Waterfall to Agile: Flipping the Switch
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Disclaimer

This presentation is **NOT** a recommendation to switch from Waterfall to Agile. It is an analysis of team dynamics if you are considering to switch or have already switched. The author would like to share his experiences which you may find helpful in making the change decision.

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Agenda

- Comparison between Waterfall and Agile
- Personality - Types vs. Traits
- Role changes for team players
- Making the transition
- Conclusions
- Q&A
Waterfall
- Big Bang Approach
- Well planned checkpoints and Milestones
- Planned but limited customer interactions
- Throw code over the wall to QA
- Break the code
- Gold plating – adding bells and whistles

Agile
- Incremental Approach
- Planned iterations
- On-going customer interactions
- Lets work together with QA engineers
- Help them fix it
- Get more story points

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Deliver a software product with intended *quality* on a planned *schedule* that meets a predefined *scope* using allocated *resources*.
The Change Process

Adaptation – team has decided to change
  ● Changing overtime
  ● Changing overnight

Mandate – management has forced the change
  ● Changing Overnight

External Entities
  Vendors, Service Providers

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Change Preparation

Training

- normally fast pace, a few days
- How to build epics, stories, backlog prioritization, tools
- Some high level processes

What gets overlooked?

The team dynamics.

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Personality Types – Type A and Type B

- Achievement oriented
- Impatient

- Easy going
- Relaxed

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Neuroticism – experience unpleasant emotions easily
Extraversion – seek simulation and enjoy company
Conscientiousness – self-discipline, competence, organized
Agreeableness – compassionate towards others
Openness to Experience – enjoy new experience and Ideas
Cognitive – analytical, abstract level thinking

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Key Players in Software Development

- Customer
- Product Owner (equivalent to Marketing Manager)
- Scrum Master (equivalent of Project/Program Manager)
- Development Team
- Quality Assurance Team
- Build and Deployment Team
Team Transition – Customer/Customer Surrogate

Waterfall
- Provide and align on requirements
- Accept product
- Undergo training

Agile
- Provide prioritized stories
- For each iteration:
  - Provide acceptance criteria
  - Validate test approach/test scenarios
  - Accept release
  - Undergo training

Surrogate

Driver + Analytical

Product Owner + Scrum Master

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Team Transition – Product Owner

**Waterfall**
- Facilitate requirements gathering
- Assure requirements understanding
- Finalize product requirements
- Assure delivery

**Agile**
Deliver value in each iteration:
- Align/Adjust backlog
- Be cognizant of customer perspective

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Team Transition – Scrum Master (the BACKBONE)

Waterfall
- Manage schedule
- Achieve checkpoints and milestones
- Assure delivery

(Prject / Program Manager)

Agile
- Orchestrate high value delivery
- Understand business and technical issue
- Be able to remove road blocks
- Maintain trusting relationship

Extraversion
Conscientiousness
Agreeableness
Openness
Humble and trusting

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Team Transition – Development Team

**Waterfall**

- Architect / design to requirements
- Code to requirements
- Add bells and whistles

**Agile**

- Develop product one story at a time
- Design / refactor as often as necessary
- Collaborate with others to produce a quality story
- Strive for story point and not for bells and whistles
- Integrate often

Neuroticism: Low
Extraversion: Medium
Conscientiousness: Medium
Openness To Experience: High
Cognitive Capability: High
Agreeableness : High

Extraversion: High
Openness : High
Conscientiousness: Very High
High
Cognition: High

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Team Transition – Quality Assurance Team

**Waterfall**
- Write test plan
- Develop test Case
- Test and submit defects
- Assess quality

**Agile**
- Understand each story – one story at a time
- Develop test cases from acceptance criteria
- Test story and submit defects
- Support defect resolution
- Collaborate with development team

Neuroticism: Low
Extraversion: Medium
Conscientiousness: Medium
Openness To Experience: High
Cognitive Capability: High
Agreeableness : High

Extraversion: Very High
Openness : Very High
Agreeableness: High

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Team Transition – Build and Deployment

**Waterfall**
- Bing-Bang Approach
- Get it right in a short time

**Agile**
- Build and Deploy in each sprint
- Shorter time to get it right
- Consistency and repeatability Highly Automated

Neuroticism: Low  
Extraversion: Medium  
Conscientiousness: Medium  
Openness To Experience: High  
Cognitive Capability: High  
Agreeableness: High

Extraversion: Medium  
Cognitive capability: Very high  
Conscientiousness: Medium  
Agreeableness: Very High

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Making Transition – Evaluate Need and Potential

- Return on Investment
  - Reduced cost
  - Shorter Schedule
  - Better Quality
  - Magnitude of Delta

- Speed of Transition
  - Adaptation vs. Total Immersion

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Peer Evaluation
Commitment to Change – Pushback, Passive Resistance

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Making Transition

- Management Understands Change Impact
- Mentoring and Coaching available until change has taken a hold
- External entities are committed to support the change
- Measuring Success –
  - Reduced resistance
  - Active participation in Scrum
  - Genuine effort level

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Waterfall and Agile development methodologies are vastly different
- Switch only if there is an ROI
- Consider adaptation as opposed to immersion if possible
- Team needs to possess certain characteristics to make agile successful
- Team should evaluate itself and make an effort to have right individuals in the key roles
- Personal changes will be required
- Measure success
Thanks!

Questions?

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