Innovations in Software Testing: the past, the present and the future

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Scope

- Intro to Innovation
- Why Innovate?
- Adjacent Possibilities
- Testing Innovations up to 2000
- Encouraging Innovation
 - Creative Thinking
 - Motivation
 - Knowledge
 - Diversity
 - Freedom

• Testing Innovations: Now & the Future

What is Innovation?

 Innovation can be seen as the useful application of 'new' inventions or discoveries

product innovations

(e.g. silicon chip)

process innovations (e.g. tdd) service innovations

(e.g. offshoring)

organizational innovations (e.g. tqm)

Innovation Types



Innovation Types



"You have to do a huge amount of testing, so your upfront costs are greater than ever before. But it's the bit I enjoy. It's exciting and fun."



Risk, Failure & Innovation

- "I have not failed, not once. I've discovered a thousand ways that don't work."
 - Thomas Edison
- "..failure is an inevitable part of innovation. It's evidence of risk taking. Where there is no failure, businesses are playing it safe by polishing that aging apple, which is getting less appetizing every day. As an essential part of the process, failure should be embraced."
 - Tom Peters, The Circle of Innovation



Burning Platforms → Microsoft

"We haven't been delivering innovation fast enough" Stephen Elop





Nokia Wins Apple Patent-License Deal Cash & Settles Lawsuits

June 2011

Why Innovate?

- More sales x2
- More profits **x2**
- Reduced break even time x2
- Increased efficiency
- Improved marketing
- Learn new skills
- Showcase skills
- It's fun & challenging

"Wealth in the new regime flows directly from innovation, not optimization; that is, wealth is not gained by perfecting the known, but by imperfectly seizing the unknown."

Kevin Kelly, Wired

Arthur Little Survey 2010

innovation excellence

innovation

success

Genius or Hard Work or Luck or ...?



"Innovation is work rather than genius,...and very much a matter of discipline." Peter Drucker

"Genius is one percent inspiration, ninety-nine percent perspiration."

Thomas Edison



"If I have seen further it is only by standing on the shoulders of giants." Isaac Newton





"Too often we forget that genius, too, depends upon the data within its reach, that even Archimedes could not have devised Edison's inventions." **Ernest Dimnet**





Gutenberg - Adjacent Possibilities



A Specific Phase for Testing



Independent & Destructive Testing



Testing across the full life cycle



Preventive Testing



Risk-Based Testing



Test Standards & Test Certification



Test Methodologies & Test Process Improvement



Testers as Innovators



Capability (and drive to innovate?)

Encouraging Innovation



Cloud testing



Open source test tools





'People testing'



Conclusion

- Intro to Innovation & Testing
- I would love feedback on the models as I would like to improve them
- And I need some more ideas for the future....

