



LabVIEW™



NI TestStand™

Automated Test Software Hands-On

Top 4 Concerns Among Leading Test Managers

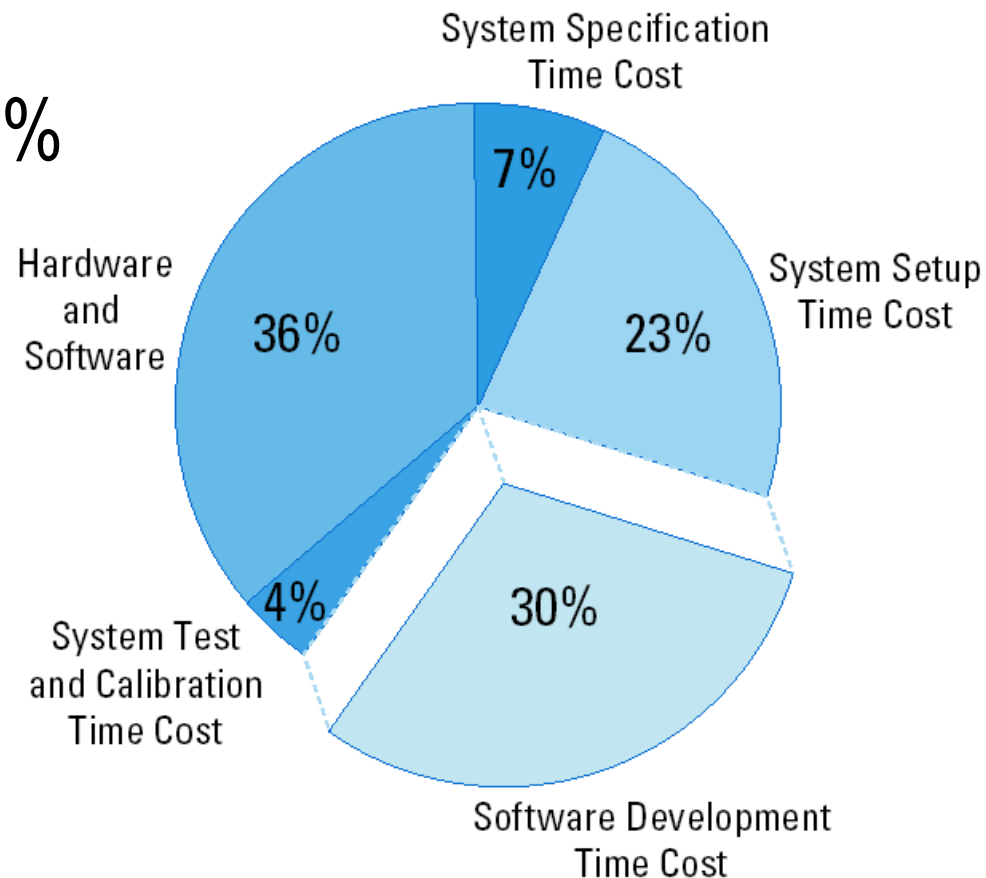
1. Reducing investment for test system development
2. Optimizing **test throughput**
3. Reducing **false failures** or false passes
4. Reducing number of **unique test systems**



Source: NI Automated Test Customer Advisory Board, 2006

Test System Cost Analysis Survey

- Capital costs – 36%
- Development costs – 64%
 - Software development – 30%
 - System integration – 23%
 - System configuration – 7%
 - System validation – 4%



Source: *Reducing the Hidden Cost of Measurements*, White Paper

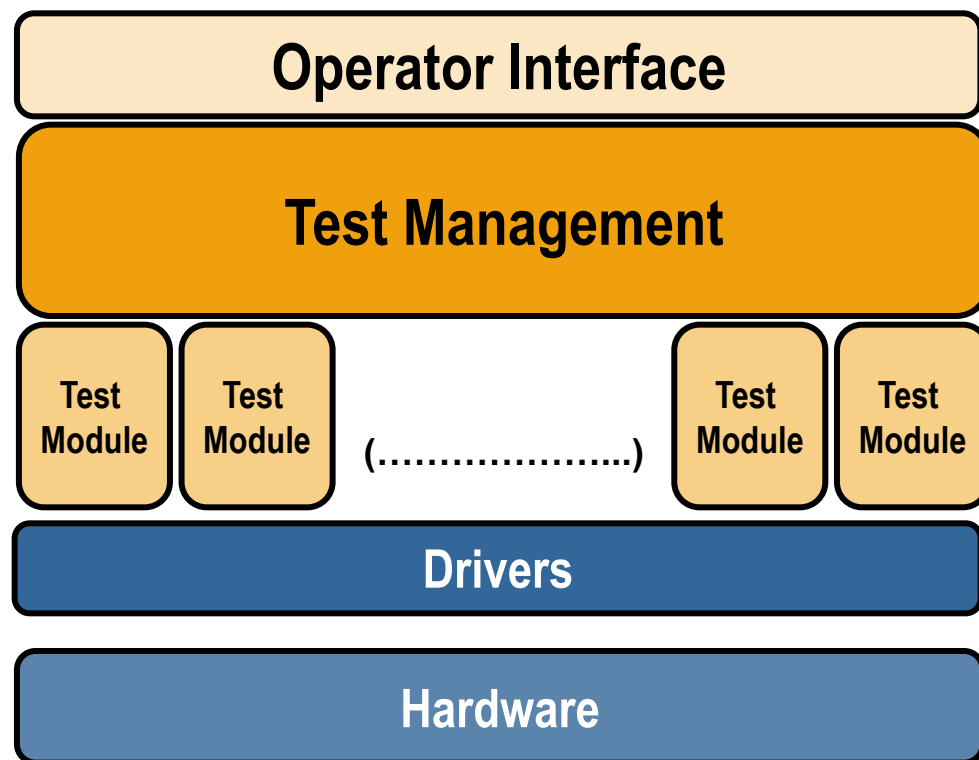
Hands-On Test System – The Challenge

- Test a multi-function handheld device
- Build a system to test all of the device's features:
 - Cell phone
 - MP3 Player
 - Internet browser
 - LCD Screen
 - Bluetooth
 - Wi-Fi
- Use commercial off the shelf (COTS) software
- Verify test system to requirements
- Develop test system in 1 hour



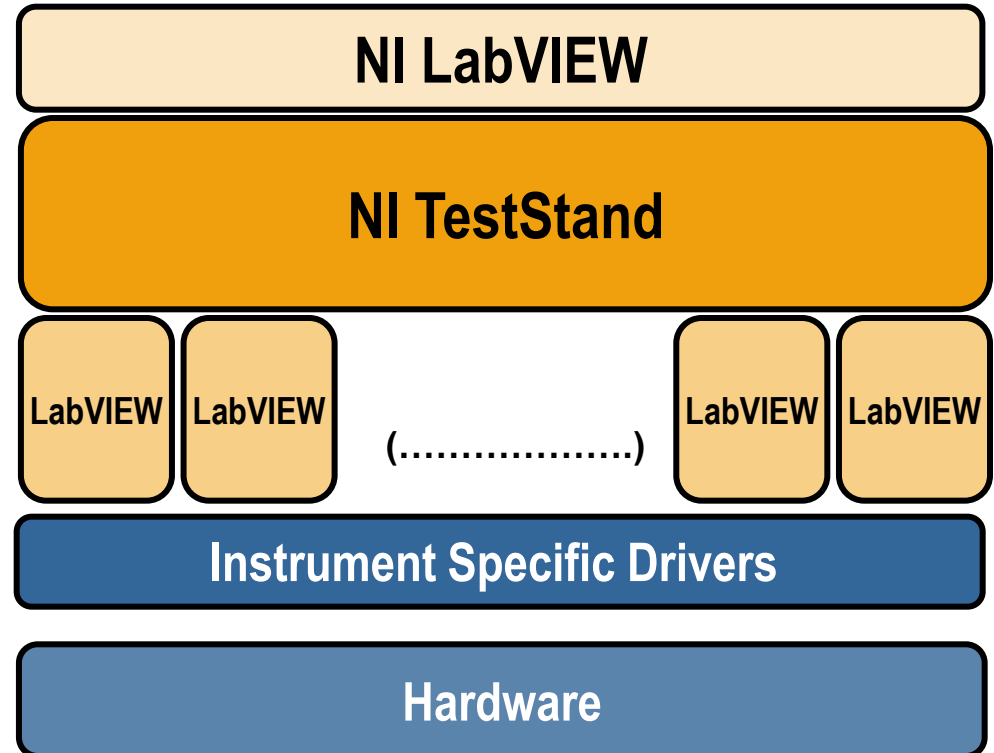
Required Elements for Test System Design

1. Test executive
2. Test development software
3. Instrument drivers
4. Test instruments

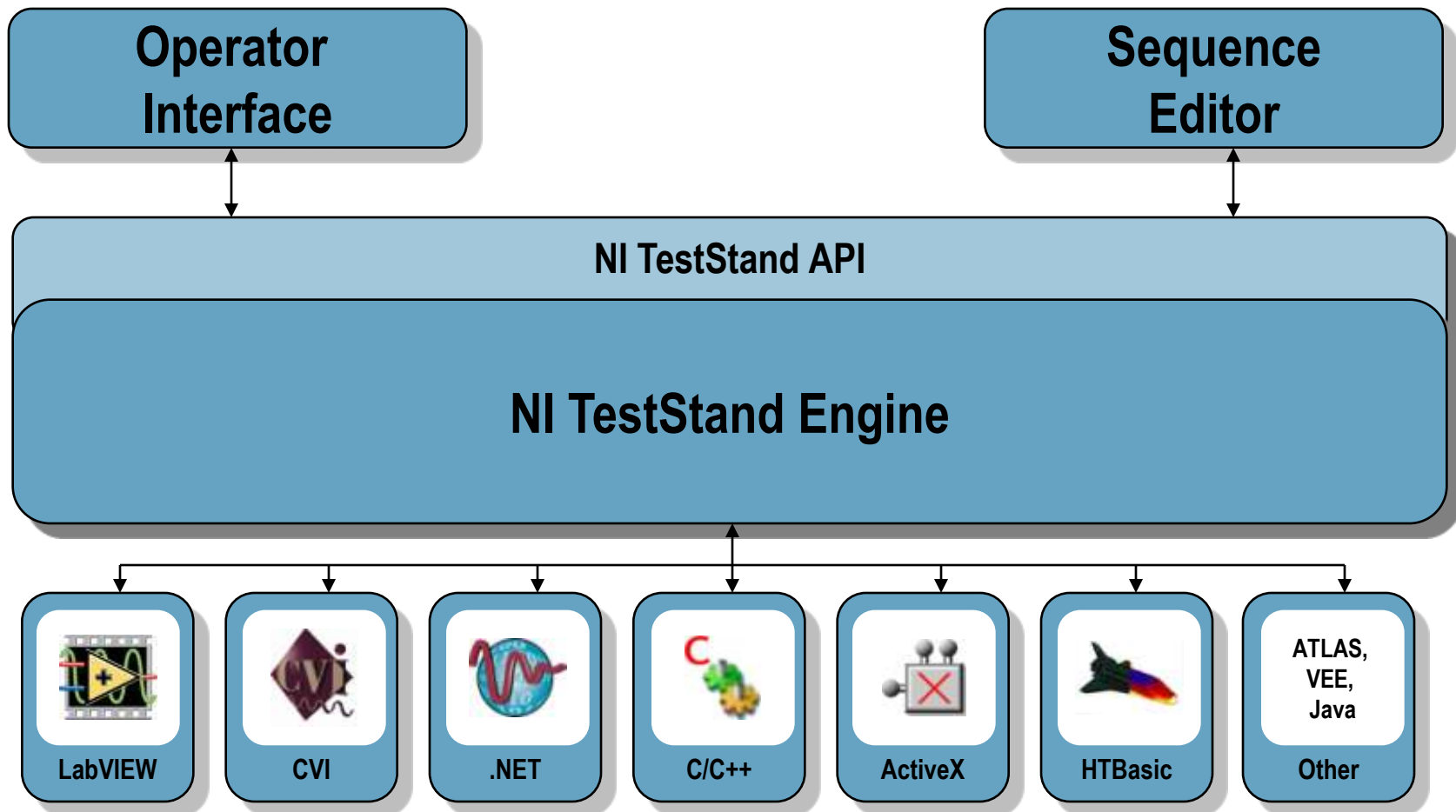


COTS Test System Software Architecture

1. Test executive
2. Test development software
3. Instrument drivers
4. Test instruments

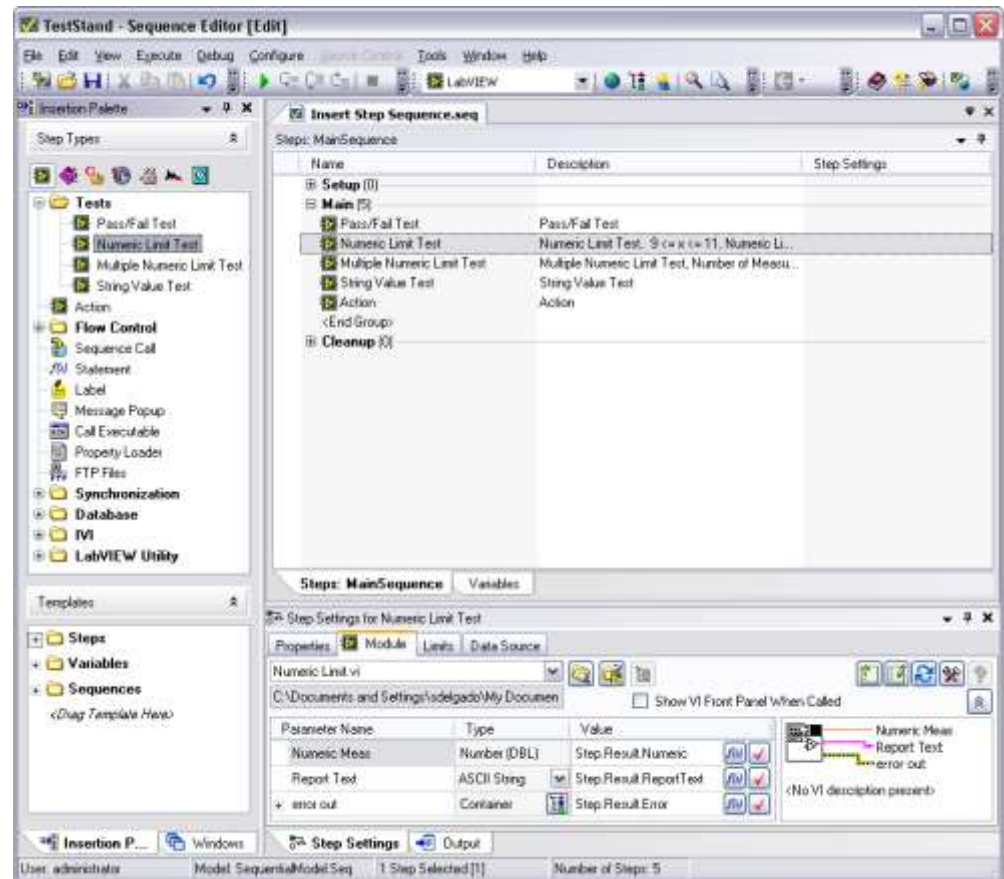


NI TestStand System Architecture



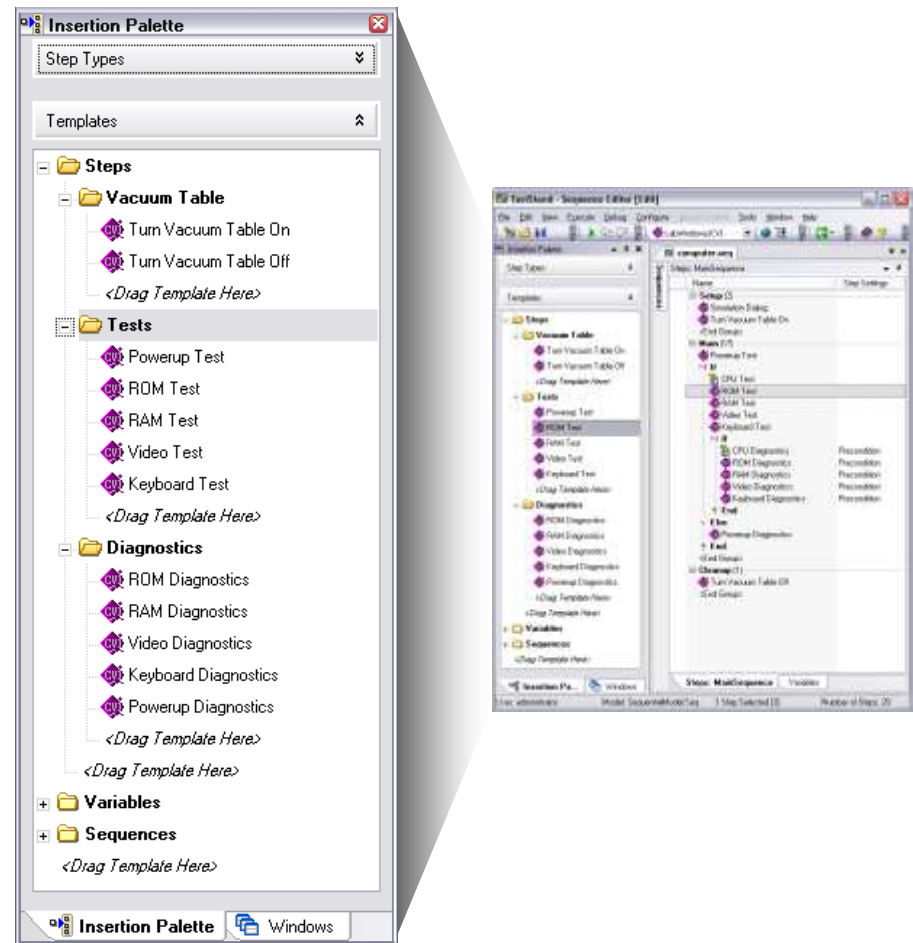
NI TestStand Sequence Editor

- Create, edit, manage test steps
- Execute and debug test sequences
- View and generate test result reports
- Deploy test systems
- Manage user permissions



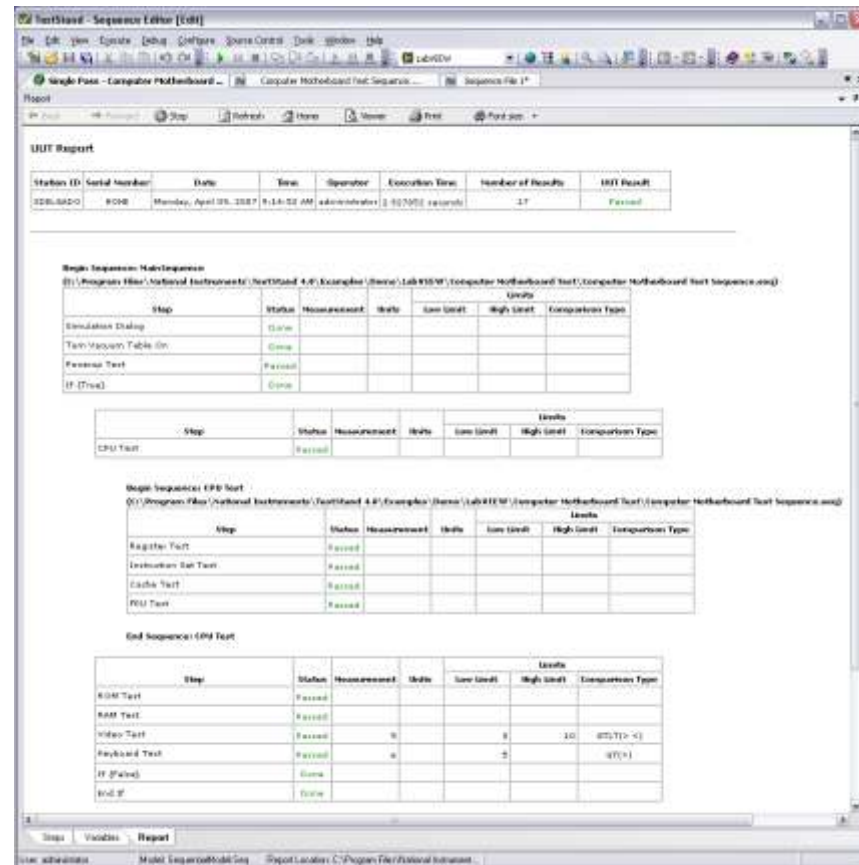
Preconfigured Step Templates

- Pane of predefined test elements
 - Steps
 - Sequences
 - Variables
- Build sequences easily by reusing test elements



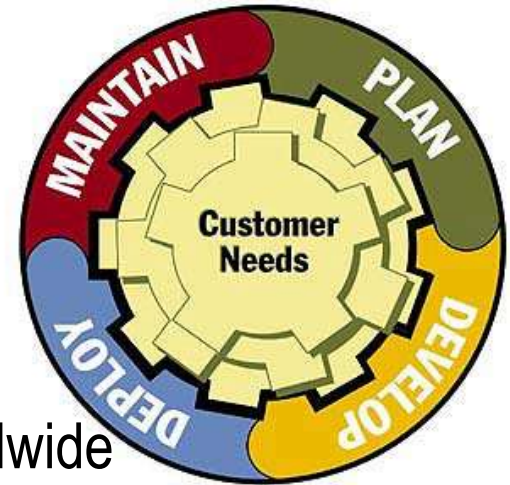
Report Generation

- Multiple formats including ASCII-text, ATML, HTML or XML
- A variety of ways to display data
 - Arrays as tables or Graphs
 - Import images to the report
- Fully customizable reports
- Custom result filtering
- On-The-Fly Reporting
- Varying color schemes



NI TestStand Services and Support

- **Technical Support**
 - Web support resources
 - Applications engineers worldwide
 - Premier Support
- **Instructor Led Training**
 - Regional and on-site courses available worldwide
 - Thousands of engineers trained each year
- **Certification**
 - NI TestStand certified developer
 - NI TestStand certified architect



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