A Guide to Critical Success Factors in Agile Delivery

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A bit about me

- **6 Years – USAF:** NSA Operations, then quick reaction capabilities deployments
- **8 Years – EDS:** Systems Engineer, Project Manager, Portfolio Manager on large business solution delivery implementations at General Motors
- **17 Years – IBM:**
  - Rapid/Agile/Lean project, Program Manager in partnership with Ford
  - Was a PMI and IBM Certified Project Manager, now an IBM Certified Consultant
  - Have consulted on 400+ engagements and worked with many others in IBM to evolve our Agile/DevOps capabilities (Assess, Innovate, Transform)
  - Led our first **troubled Agile** assessment at Regence Blue Cross in 2005
  - Focused on U.S. Federal Agile exclusively for the past 4.5 years including National Archives, USCIS, Army Logistics, FEMA, SAMHSA, GSA, others
  - Worked with our IBM Center for the Business of Government to develop a **guide** to help agencies learn some lessons based on our experience
  - I **strive** to build bridges between Agile and Traditional perspective

*Net-net: I have stuck with “Agile” because when it is done with discipline, and to scale, it brings all parties together, leveraging proven practices, to create innovative solutions that delight my customers (but I have A LOT of scars that I would like you to avoid)*
Ten (not THE Ten) Critical Success Factors in (US Federal) Agile Delivery

- One: Changing the Acquisition Process to Support Agile Delivery
- Two: Integrating Executive Champions and Stakeholders into an Agile Initiative
- Three: Using Existing Knowledge and Not Reinventing the Wheel
- Four: Implementing More Verbal Communication and Dashboards
- Five: Including the Right Product Owner and Mission Subject Matter Experts
- Six: Implementing Reviews that Support Agile Delivery
- Seven: Selecting Top Staff for Lead Roles in the Agile Project
- Eight: Planning for IT Infrastructure and Tooling Needs
- Nine: Conducting “Just Enough” Upfront Work Before the Start of the Agile Project
- Ten: Integrating Critical Specialty Skills to Support Agile Teams

*These CSF’s address Complex Project Management best practices (although in support of Agile principles and practices)*
One: Changing the Acquisition Process to Support Agile Delivery

- **Planning:**
  - Include Mission, IT, and procurement in planning to define intent and assure that all entities can contractually act as one team
  - Define initial period of time for Solution Definition / Release Preparation
  - Include language that clearly allows for flexible scope, fixed resources, fixed time
  - Consider all aspects of this briefing (Organization, releases, cost vs. budget vs. time, reviews, number of Agile teams, types of resources)
  - Rethink minimal years of experience for Agile developer roles at least

- **Selection:**
  - For larger initiatives, who is capable of playing the role of systems integrator?
  - Do not ask for resources to be Scrum “Certified”

- **Post Award:**
  - Mission, IT and procurement should meet periodically to monitor program success

*If a client asks for traditional Project Management and waterfall processes, then mixes in some Agile terms, it makes it difficult to plan or compare RFP responses*
Two: Integrating Executive Champions and Stakeholders into an Agile Initiative

- Must be willing and capable of challenging the status quo and removing barriers (Typically both CIO and Mission/LOB leadership is required)
- Must actively participate (in a flatter delivery organization) and empower staff
- A Charter (“A charter?…that isn’t Agile”) to help shape and communicate executive vision and expectations
  - Document the “Vision” of the Agile initiative
  - Define Goals, Objectives
  - Context diagram of scope
  - Organization
  - Impacted entities
  - Roles & Responsibilities of stakeholders and their staff required to deliver
  - Define a clear and open path to executives for escalation
  - Multiple levels for large initiatives

Stakeholder planning for any initiative is essential...especially for an Agile initiative for a client who is likely to have organizational and cultural issues that conflict with Agile delivery
Three: Using Existing Knowledge and Not Reinventing the Wheel

- Agile Manifesto Values and Principles are a point in time guideline
- There have been a lot of great resources and expertise generated before and since the Manifesto
- Retrospectives are great but you can quickly pre-assess and plan to avoid many known challenges
- Hire / partner with people who have implemented to the scale you desire and can leverage proven frameworks (or tailor to fit yours)
Four: Implementing More Verbal Communication and Dashboards

- **Daily:**
  - Daily Agile team Scrum, and Scrum of Scrum meetings – Stories, tasks, impediments
  - Dashboards / tooling that all program participants can access for status, major impediments, backlog of evolving “stories”

- **Weekly:**
  - Face to face between Mission Program Lead, CIO, Partner executive(s)
  - Product Management Team discussion of current and next release

- **Ongoing joint/facilitated work sessions:**
  - Group backlog grooming to refine epics, stories, acceptance criteria, assumptions
  - Retrospectives
  - Demonstrations
Five: Including the Right Product Owner and Mission Subject Matter Experts

Product Owners / SME’s should be the **RIGHT** representative's from the mission(s) who are:
- Knowledgeable / experienced in the agency mission
- Understand and are empowered to implement the charter (does it change the mission?)
- Respected and can broker consensus when necessary
- Capable of working directly with each Agile team, other parties and make decisions

- Lean product management that considers (if not equally) all stakeholders (no voting!!)
- Demonstrate / release to the broader user community to validate and obtain feedback
Six: Implementing Reviews that Support Agile Delivery

Baseline includes estimates and commitment to “Features” with Story assumptions, T-Shirt estimates (S,M,L), and fixed budget estimates (Cost of each Agile team) and support per “Sprint”

Prior to each Sprint, each team estimates Story Points and commits to stories they will deliver that Sprint. After each Sprint, Actual Stories / (Points) delivered and demonstrated is measured

Achievement of real earned value and comparison of baseline vs. actuals as Release is deployed to end users. Teams frequently refine the scope of features and stories through discovery throughout the release, so expect some change, and increase in stories / scope but if way off, then that typically means that improvements to Release Preparation activities are in order

* This is an example 16 week release cycle…a legacy DevOps solution was implemented, however each release included a final Release Integration Sprint
Seven: Selecting Top Staff for Lead Roles in the Agile Project

- Leaders within (or you bring into) your organization who are able to:
  - Take the vision of the champions and stakeholders and see it through
  - Execute and lead the charge
  - Can broker support from other organizations required for success
  - Willing to challenge the status quo / escalate when necessary

- Partners:
  - Experience planning and delivering using Agile (not just Agile trained/skilled)
  - Skills commensurate with the scope and scale you require
Eight: Planning for IT Infrastructure and Tooling Needs

- Tools that build, deploy, test, release code from many Agile developers and teams
- Tools that perform automated scans that identify risks or non-conforming code early (e.g. code reviews, security scans)
- Fit to purpose environments that are production-like and can be quickly provisioned

*These continuous integration (e.g. DevOps) tools require humans to plan how they will be used, optimize their use, and assist many Agile teams*
## Nine: Conducting “Just Enough” Upfront Work Before the Start of the Agile Project

**Plan iteration**
- Initiate starter team (first iteration) and train them
- Plan work sessions using workshop calendar
- Select / Refine templates
- Schedule stakeholders for work sessions

**Manage / Execute Iteration**
- Develop project charter including release and sprint timing
- Review relevant, existing process and design assets
- Write, prioritize and elaborate themes, capabilities (epics stories) and stories
- Execute “spike” stories that have high risk or cross-team impact
- Define Agile technical standards and environments
- **Plan for desired release capacity (x Agile teams of y size with z skills, iteration timing)**
- Staff, train and onboard Agile teams
- Setup environments and facilities

**Assess Iteration**
- Communicate to stakeholders in ceremony
- Commit to release (PowerPoint)
- Light-weight document review / approval
- Retrospective

- **A few days** (If staff is on hand)
- First iteration: **Weeks**
- Subsequent iterations: **In parallel to current release**
- **A few days**

- **What is “just enough” for your situation?**
- **How much budget will your executives allow you to burn before you determine velocity?**

*Large projects may require more than a short “Sprint 0”*
Ten: Integrating Critical Specialty Skills to Support Agile Teams

**Product Management**
- Product Director
- Representatives from other stakeholder entities

**Product Stakeholders**
- Executive Steering Committee
- Product Management Team
- End Users
- Other Government Agencies
- External partners

**Agile Delivery Support / Integration**
- Requirements / BPM / UI
- Architecture
- Continuous Integration
- 508 / IV&V Testing
- Legal / Privacy
- Testing / Performance
- Continuous Integration
- Stakeholder Readiness / Training
- Agile Coaches / Advisors
- Security

**Agile Team 1**
- Product Owner / SME
- Agile PM / Scrum Master
- Lead Developer
- Business Analyst / Systems Engineer
- Developers
- Test Specialist

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- GUIDE Agile teams in use of standards or perform niche skill roles
- Supporting backlog grooming for next release
- May execute “spike” stories
Summary and final questions

- We spoke about critical success factors that I have seen or implemented in successful, large scale (organization of projects) Agile delivery initiatives, or have been absent in troubled Agile delivery implementations.

- Please consider these when you PLAN or assess your Agile implementation.

- If you need help to expedite your success with large scale Agile delivery, contact me:
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