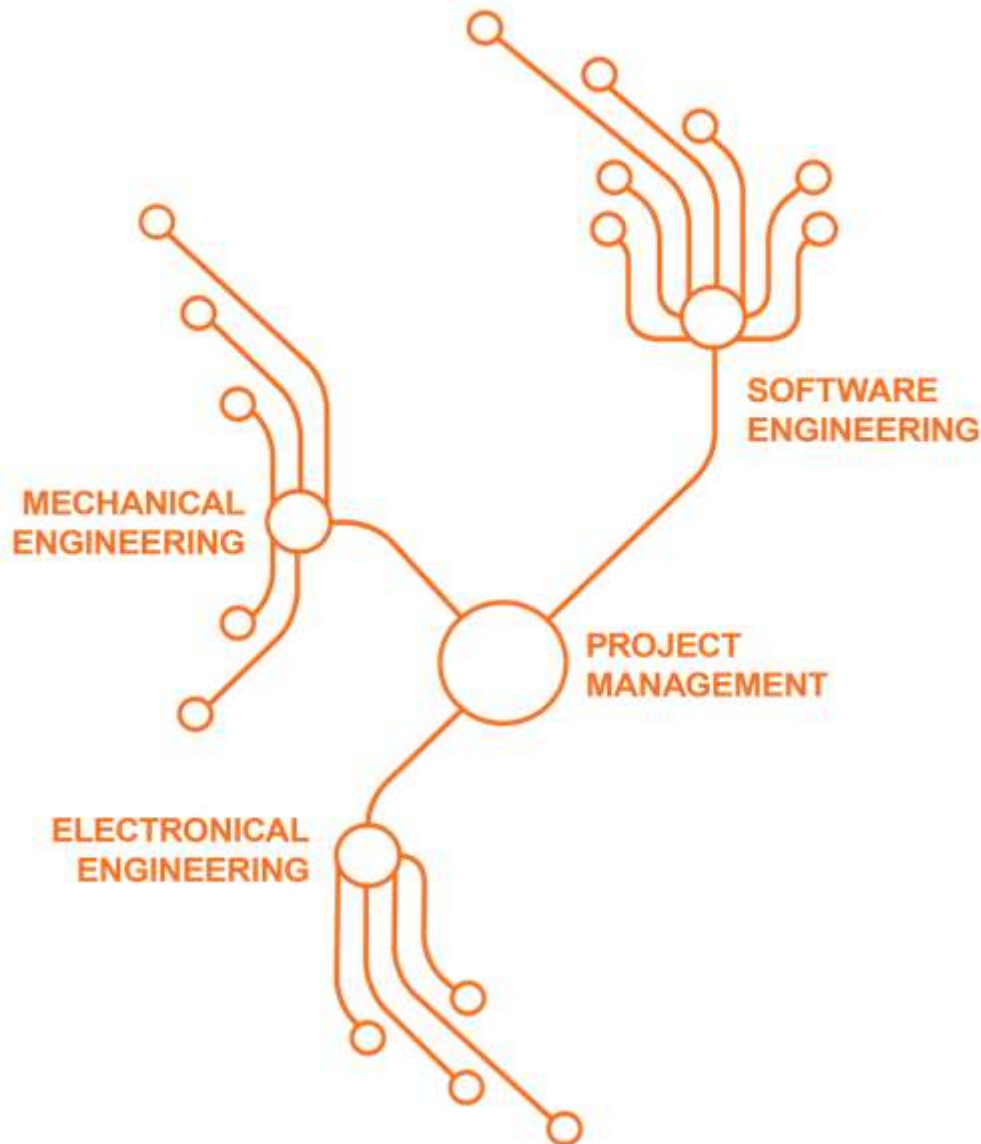
NI – Partner Presentation – Track C

How to create a reliable
and flexible production
test system concept,
with LabVIEW.



COLUMBIA

DSE Test Solutions A/S



- More than 25 years in T&M business
- NI Silver Alliance partner
- ISO 9001:2008 certified
- Turn key projects
- Production test systems
- Verification test systems
- 26 employees



Who is T&M Solutions Group

- **Solution provider specialized in tailor made solutions for measuring, testing, control & assembly.**
- **Services & turnkey solution**
- **Concurrent Engineering partner for our customers following them in every step.**
- **5 offices in 3 countries (BE, NL, PL)**
- **Worldwide active**
- **> 20 years Alliance Member**



- Source your all-through quality measurement system directly from ni.com
- Build your acoustic applications based on dedicated toolkit and suites
- 5 selected microphone sets covers 80% of all typical acoustic applications
- NI approved and 100% IEPE input compatible measurement microphones

IN BRIEF

- Founded in 1985
- Nordic leader in Embedded Systems
- Nordic leader within MES, EMI and Automation
- 500 employees – Sweden, Norway, Denmark, India and Dubai.
- Listed on NASDAQ OMX
- ISO 9001:2008 Certification

INNOVATION FOR GROWTH

In industry, small innovation-driven companies and multinational exporters alike are faced with great challenges.

In order to survive, they are forced to continually develop new, innovative products, as well as more intelligent production methods and processes.

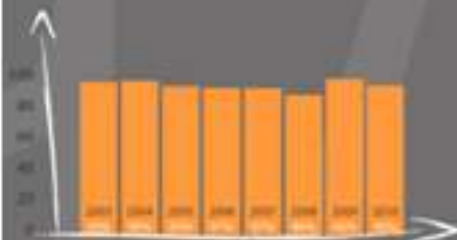
Prevas has since 1985 succeeded in developing more than 4,000 products, many of which have helped our customers become global leaders and to the same extent, we have contributed to higher levels of productivity, quality and profitability at our clients' facilities.

We call it *Innovation for Growth*.

FACTS

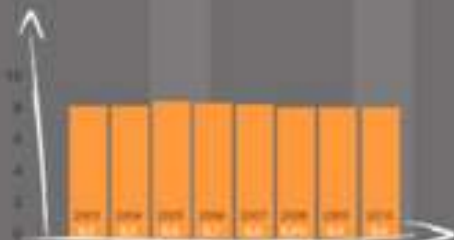
9 out of 10 projects on time

Compared to 4 out of 10 IT-projects as a market average



Satisfied customers

Consistently scoring around 9 out of 10 in customer satisfaction surveys



**NATIONAL
INSTRUMENTS**

Platinum
Alliance
Partner

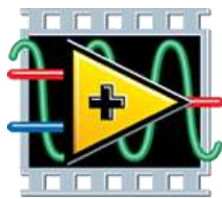


WATS

Trends in product quality are quickly uncovered with WATS



*A National
Instruments
Company™*



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LabVIEW™ 2012

Elijah Kerry

Certified LabVIEW Architect

Senior Product Manager LabVIEW

Graphical System Design

A Platform-Based Approach for Measurement and Control

Test



Monitor



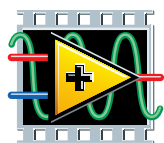
Embedded



Control



Cyber Physical



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LabVIEW™



Desktops and
PC-Based DAQ



PXI and Modular
Instruments

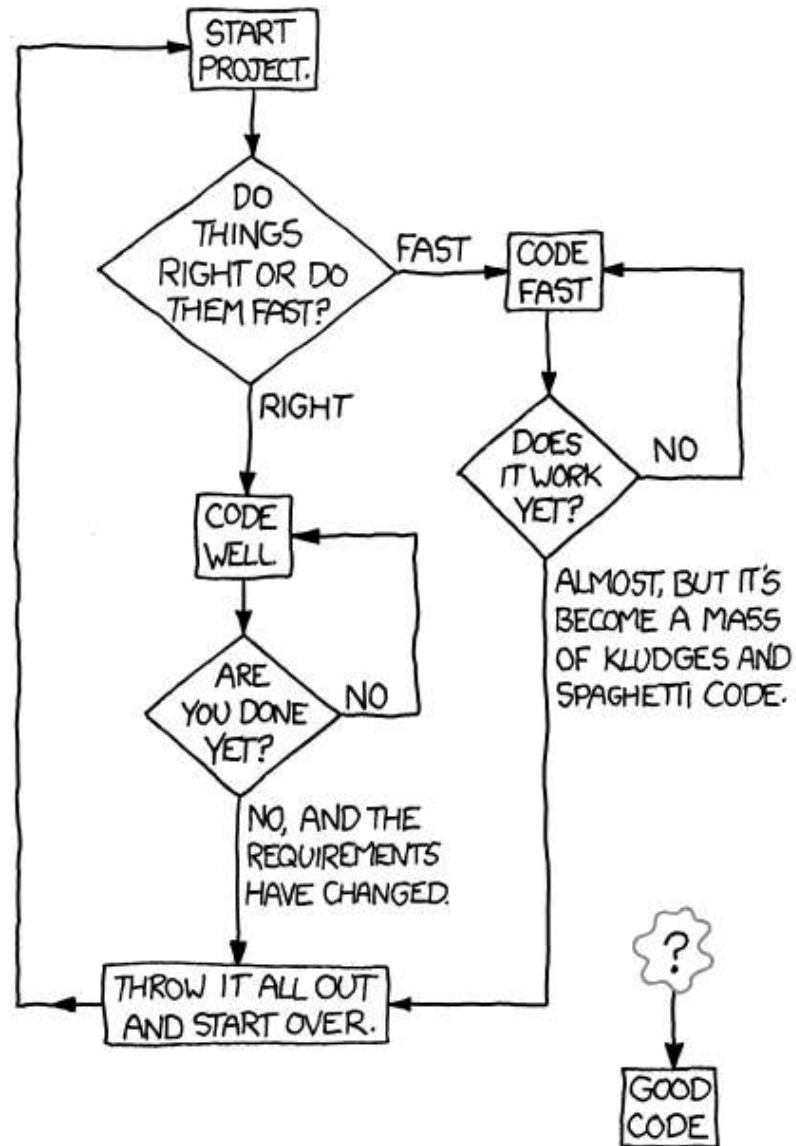


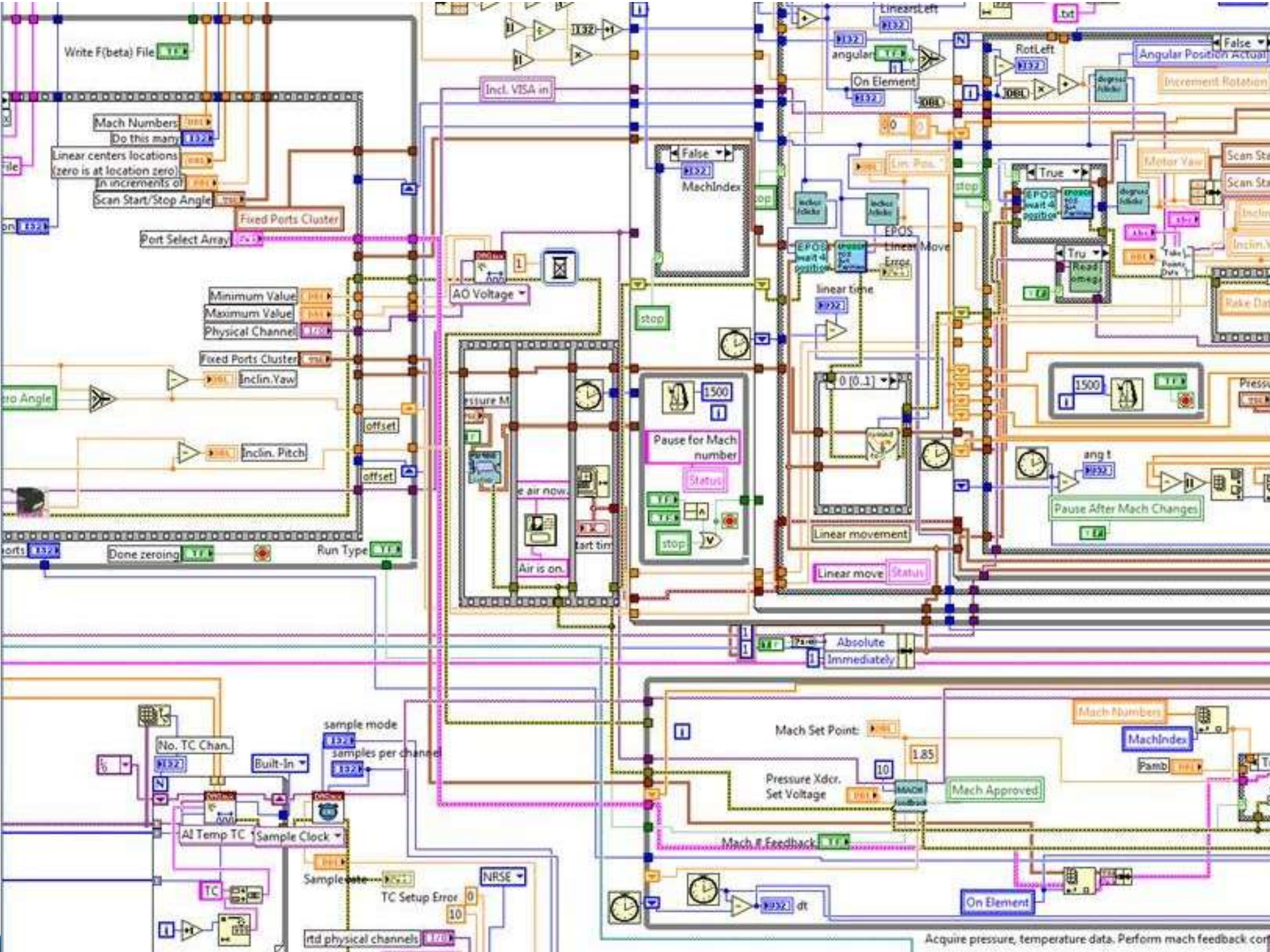
RIO and Custom
Designs



Open Connectivity
With Third-Party I/O

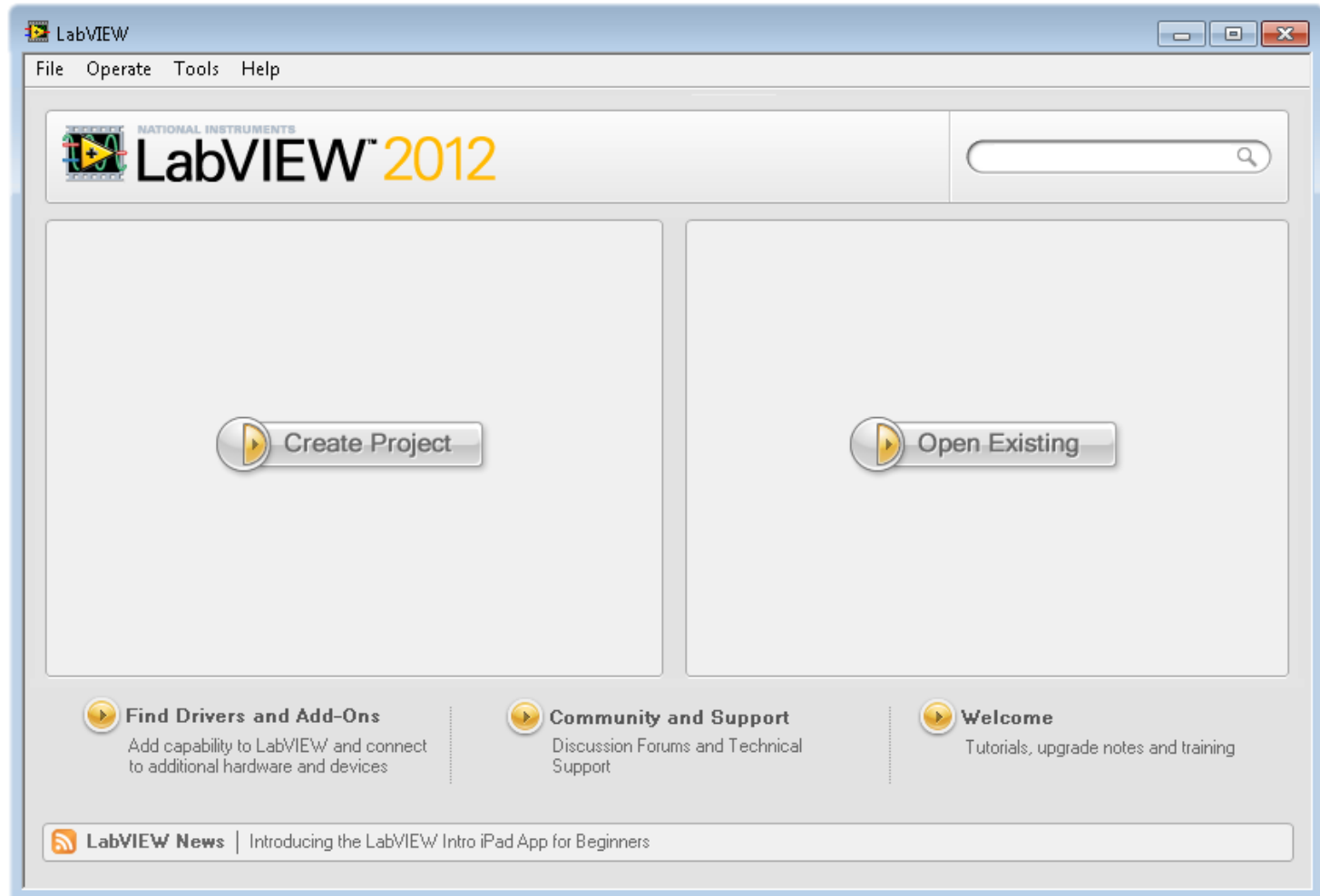
HOW TO WRITE GOOD CODE:



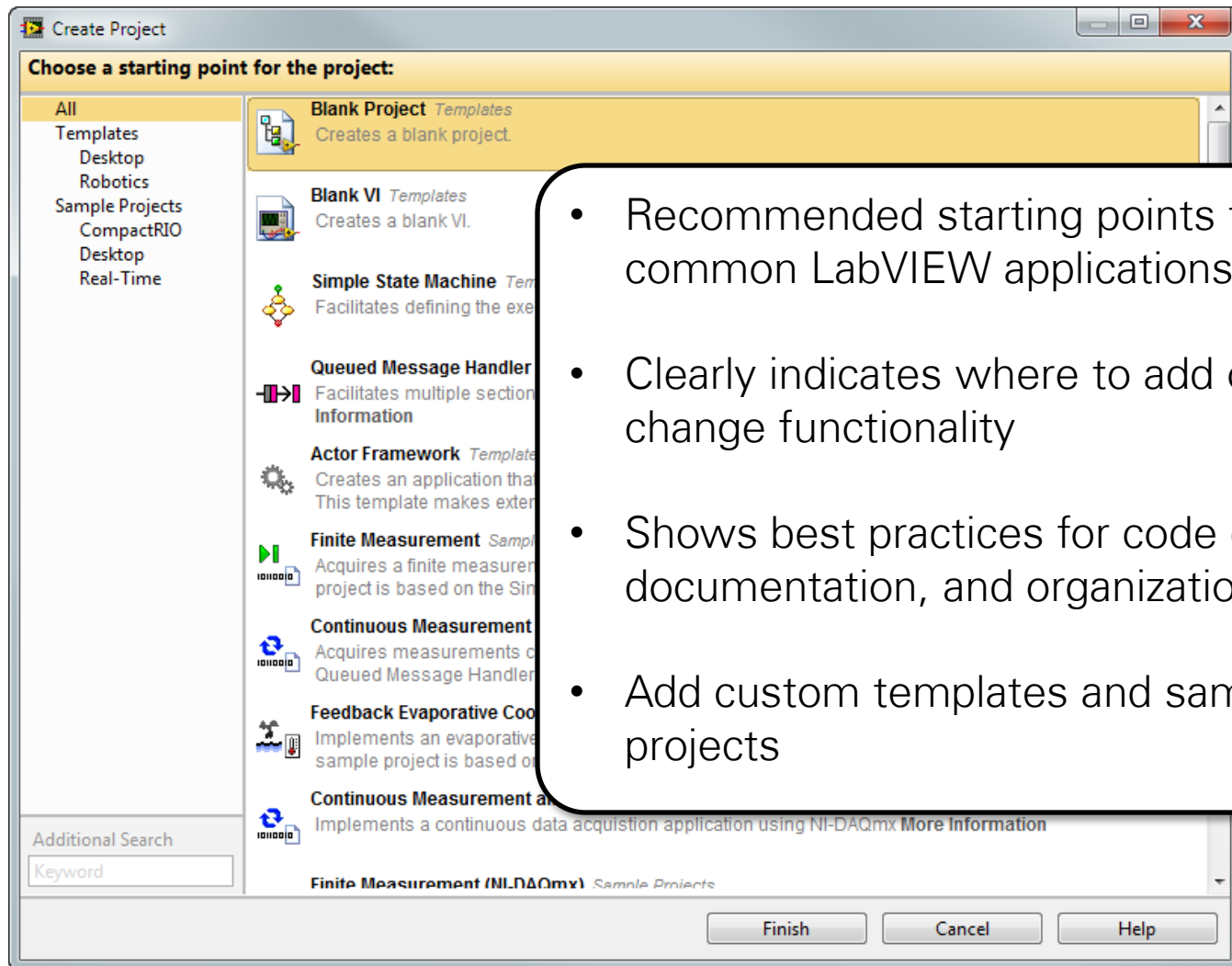


Acquire pressure, temperature data. Perform mach feedback control

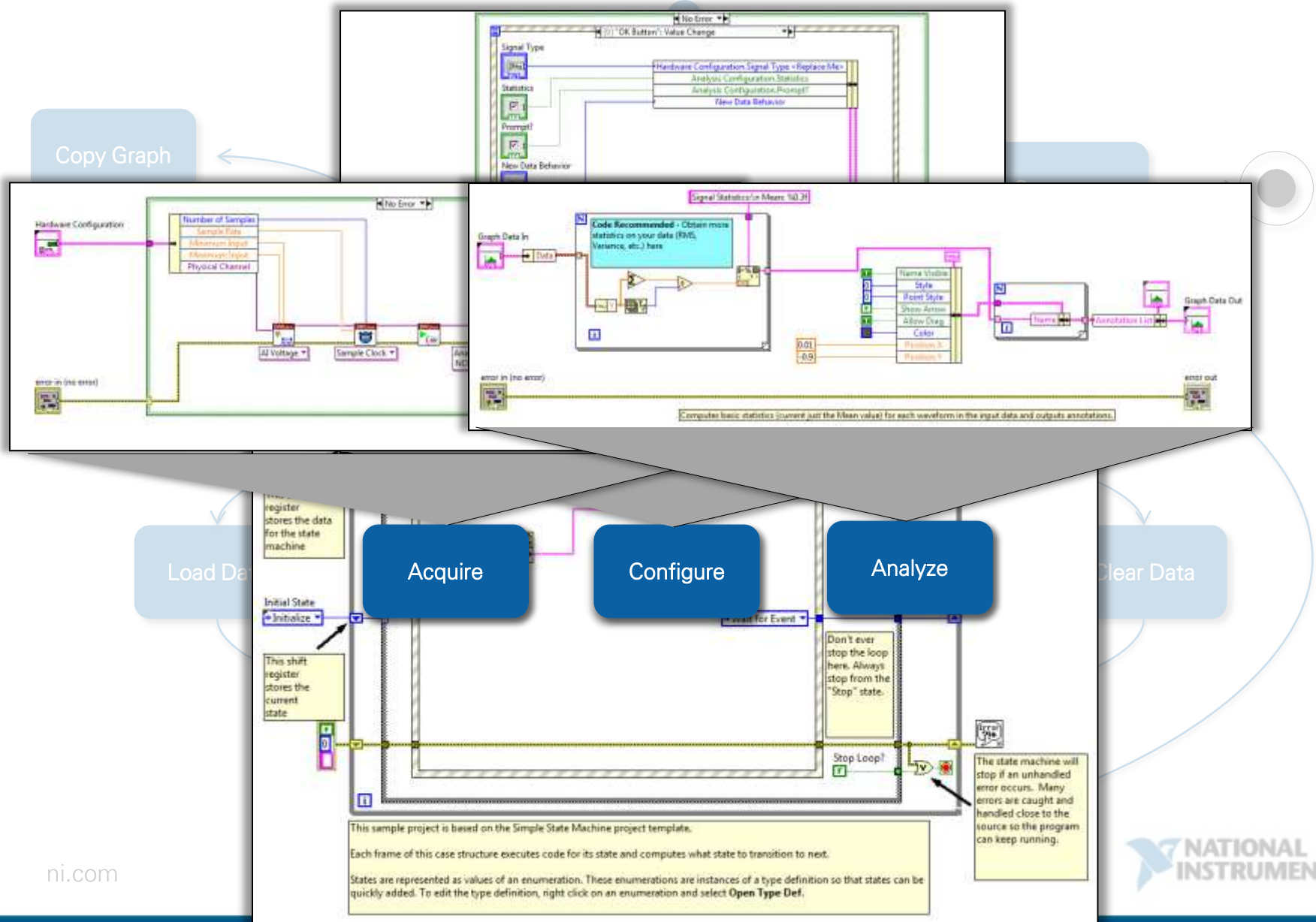
LabVIEW 2012 Getting Started Window



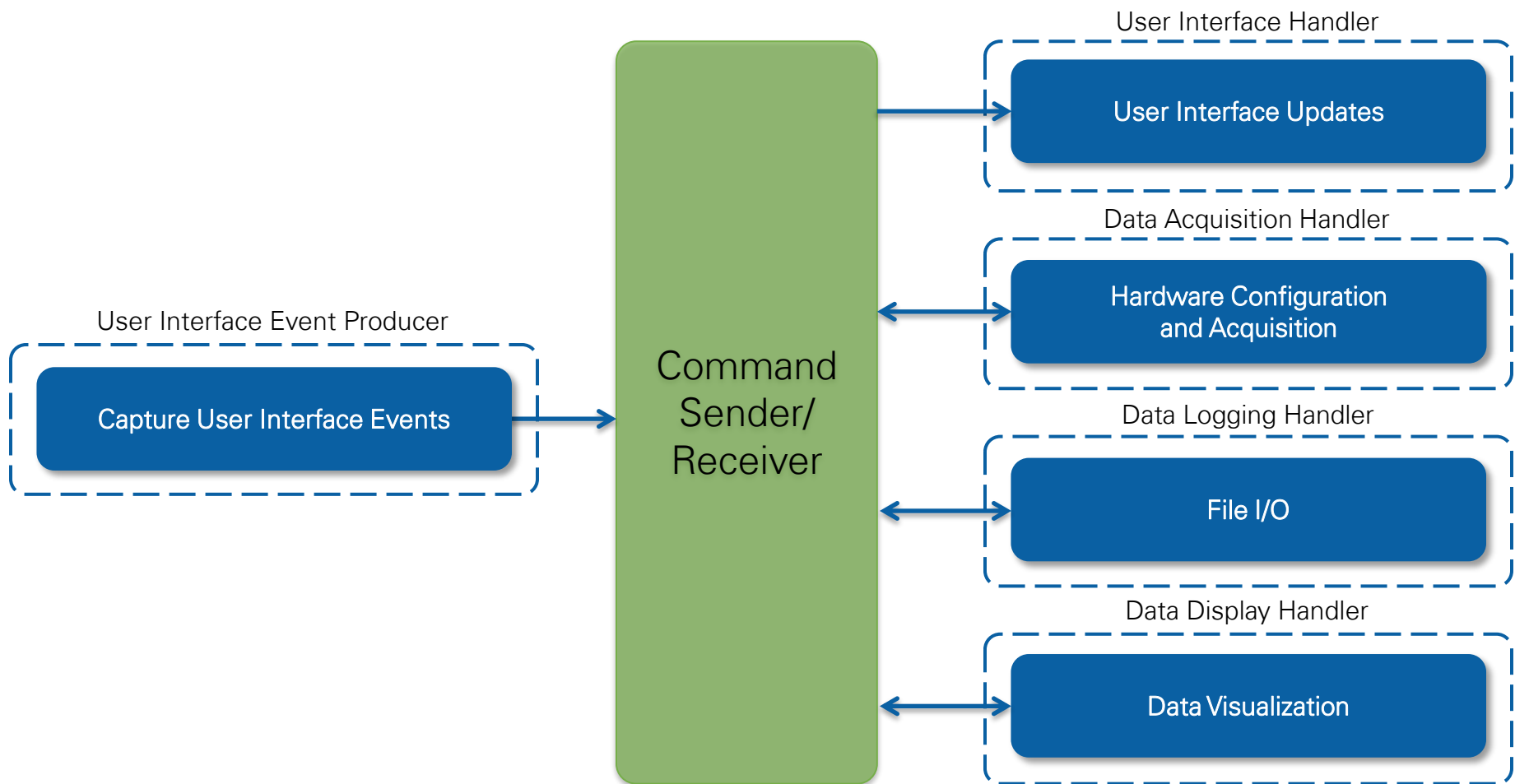
Introducing Templates and Sample Projects



Finite Measurement Sample Project State Diagram

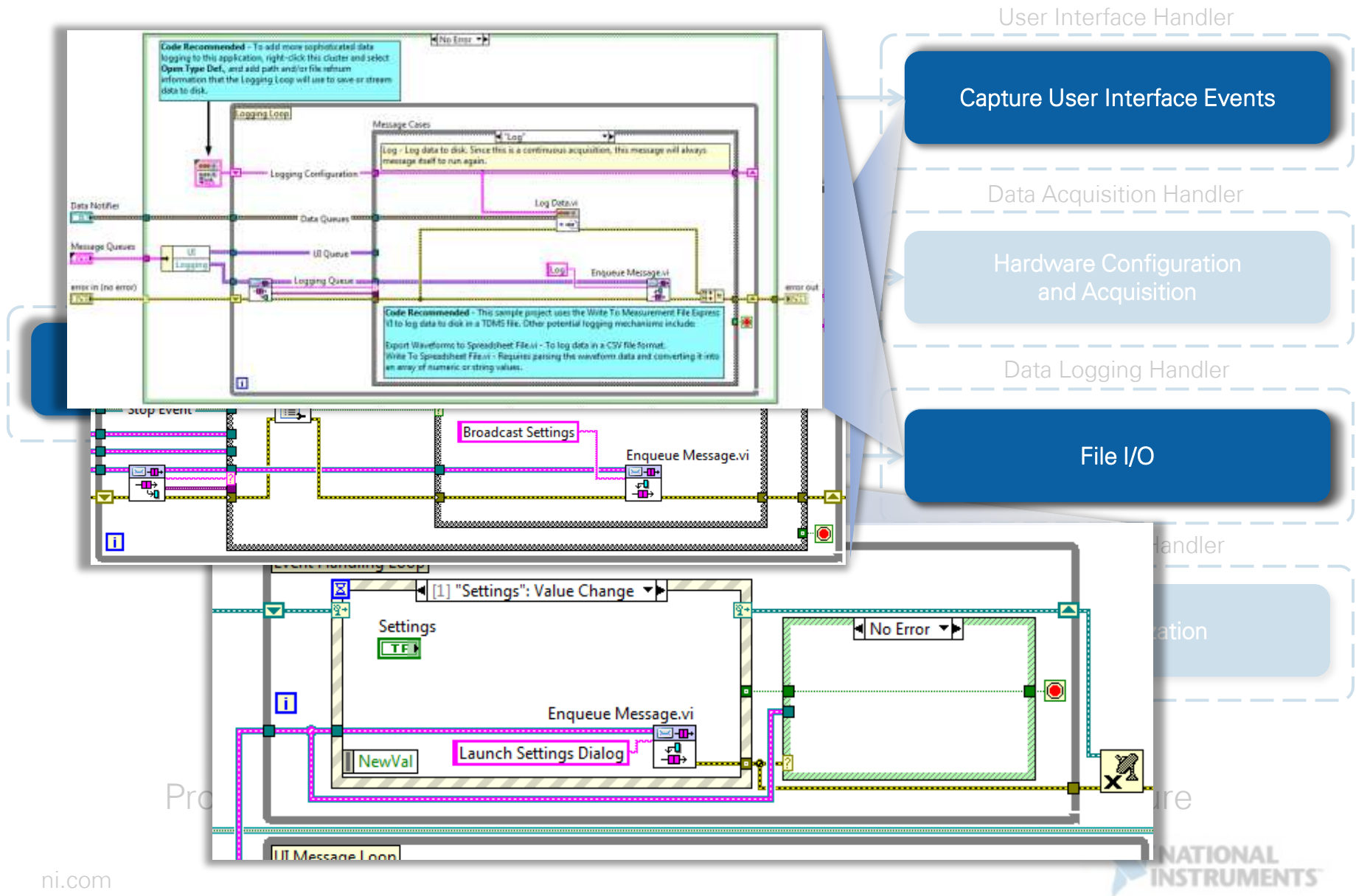


LabVIEW Continuous Measurement Architecture

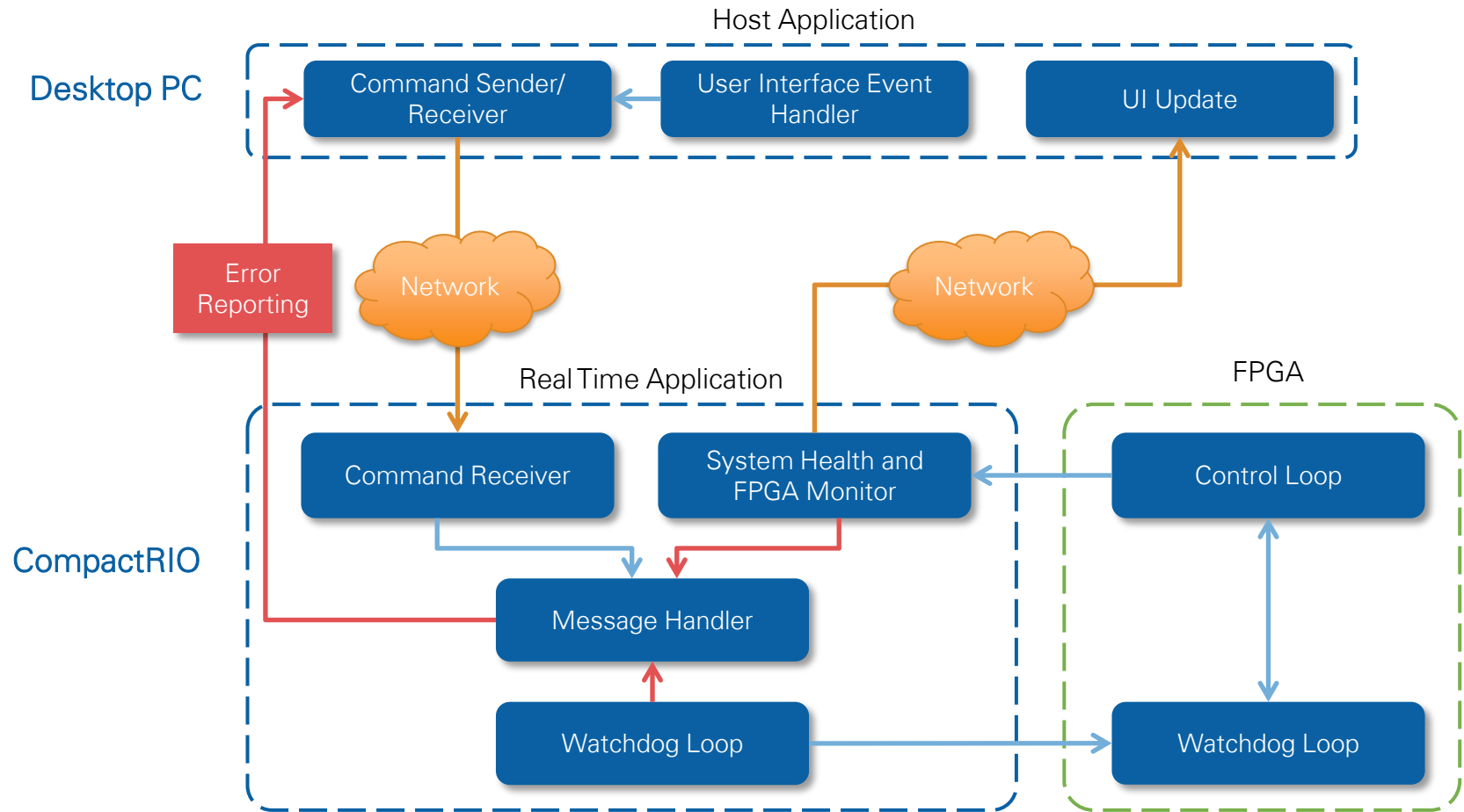


Provides a **ready-to-run** starting point using a **scalable** architecture

LabVIEW Continuous Measurement Architecture



LabVIEW FPGA Control Sample Project

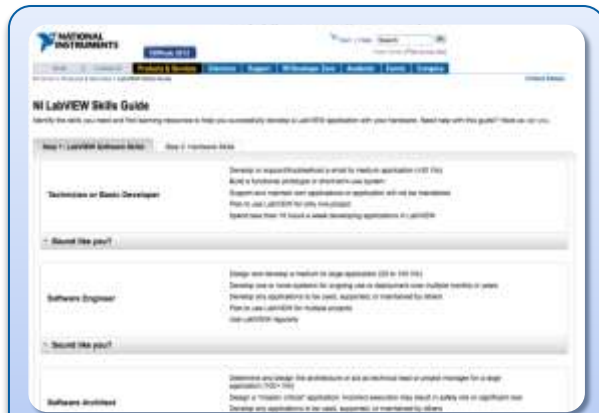


Provides a recommended starting point using a scalable architecture

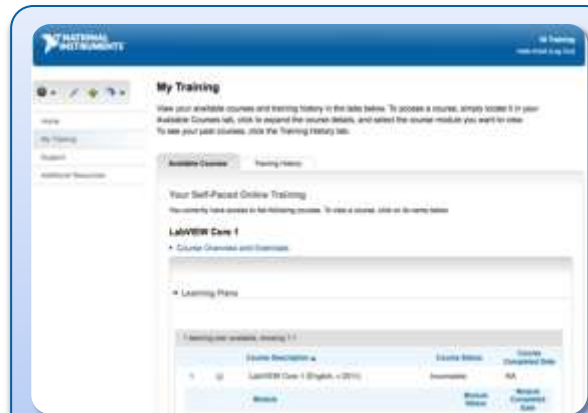
Training and Certification

Joeri Wingelinckx
Services Manager

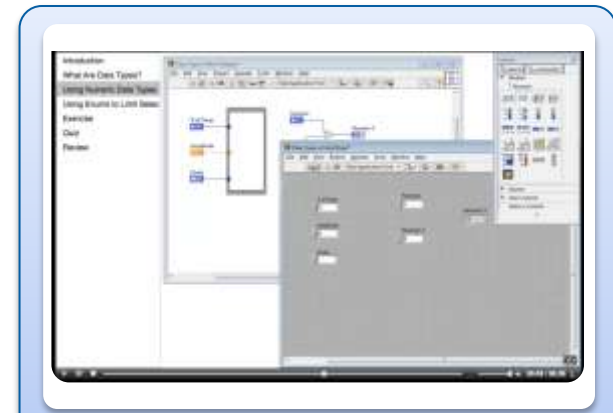
New Learning Resources



New LabVIEW Skills Guide

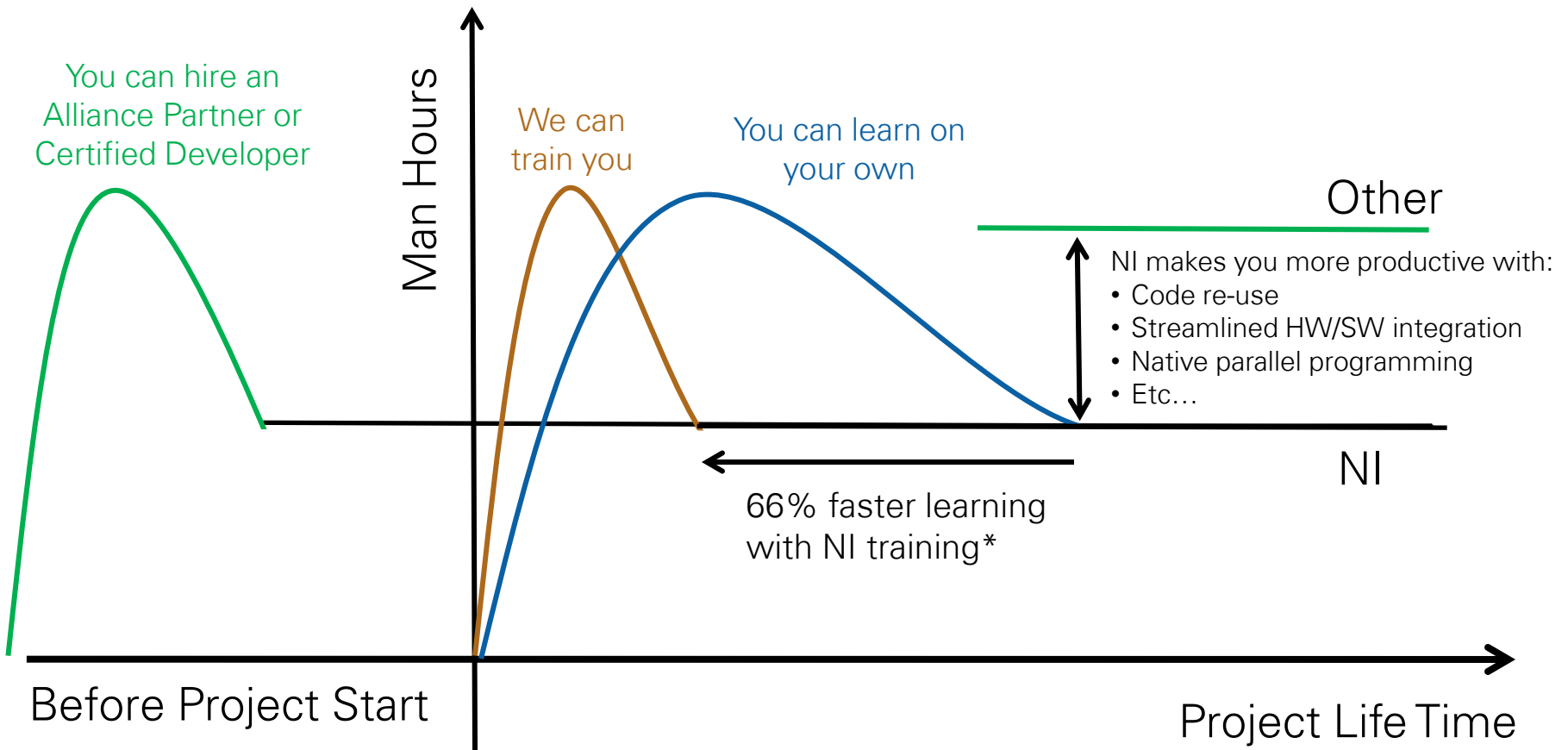


New Self-Paced Online Training



>25 Hours of Video Learning Content

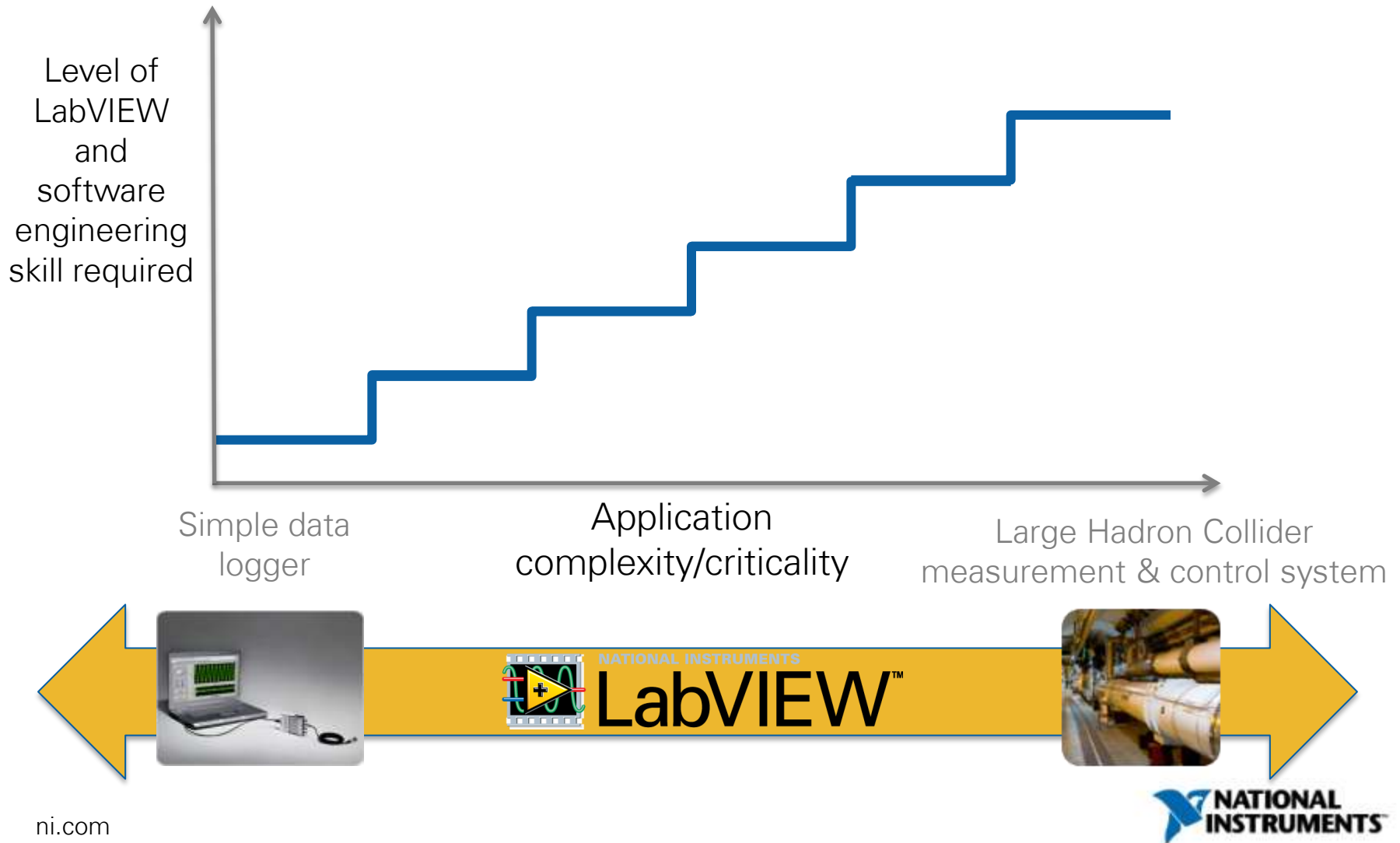
NI LabVIEW Will Make You More Productive ...but There is a Learning Curve



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

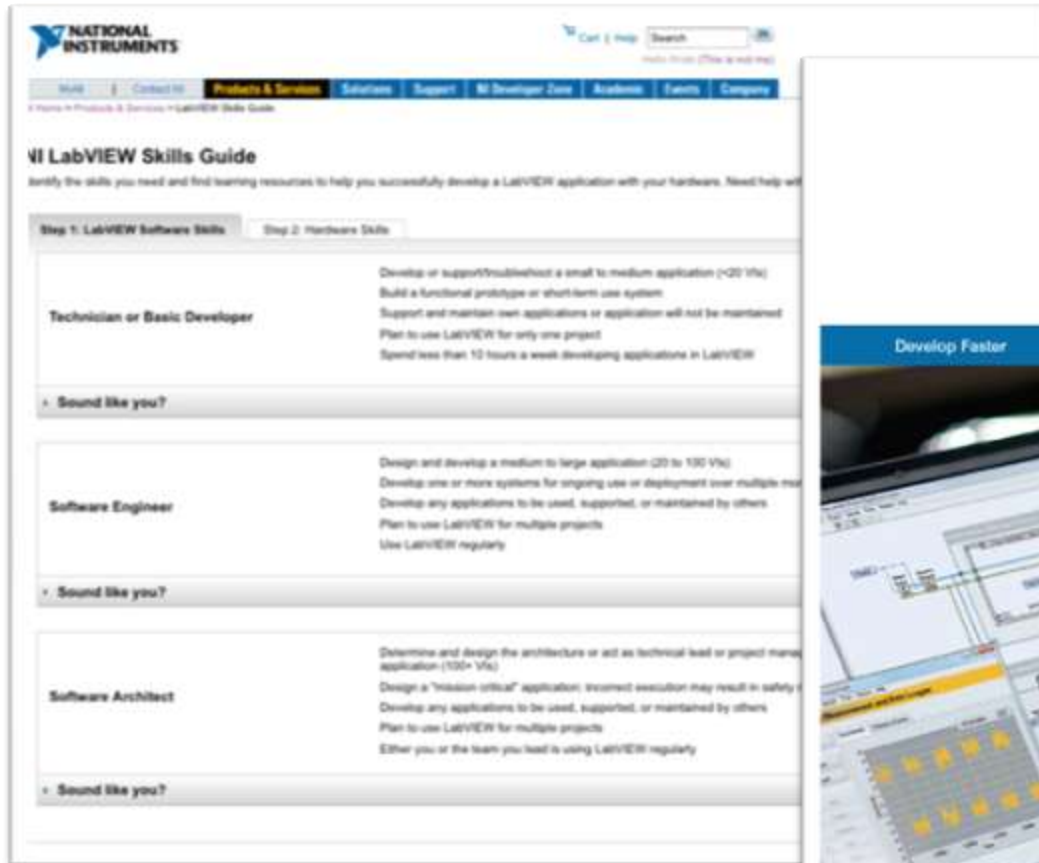
Harness the Power of LabVIEW

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



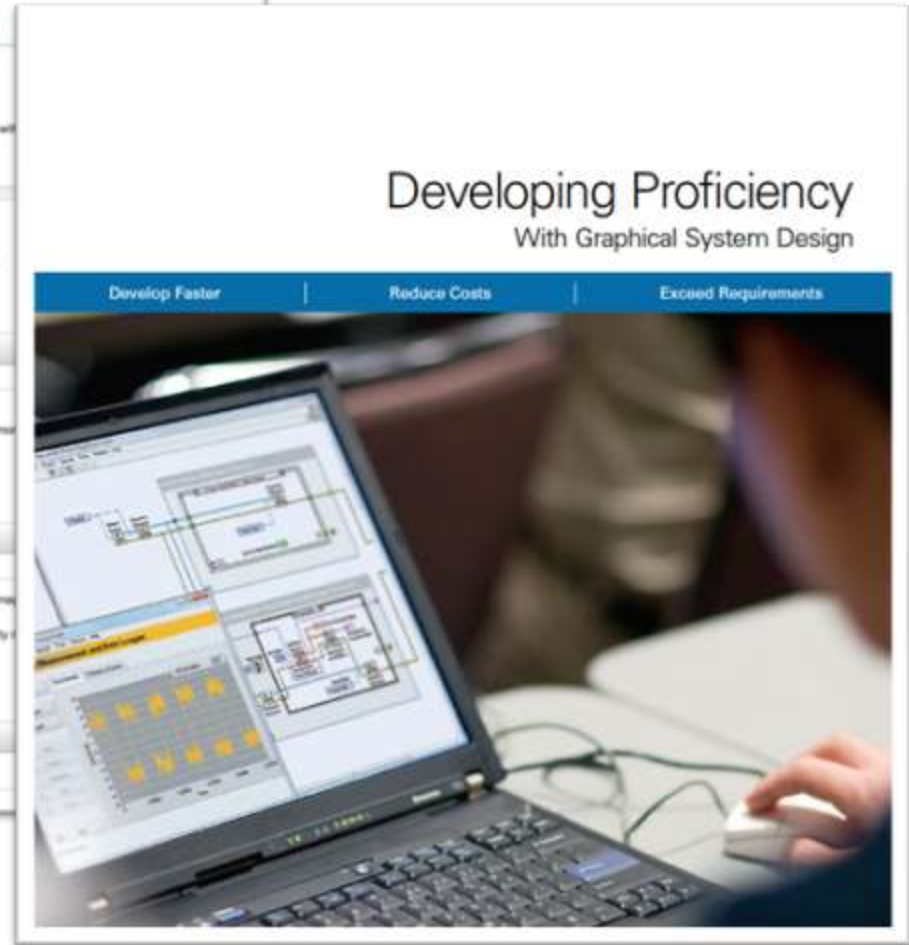
What Skills Do You Need to Maximize Success?

NI Offers Tools to Help You Find Out



Online LabVIEW Skills Guide

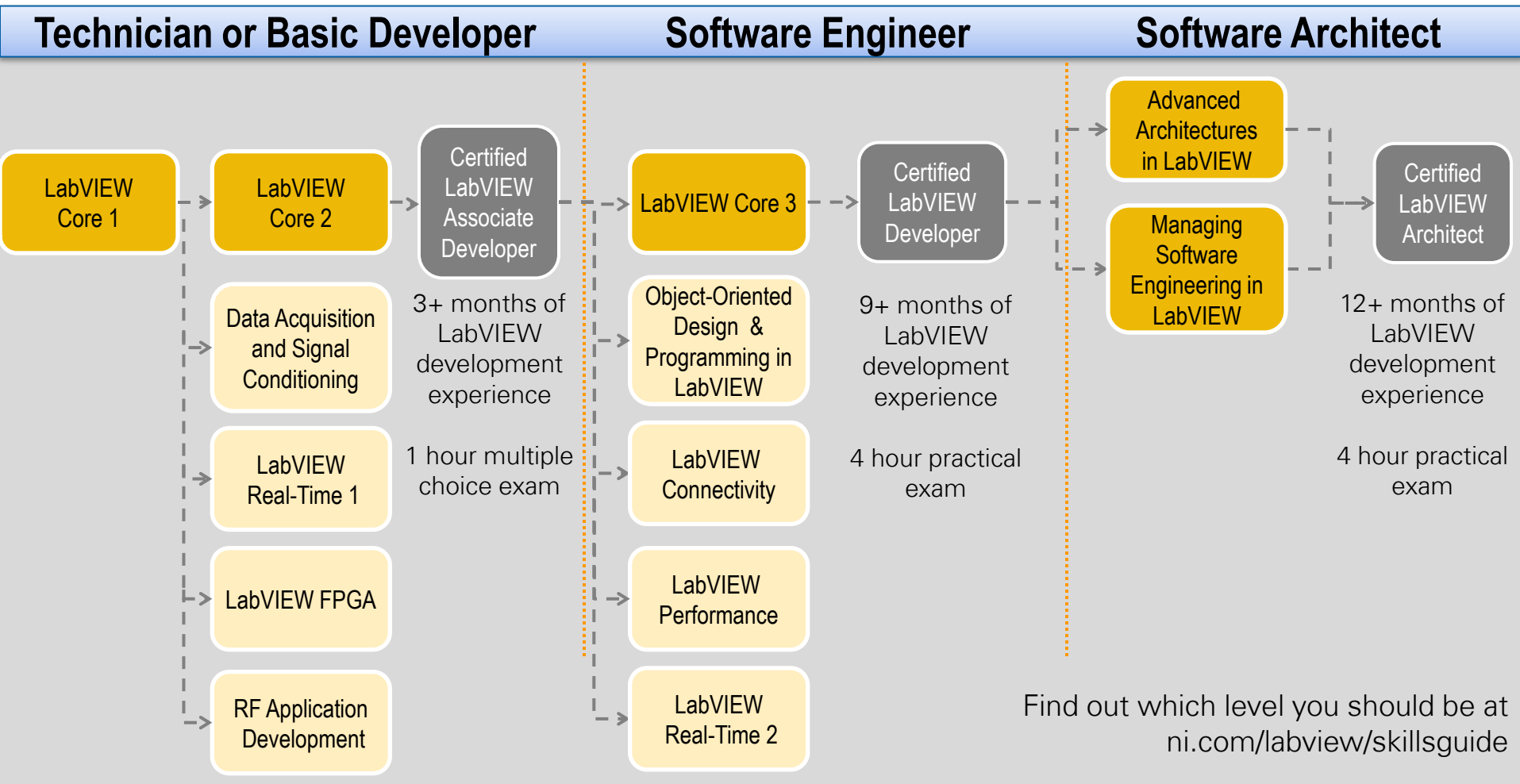
ni.com



Printed brochure

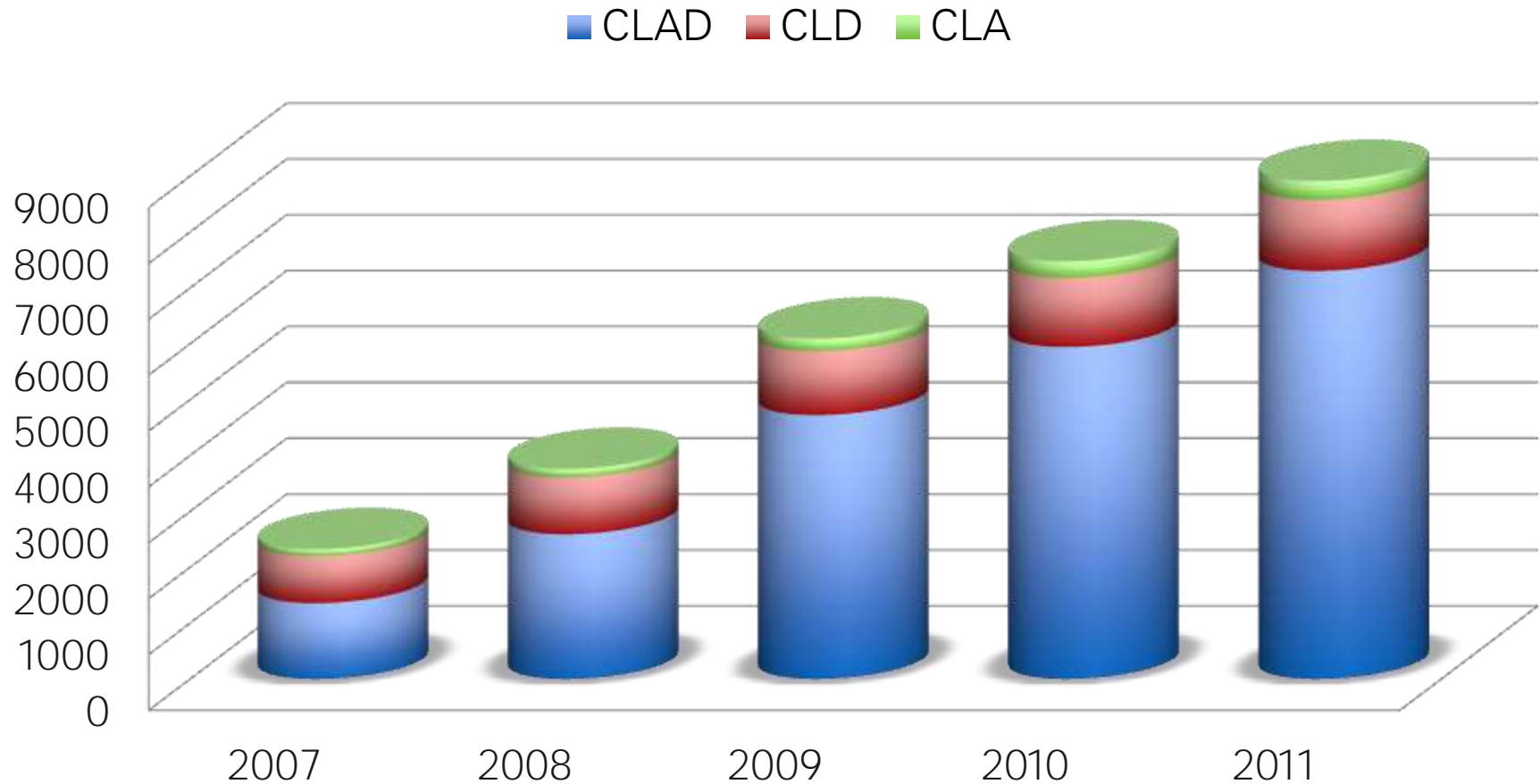


NI LabVIEW Training and Certification Path



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>

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Search

Community

LabVIEW User Groups

LabVIEW User Groups provide the opportunity for face-to-face interactions with other LabVIEW developers. This page helps you find a user group in your area and links you to other user group related resources.

Find a LabVIEW User Group in Your Area

Use the map to the right to locate a LabVIEW User Group in your area.

Would you like to start a new user group? Then fill out this online application form and check out the User Group Starter Guide to begin. We will assess your application and will respond shortly.

Are you a current User Group Leader? Then click here to check out the User Group Resource Center to find all of your user group needs.

My Profile | RSS | Privacy | Legal | Contact Us | © 2011 National Instruments Corporation. All rights reserved. | [Contact Us](#)

jive

Local User Groups:

- *Campus Riso Usergroup – Roskilde*
- *LabVIEW User Group Skane - Malmo*

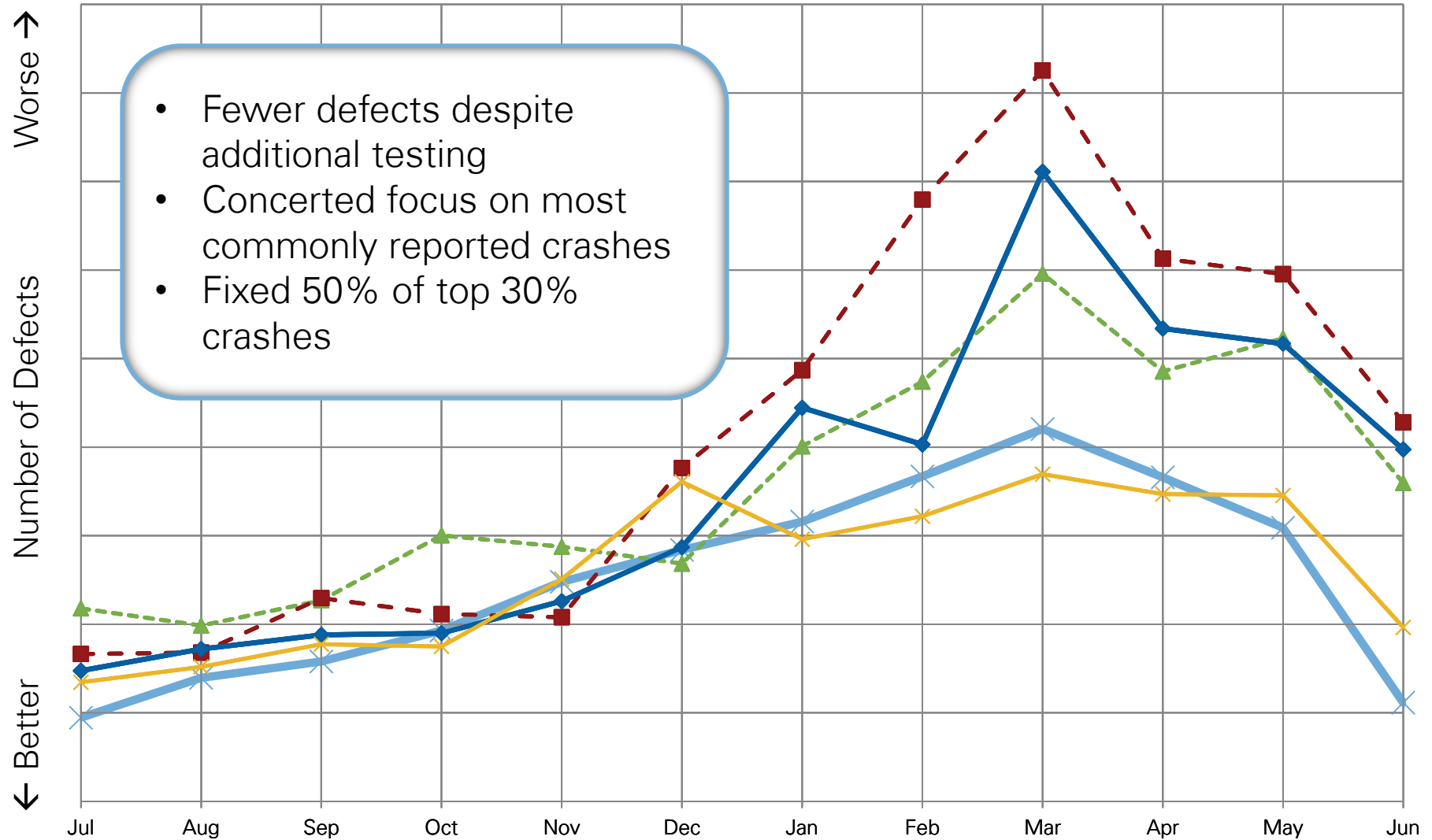


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LabVIEW™

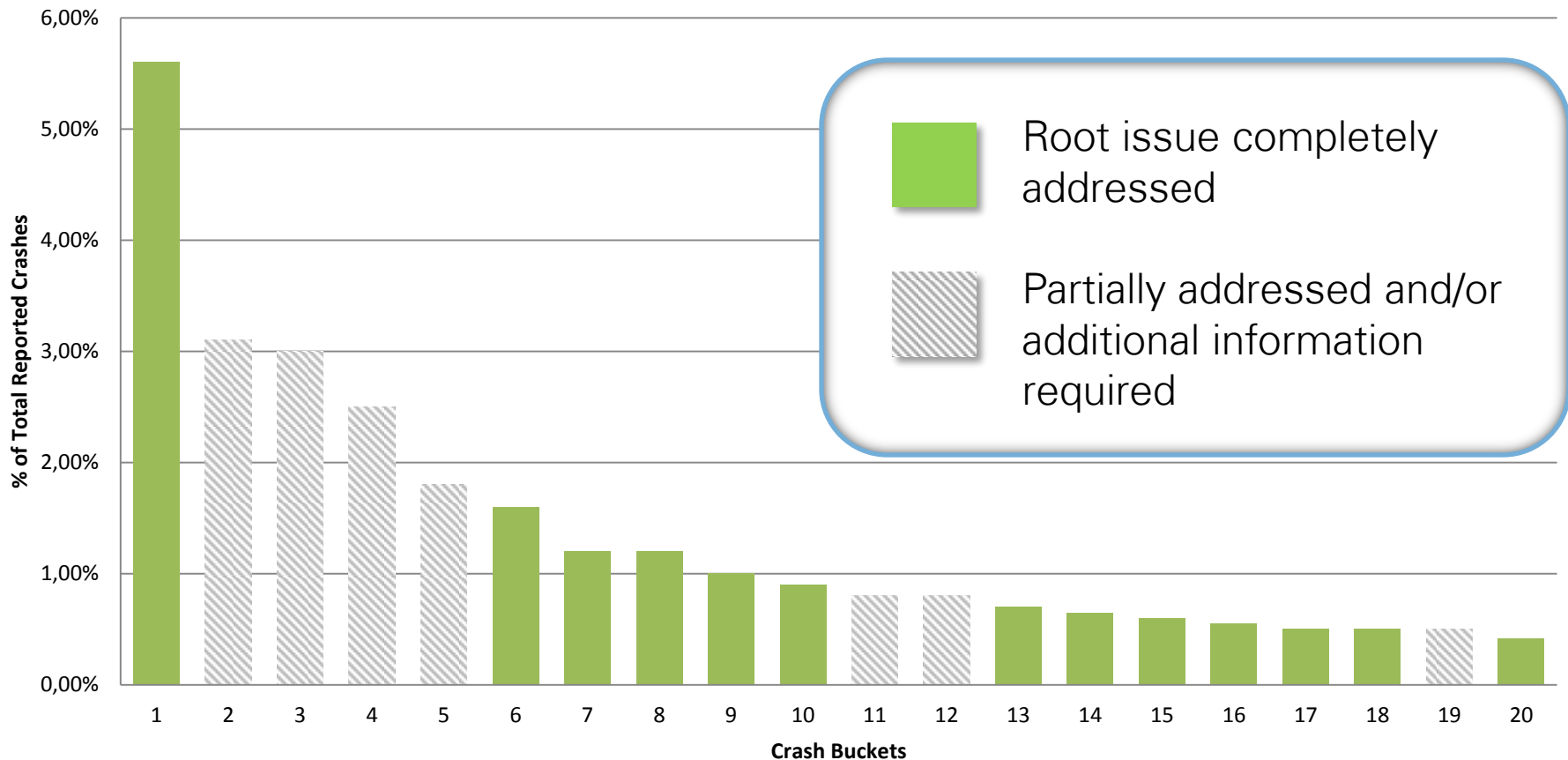
Get a demo of the Self-Paced
Identify the skills you need
LabVIEW Proficiency Booth

Pre-Release LabVIEW Defect Flow



Continuous Investment In Stability

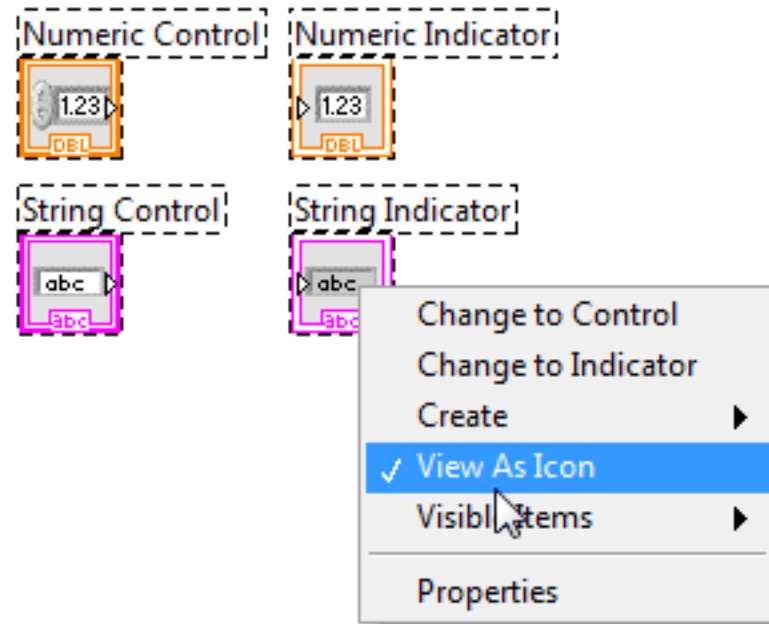
Top 20 LV 2011 NIER Reported Crashes (30% of all reported crashes)



Over half of the top reported crashes were fixed in 2012

Idea Exchange Features

- Pop-up Menus for Multiple Selected Objects

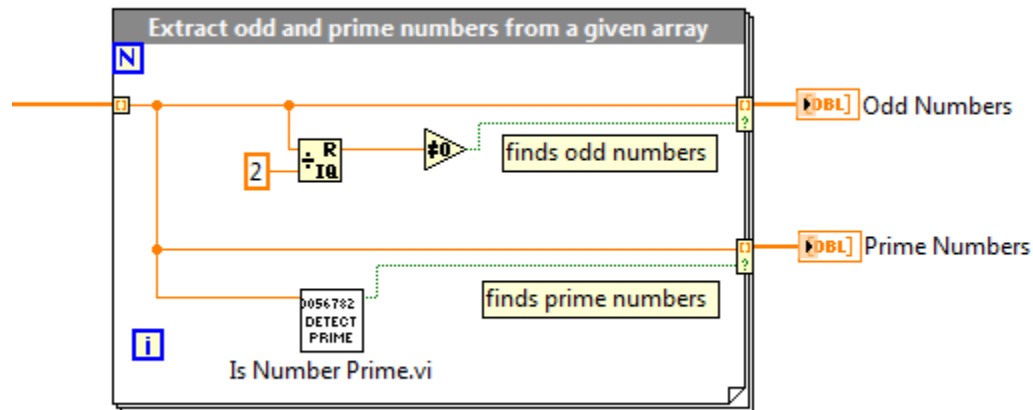


Save the time required to manually apply settings to multiple items

Idea Exchange Features

- Conditional Loop Tunnel

Simplified approach



Simplifies common coding practices for
conditionally building arrays

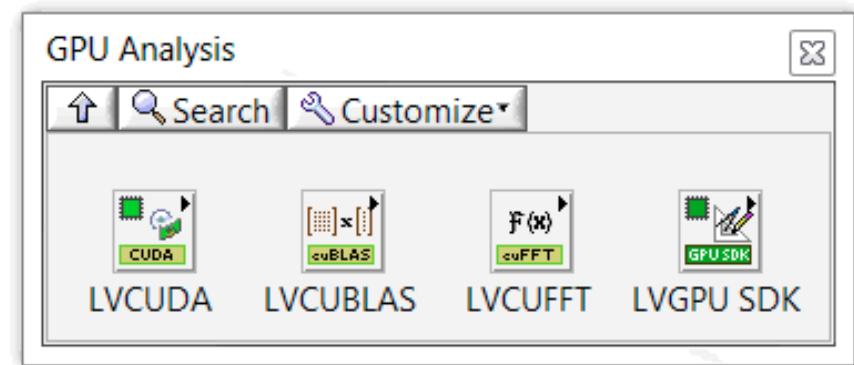
12 Productivity Enhancements From the LabVIEW Idea Exchange

- 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

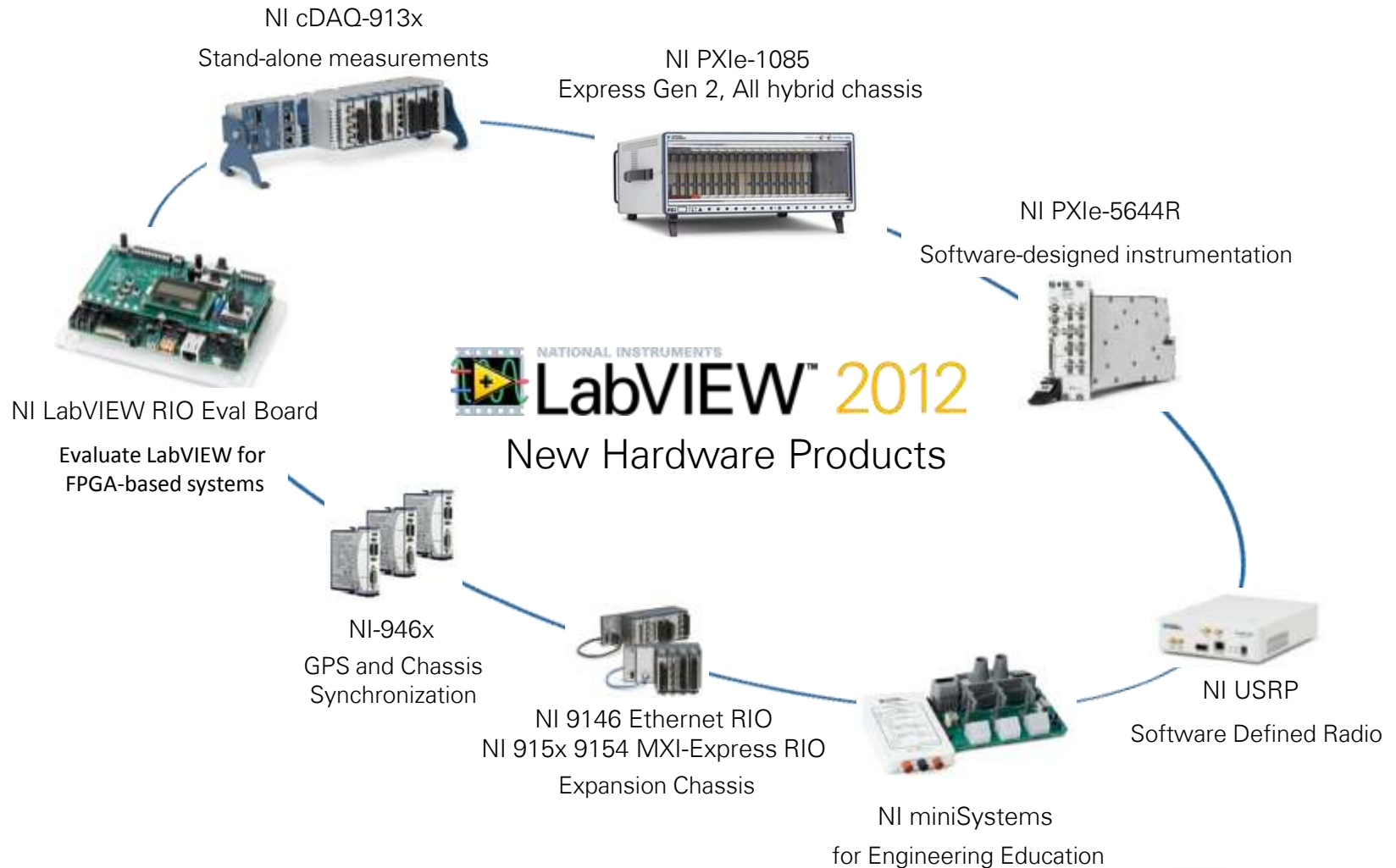


Fixed-Point

Floating Point New in 2012

The screenshot shows a LabVIEW block diagram for calculating the square root of a number using the Newton-Raphson method. The diagram includes a 'For' loop with a counter 'i' from 0 to 32767. Inside the loop, the current value 'x' is squared, divided by the current value, and then the average of the result and the current value is calculated. The result is then compared to the original value to determine the number of iterations. The final result is displayed as '~Pi'.

Unrivaled Integration with the Latest Technology



Stand-Alone NI CompactDAQ

Embedded Measurements and Logging System

NI LabVIEW
System Design Software

NI DIAdem
Data Management

NI-DAQmx
Driver Software



External Devices
USB, Ethernet, Serial,

>50 I/O modules
Analog, digital, CAN, etc.

32 GB hard drive
Log for 360 hours*

Intel Core i7
Dual-Core processing

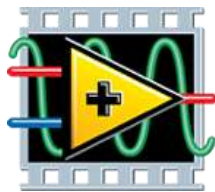
Multiple OS Options
Windows or Real-Time

High Data Throughput
Stream up to 30 MB/s to disk



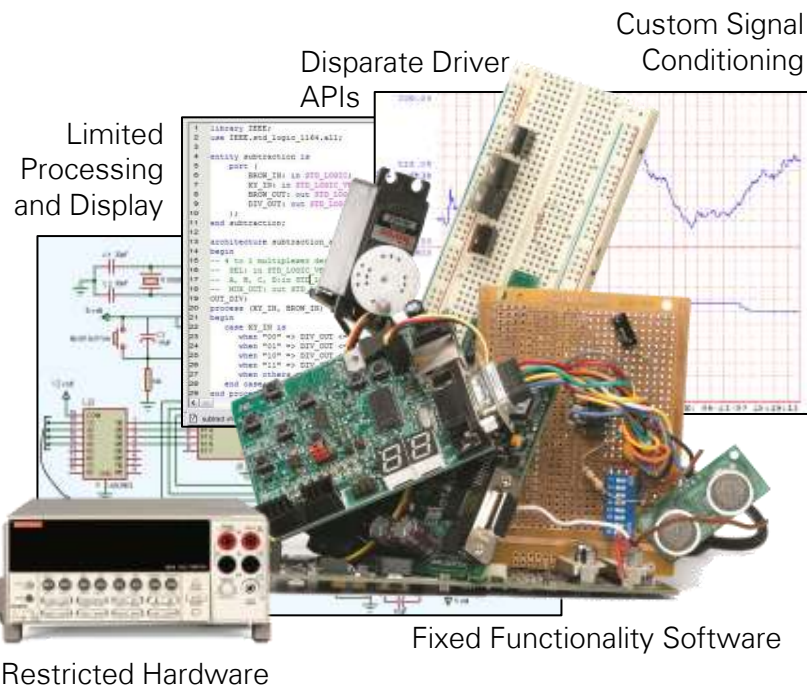
Samuli Bergstrom

Certified LabVIEW Developer
Marketing Engineer



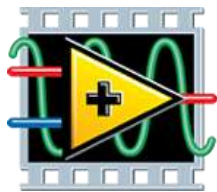
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LabVIEW™ 2012



Build This. Not That.

LabVIEW 2012 delivers all the tools you need to move from measurement to decision, faster



NATIONAL INSTRUMENTS

LabVIEW™ 2012

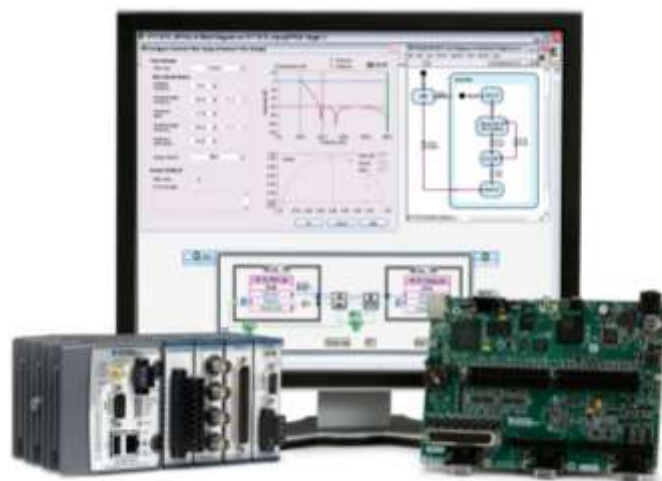


Build This. Not That.

Build a custom and flexible test system
in less time with LabVIEW 2012



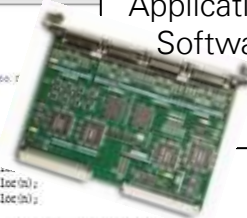
LabVIEW™ 2012



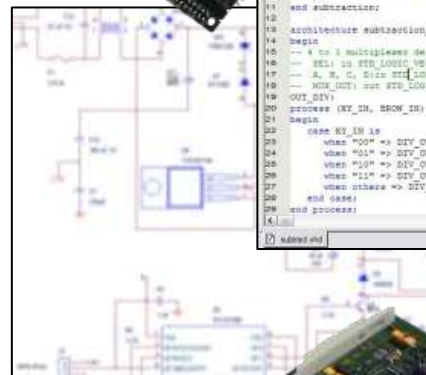
Board
Support
Package



Device Drivers



Application Software



PCB Design and Layout

Application Software

```

LOG1012
LOGIC_VECTOR (I_Converte_F
I_2501cc:
I_250000
I_250000

int *A = malloc(
int *B = malloc(n);
int *C = malloc(n);

A_desc = chi_alloc_surface(A, 23000_INFUT, n, 1);
B_desc = chi_alloc_surface(B, 23000_INFUT, n, 1);
C_desc = chi_alloc_surface(C, 23000_INFUT, n, 1);
#pragma omp parallel target(n0000) shared(A,B,C)
    descriptor(A_desc,B_desc,C_desc) private(i)

    for (i=0; i<n/8; i++)
        am

        sh1.1.w    wr1 = i, 3
        ld.8.w     [wr1, wr1] = (A, wr1, 0)
        ld.8.w     [wr10, wr1] = (B, wr1, 0)
        add.8.w    [wr10, r25] = [wr10, wr1], [wr10, wr1]
        st.8.w     (C, wr1, 0) = [wr10, wr25]

#pragma omp parallel for shared(D,E,F) private(i)

    for (i=0; i<n; i++)
        F[i] = D[i] + E[i];
}

```

VHDL

Build This. Not That.

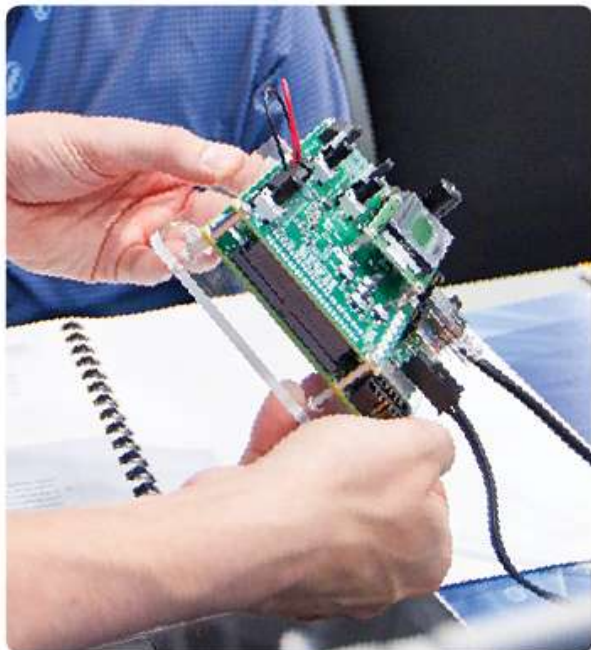
End-to-end integration means you can
deploy an embedded system faster

Dennis Morini

Sales Engineer NI Denmark

Jacob Mac Rygaard, Nils Refstrup, and Pascal Randau Mikkelsen

DTU Roadrunners



NI Build Your Own Embedded System Workshop

December 4th | Hørsholm

Ask our staff for more information

Enjoy your day!

