



EMERGING TECHNOLOGIES  
FOR THE ENTERPRISE CONFERENCE

April 12, 2016

# Delivering Agile Methodologies and Emerging Technologies in Hostile Environments

---

Martin Snyder  
CTO, Wingspan Technology



# Hostile Environments



- Hostile to the very things we want to deliver
- Hostile due to nature, not malice

# Goals

1. Modern practice adoption
  - » Better efficiency
  - » Better value delivery
2. Emergent technology adoption
  - » More efficient solutions to present-day problems
  - » Better suited for modern ecosystems

# How Is the Environment Hostile?

- Rigid Processes
- Implied Requirements
- Status Quo

# Phone Comparison



	Samsung Galaxy S7	iPhone 6 Plus
Storage	32 GB	16 GB
Screen Size	5.1"	5.5"
Battery Life	~13 hours	~12 hours

# Phone Comparison



	Samsung Galaxy S7	iPhone 6 Plus	Iridium Extreme 9575
Storage	32 GB	16 GB	“100 entry address book”
Screen Size	5.1”	5.5”	“200 character display”
Battery Life	~13 hours	~12 hours	~3.5 hours
% Coverage	~7%	~7%	100%

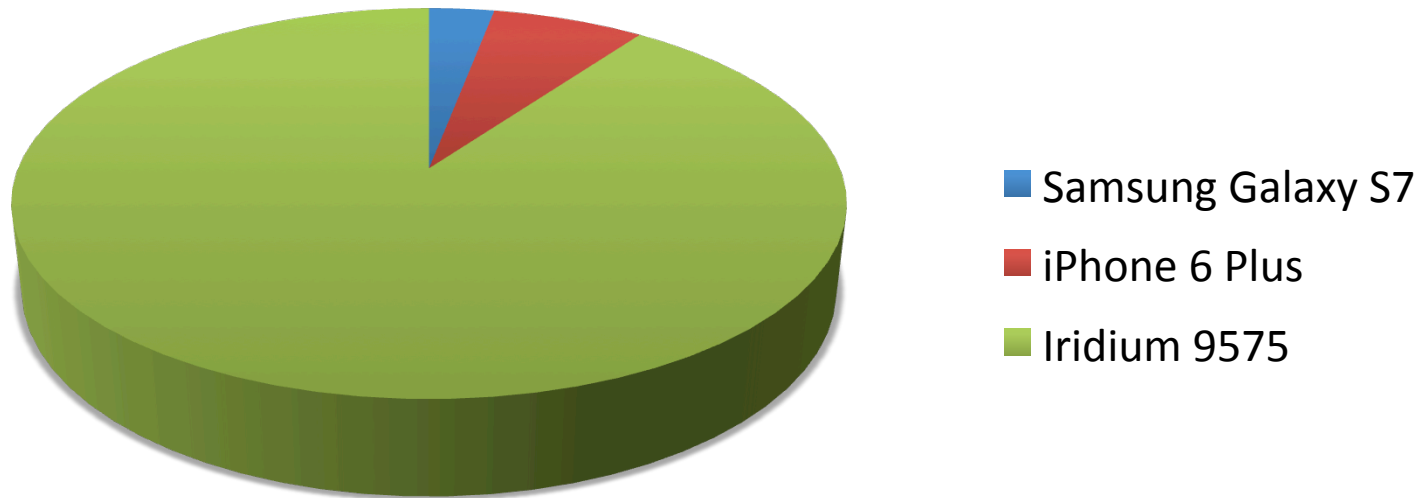
# Audience Participation



- Vote for which phone to take with you

# Have a Nice Trip!

## Audience Phone Preference



Requirements

Design

Implementation

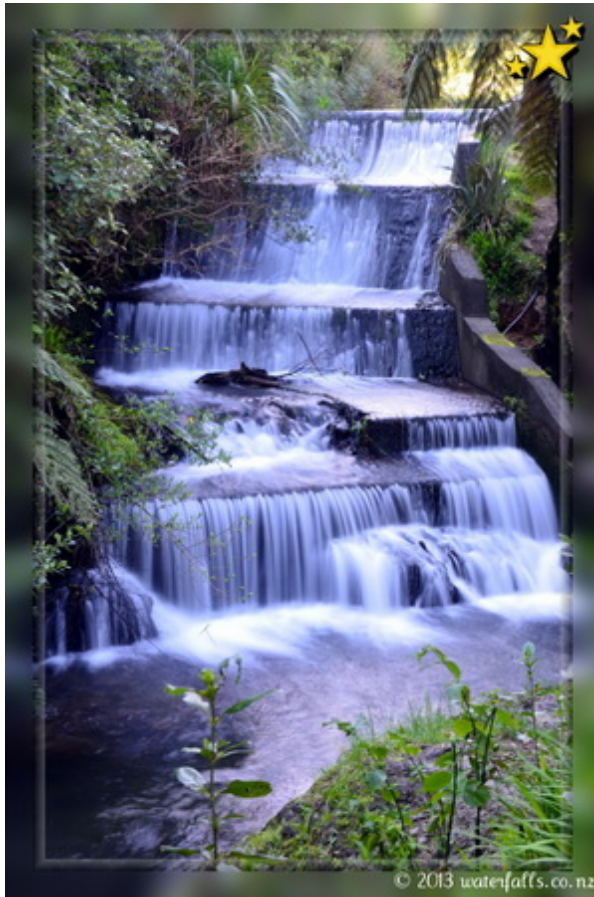
Testing

Deployment

Maintenance



# The Origins of Waterfall



- Organizational influences
- Regulatory influences
- Business influences

# Scenario 1 - Organizational

- BigCo has contracted with a vendor to fulfill certain job functions with a commitment for a certain number of positions on an annual basis.
- Project A must use those resources for those functions under the terms of the enterprise agreement.

# Scenario 2 - Regulatory

- TLA declares that you can do whatever you want so long as:
  - » Dated evidence exists for all actions
  - » Actions are done in order of dependencies (e.g. Requirements -> Development -> Testing)

# Scenario 3 - Business

- “The business” wants a new version to coincide with the on-boarding of a significant number of new users of the application.
- In order to train both existing and new users at the exact same time, they require that the application be delivered on a specific date.

# Recurring Themes

- Schedule first mentality
- Focus on interdependencies

# Technology Stasis



# Scenario 1 – Organizational Budget

- BigCo prefers broadly used technology platforms because the cost profile of those technologies are well understood

# Scenario 2 – Cost Sharing

- BigCo divides the cost of running systems between the internal organizations using those systems.



# Recurring Themes

- Costs related to operation as or more important than development efficiency.
- Per-project costs of adoption and operation heavily influenced by enterprise-wide adoption.

# Delivering Better Methodologies



- More development iterations
- Faster feedback loop

# Form a Deliberate Approach

God, grant me the serenity to accept the things I  
cannot change,

Courage to change the things I can,

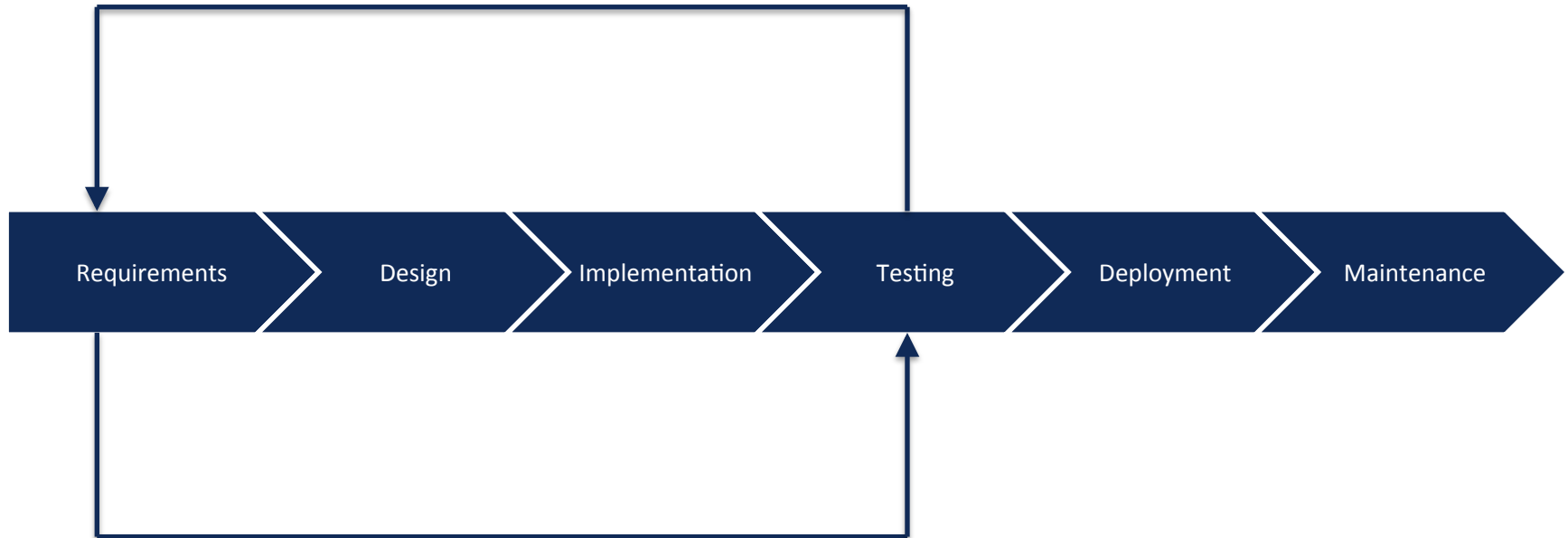
And wisdom to know the difference.

- Serenity Prayer by Reinhold Niebuhr

# Build an Improved Feedback Loop

- Recruit cross-functional team members directly
- Stand up a Continuous Integration Server
- The pitch
  - » Greater impact on the finished product
  - » Insight into what's coming
  - » Highlight the risk of having feedback ignored or deferred due to time constraints

# Alternative 1 – Deferred Delivery



# Alternative 2 – The Highway

## Project Management



## Software Development Methodology



# Implementation Strategies

- Vocabulary
  - » Find compatible terms to describe activities
- Process
  - » Develop reconciliation steps, if necessary
- Planning
  - » Allocate time for waterfall deliverables

# Delivering Emerging Technologies



- Tools
- Languages, Libraries and Frameworks
- Storage & Query Engines
- Analytics



# Operational Considerations

- On Premise
  - » Deployment
  - » (High) Availability
  - » Monitoring
  - » Backup/Restore
- Cloud Vendors
  - » Commodity vs. Specialized
  - » SLA Compatibility

# Other Considerations

- Maintenance phase
- Training
- Compliance

# Positive Examples

- git svn
- Play Framework
- React.js
- Solr in the Cloud
- Spark in the Cloud

# Final Words of Advice

- Key words:
  - » Agile
  - » Quality

# Thank You



EMERGING TECHNOLOGIES  
FOR THE ENTERPRISE CONFERENCE

April 12, 2016

Martin Snyder

» [@MartinSnyder](#)

» <http://martinsnyder.net>

Wingspan Technology, Inc.

» <http://www.wingspan.com>