Manual Testing is Here To Stay

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Quick Poll

What do you see as the main market drivers for improving your software quality process? (Tick all that apply)

1. Need for increased business agility
2. Increased complexity in IT environments
3. Need for increased competitive advantage
4. Increased business risks
5. Changing market requirements
Drivers for Improving Quality

- Need for increased business agility: 21%
- Increased complexity in IT environments: 32%
- Need for increased competitive advantage: 39%
- Increased business risks: 49%
- Changing market requirements: 65%
- Introduction of open source technology platforms: OTHER
Importance of Software Quality
AQM Objectives

- Improve visibility into a project lifecycle: 17%
- Improve collaboration on projects: 23%
- Increase QA productivity: 30%
- Ensuring compliance with industry regulations and organisational governance: 34%
- Fix bugs faster: 39%
- Shortening application delivery timescales: 41%
- Aligning IT with the goals of the business: 49%
- Reducing business risk with poor software quality: 69%
AQM Challenges

- Quality as a business imperative
- Agility is a business imperative
- Disparate teams
  - Departmental
  - Skill gaps
  - Off shoring
- Access to information
  - Project status
  - Reporting
- Manual nature of testing
- Automation is hard
Theatre of Operations

- High profile, key systems
- Required rapidly
- Increasing complexity
- Pressure on resources
- Pressure on timescales
- Commercial competition
- IT competition
Automation Pyramid

High Risk

Manual

Application

High Change

Automation

Stable
Quick Poll

Do you currently use a test automation solution to help you with your QA process?

1. Yes – high degree of automation
2. Yes – partially successful
3. Used to – not maintained
4. Tried – was not appropriate
5. Mostly manual
Part of the Problem or Solution?

- Scripting code driven
- High maintenance burden
- Limited audience
- Technical specialists
- Often shelf-ware

Sub Main
Dim Result(50) As Integer
Dim i As Integer
Dim NewResult as String
StartBrowser "http://pandora.ple.blah blah.co.uk/action.pega?f1000=SIGNON&profile=test3", "WindowTag=WEBBrowser"
Window SetContext, "WindowTag=WEBBrowser", ""
Window WMaximize, "", ""
delayfor 3000
Browser SetFrame, "Type=HTMLFrame;HTMLId=__pegMainFrame",""
Browser NewPage, "HTMLTitle=PANDORA - TEST1",""
Result(1) = EditBoxVP (CompareProperties, "Type=EditBox;Name=f5p1", "VP=Object Properties;Wait=2,30")
Result(2) = EditBoxVP (CompareProperties, "Type=EditBox;Name=f6p1", "VP=Object Properties5;Wait=2,30")
Result(3) = EditBoxVP (CompareProperties, "Type=EditBox;Name=f7p1", "VP=Object Properties6;Wait=2,30")
Result(4) = EditBoxVP (CompareProperties, "Type=EditBox;Name=f8p1", "VP=Object Properties7;Wait=2,30")
Result(5) = PushButtonVP (CompareProperties, "Type=PushButton;Name=|ACTION|=|APPR|", "VP=Object Properties8;Wait=2,30")
Result(6) = PushButtonVP (CompareProperties, "Type=PushButton;Name=|ACTION|=|BACK|", "VP=Object Properties9;Wait=2,30")
Result(7) = PushButtonVP (CompareProperties, "Type=PushButton;Name=|ACTION|=|ENTR|", "VP=Object Properties10;Wait=2,30")
For i = 1 to 3
  Select Case i
    Case 1
      InputKeys "robir"
      PushButton Click, "Type=PushButton;Name=|ACTION|=|ENTR|
      InputKeys "robir"
      PushButton Click, "Type=PushButton;Name=|ACTION|=|APPR|
```
Re-use is Key

- Process
- Knowledge
- Results
- Data

Automation meaningless without re-use
Why Manual Testing?

Addresses
- Unit testing
- System testing
- Regression testing
- UAT

Performed by
- Professional Testers
- SME’s
- BA’s
- End-users

Inadequately documented
Often the “Wild West”
Why Automation?

- Manual testing is slow
- Faster feedback
- Consistency
- Empower testers
- Confidence
- Documentation
Why Test Automation May Fail

- Extensive ramp-up time
- Lower on-going value

Programmatic Test Tools

- Skills Acquisition
- Build Script Library
- Automation partially available
- Script Maintenance Cycles

Effort

4-8+ months

Benefit 'Black-outs'

Shelf-ware Warning

Effort
Falling Back to Manual Testing

Programmatic Test Tools

- Skills Acquisition
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- Script Maintenance Cycles
- Automation partially available

Effort

- 4-8+ months

Time

- Less challenging
- More effort

Fall Back to Manual Testing

Benefit ‘Black-outs’ Shelf-ware Warning

Benefit

Original Software
Why do you have to choose?

Manual

Automation
Manual testing is a good source for
- Requirements
- Historical risk assessment
- Boundary conditions

Defect Records
- Often most detailed
- Important automation test cases
- But small percentage of test suite goal
SME’s & BA’s
- Know what to test
- Capture their knowledge
Jump Start Your Automation

- Build “automatable” test assets
- Dynamic manual testing
  - Document
  - Faster
  - Categorize
  - Collaborate
  - Do once
  - Ad-hoc or Scripted

Original Software
Move Into Automation

- Categorize manual test cases
- Convert to Automation
  - Automatically
- Enhance with
  - Variable data
  - Validation rules
  - Data analysis
- Maintain test cases
  - Deal with constant change
  - Self-healing
Success in Automation

- No need for technical specialists
- Ability to adapt to change
- Rapid process
  - Not another bottleneck
  - To run in parallel with manual testing
Original Technology