Core Admin Platform Program "CAP"
An AGILE Journey

September 24, 2013

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Today's Agenda

- **Introductions**
- **Background**
- **Why Agile?**
- **How we got started with Agile**
- **How we adapted Agile over time**
- **How our culture changed**
- **Challenges**
- **Tips & Tricks**

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Introductions

- JoAnn Boehm – CAP Program Manager (IH)
- Harshad Desai – CAP ScrumMaster (CTG)
- Erin Keding – CAP ScrumMaster (IH)
- Anne LaVigne – CAP Business Lead (IH)
- John O'Keefe – CAP IT Lead (IH)

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Introductions (cont'd)

- Our focus today will not be on the technical details of Agile and Scrum; i.e. the "how to"
  - *Note: The PMI Buffalo Chapter offers prep classes if you are interested in getting your PMI-ACP (Agile Certified Professional) certification*

- Our focus today will be on how IH implemented Agile/Scrum, how IH adapted its use of Scrum over time, and tips & tricks gathered throughout the journey

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Background

- **CAP = Core Administrative Platform**
  - Multi-year, multi-million dollar program
  - Primary goals:
    - Replace legacy claims processing system
    - Improve/transform business processes
  - Impact:
    - Majority of core business processes, and therefore functional departments
    - Integrations and reporting with multiple partners/applications
    - Decommissioning multiple applications

- **Up to this time, IH used a traditional (i.e. waterfall) PM methodology**
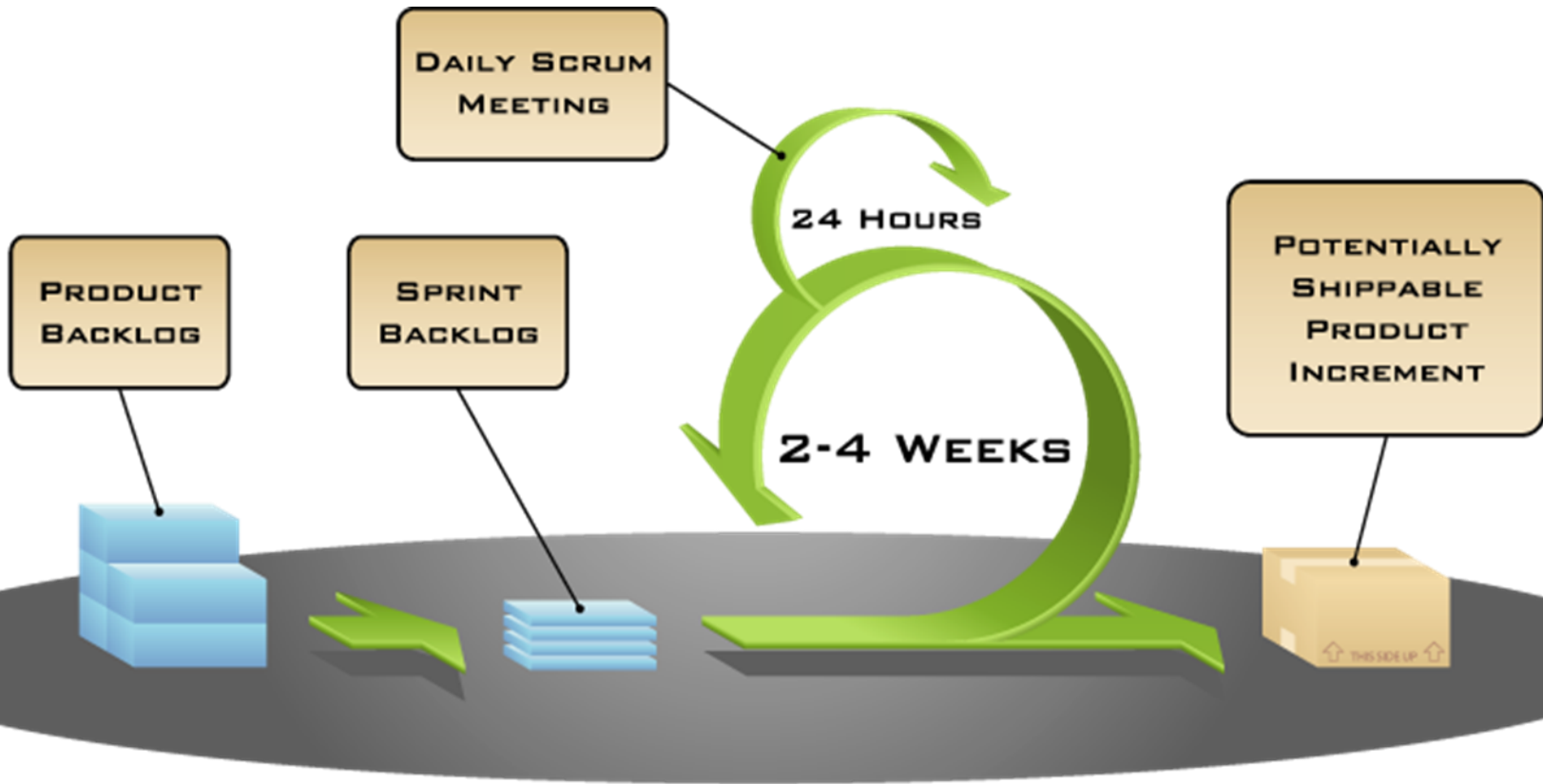
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Why Agile?

- Senior Management was interested in exploring the opportunities that Agile would provide from both project management and development perspectives

- During CAP's solution selection process, project management and software development methodologies were discussed with the various vendors
  - Our chosen vendor indicated they use Agile for both

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What is Scrum?

- Scrum is an agile process that allows you to focus on delivering the highest business value in the shortest time through iterative and incremental development, where requirements and solutions evolve through collaboration among self-organizing, cross-functional teams

- The business sets the priorities. Teams self-organize to determine the best way to deliver the highest priority features

- Every two weeks to a month you can see real working software and decide to release it as is, or continue to enhance it in another sprint

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Agile Scrum Cadence

Image available at www.mountaingoatsoftware.com/scrum

How we got started with Agile

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Vendor Collaboration

- During Planning phase, IH and primary Vendor agreed upon:
  - Management/organization of work effort into features/stories
  - Cadence – process we would follow
  - Ownership/Responsibility - Who would do what
  - How we would take delivery of software

Introducing Agile to the CAP Team

- **Partnered with an Agile Coach**
  - Recognized that we needed help "standing up" agile
    - With >100 people working on the program, we knew we would have to stand up many teams
  - Chose Lean Dog (Cleveland, Ohio)

- **Performed formal Agile education**
  - Searched for <u>local</u> ScrumMasters >> no strong and available candidates existed back in 2010-2011
  - Certified our PMs as ScrumMasters
 - Certified process/business leads as Product Owners

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Introducing Agile to the CAP Team (cont'd)

- **Introduced basic "cadence" to teams**
  - Sprint planning >> daily scrum >> sprint grooming >> sprint review >> sprint retrospective

- **Sprint Planning sessions held to introduce Feature/Epic/Story/Task concepts and develop team backlogs**

- **Developed "IH-ified" Agile presentations**
  - Agile 101, Product Owner 101, ScrumMaster 101, Story Writing, Work-in-Process (WIP) and other role playing sessions to demonstrate concepts
  - Developed "team member orientation" sessions
    - CAP 101, HealthRules 101, Agile 101

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Introducing Agile to the CAP Team (cont'd)

Other Organizational Change Management (OCM) activities performed:

- Myers-Briggs assessments
- Change Management training
- Team Health assessments
- Teambuilding opportunities for scrum teams and total team
- Agile assessment by Role

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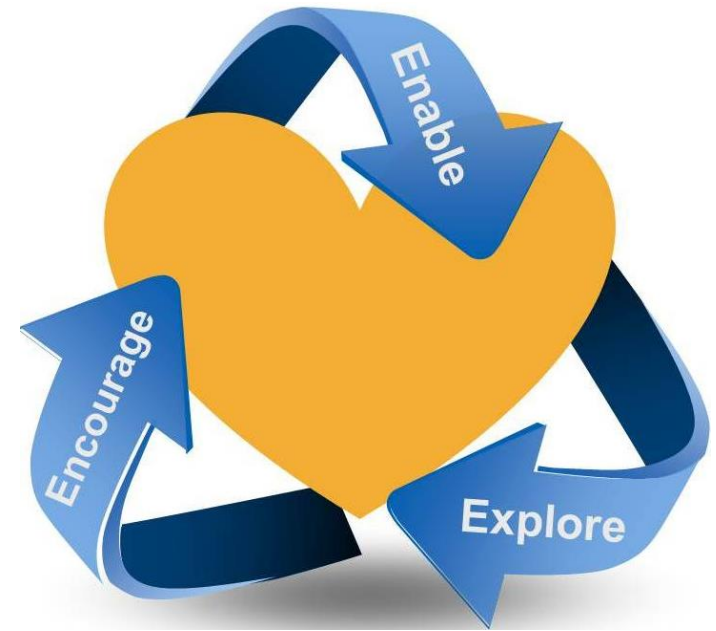
Introducing Agile to the CAP Team (cont'd)

- **Built a Library of Education Materials:**
  - Agile/Scrum Published Literature
  - CAP Training Class Presentations
  - LeanDog/Rally/Ruby Documentation
  - Technical Wiki
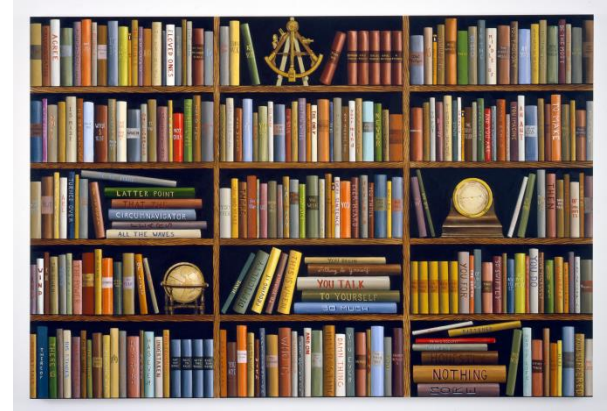
- **Some team members participated in WNY Agile User Group sessions**

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Introduced CAP & Agile to the IH Organization

- Presented CAP 101 "lunch 'n learn" sessions – 565 employees attended

- Performed corporate Communications – messages from CEO, COO, etc.

- Held "An Intro to Scrum" lunch session for organization

- Developed CAP 201, etc. presentations – focused on impact to associates' roles and responsibilities

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How we adapted Agile

Scrum Ceremonies
2-3 Months after Sprinting Began…

- Sprint Planning

- Daily Scrum

- Scrum of Scrums (SOS)

- Sprint Grooming

- Sprint Review

- Sprint Retrospective

- Program Alignment Wall (PAW)

* Red ceremonies – introduced by IH after initial stand up

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Cadence, Feature Focus & Orientation
6 Months after Sprinting Began…

- Evaluated what was working well and what was not, and began adapting some aspects of our cadence and artifacts

- Re-trained team to reinforce new Cadence
  - Ex. Reinforced INVEST model for story writing
    - Independent, negotiable, valuable, estimable, small, testable

- Changed our focus and orientation from Processes to Features
  - Feature = a significant piece of functionality that delivers business value
    - This allowed us to ensure that multiple teams working on one business feature collaborated and communicated better
    - We reorganized our work effort accordingly and introduced an additional ceremony to perform Feature Grooming

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Kanbans…

- A Kanban is a work system that pulls work through, based on demand.

- Have conversations around delivery, dependencies, and blockers.

- Priority moves from right to left, top to bottom.

- This Kanban shows features (large bright pink Post-its) + epics (multi-colored Post-its in team colors).

- Status queues are Backlog, Analysis, WIP (Work In Progress), and Done.

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Other Adaptations

Since then…

- Release 1 Retrospective – we combined teams that were collaborating on a feature, to reduce overhead and encourage greater communication

- Have allowed teams that are winding down the latitude to meet less frequently than daily

- Have eliminated PAW huddle on Sprint closing weeks

- Have adapted testing and sign-offs to meet team and organizational requirements

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How our culture changed

Aspects of Culture

- Environment
- People & New Skillsets
- Process
- Technology & New Tools

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Environment

Highest Impact aspect of program:

- Co-location
- High noise level is the norm (and is a good thing!)
- Shared workspace
- Continuous improvement
- Unending change
- Value based compromise
- Everyone equal (associate & consultant)
- "Let it go" (no admin, no office, no privacy, etc.)

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People & New Skillsets

- **Technical Skillsets**
  - Story Writing: Agile Requirements, INVEST

  - Acceptance Criteria: for features, epics and stories

  - Agile Backlog tracking & Status reporting: New processes, Agile PM software

  - SOA: Architectural Design and Service Development

  - Automated Testing: Cucumber, Acceptance Test Driven Development (ATDD), ALM software

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People & New Skillsets (cont'd)

- **Soft Skillsets**
    - Communications/Collaboration: highly interactive
    - Team Centric: cross functional, timely decision making, self organizing
    - Working in the "grey": working with many unknowns, innovation, trusting the process to get you to "done"
    - Adaptability/flexibility to change: constant, must respond, anticipated, time boxing
    - Drive for slicing to deliver business value: building and testing thin slices across process
    - Commitment
    - Accountability

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People & New Skillsets (cont'd)

- **Soft Skillsets – by Role**
  - Business Owner: Product Owner, leading cross-functional team, need to understand more technical aspects of work effort
  - PM: ScrumMaster, servant leadership, facilitator, collaborator
  - BA: soft skills, switch from RSD to Stories/Tasks
  - QA: faster pace, longer engagement (test early and often!)
  - Architect: proactive, lead developers
  - SMEs: learning technical skills (ex. testing)

  * Whole Team – ex. anyone can write a story

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Process

- Shift from traditional / waterfall SDLC to Agile
- Need to adapt governing processes also, for example:
  - Enhancement (Gap) Management
  - Defect Management
  - Project/Program Metrics & Reporting for schedule, scope, resources and budget

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Waterfall vs. Agile

Waterfall - Project

Requirements	Solution Review	Development	QA	Production
Artifacts: **- BRD** - BRD Approval Work Effort: BA working with business to create BRD document	**Artifacts:** **- BRD** **-SAD** **- TCD** **-Test Plan** **-Solution Review Minutes** Work Effort: Architect working with business owner and SME	Artifacts: - Code **- Code Review Sign-off** Work Effort: Development Unit testing Developer working with peer on review	Artifacts: **- CMR to promote to QA** **- Executed Test Plan** **- Signed success UAT** Work Effort: QA working with business on UAT	Artifacts: **- CMR to promote to Production** **- Application Workbook** - Implementation Plan Work Effort: Developer creating CMR – QA/ Manager approval

Sprint Planning	Story Analysis	Iterative Development	QA	Production
Artifacts: **1** - Product Backlog - Sprint Backlog **-Accepted User Stories to be worked on by team during sprint** Work Effort: -Creation of Product Backlog -Spring Planning Meetings	Artifacts: **-User Stories** **-Acceptance Criteria** Work Effort: -Decomposition of User Story -Estimation of work effort for each task -Creation of test /use cases	Artifacts: **2** -Code **-Test / Use Cases** **-Testing Results** Work Effort: - Development - Testing - Show and Tell Demos with team and Product Owner	Artifacts: **3** -Working increment of software **-Product Owner Sign-off** **-Executed UAT Test Plan** **-CMR to promote to QA/Model Office** Work Effort: - UAT Testing (user and automation)	Artifacts: **4** -Working increment of software **-Product Owner Sign-off** **-CMR to promote to Production** **-Application Workbook** Work Effort: - UAT Acceptance

Agile - Sprint

Bold = audit control point

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Where Agile & Waterfall Intersect
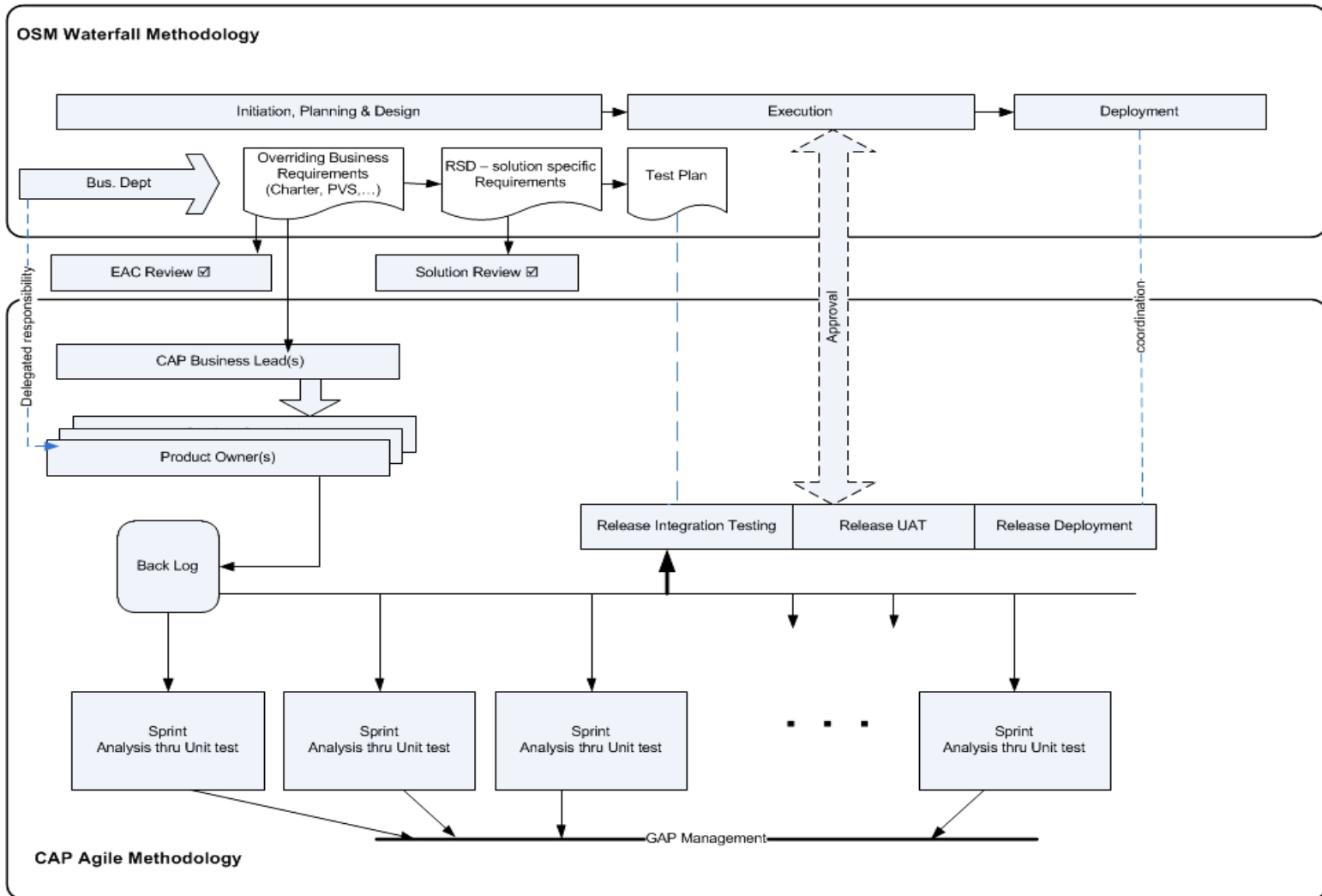
Where Agile & Waterfall Intersect (cont'd)

Waterfall

- Definitive Requirements with well established boundaries
- "rework/refinement" cost prohibitive

Examples:

~ hardware installation
~ packaged system installs

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- Emerging requirements where clarity can be gained by experience
- Value added with intermediate deliverables

Examples:

~ new software development
~ system configuration
~ business rule definition

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Program Metrics
Sample Burn Up Chart

CAP Burn-up

Legend:
- Projected Build + UAT Growth
- CAP Project Total UAT Planned Hrs - R1
- CAP Project Total Build - R1 only
- Hrs Not Accepted - R1
- Accepted - R1
- Total Velocity - R1 Accum
- Projected Velocity
- Projected Pess. Velocity

Y-axis: Hours (0 – 140000)
X-axis: Sprint # (3 – 29)

UAT

Target Go-Live

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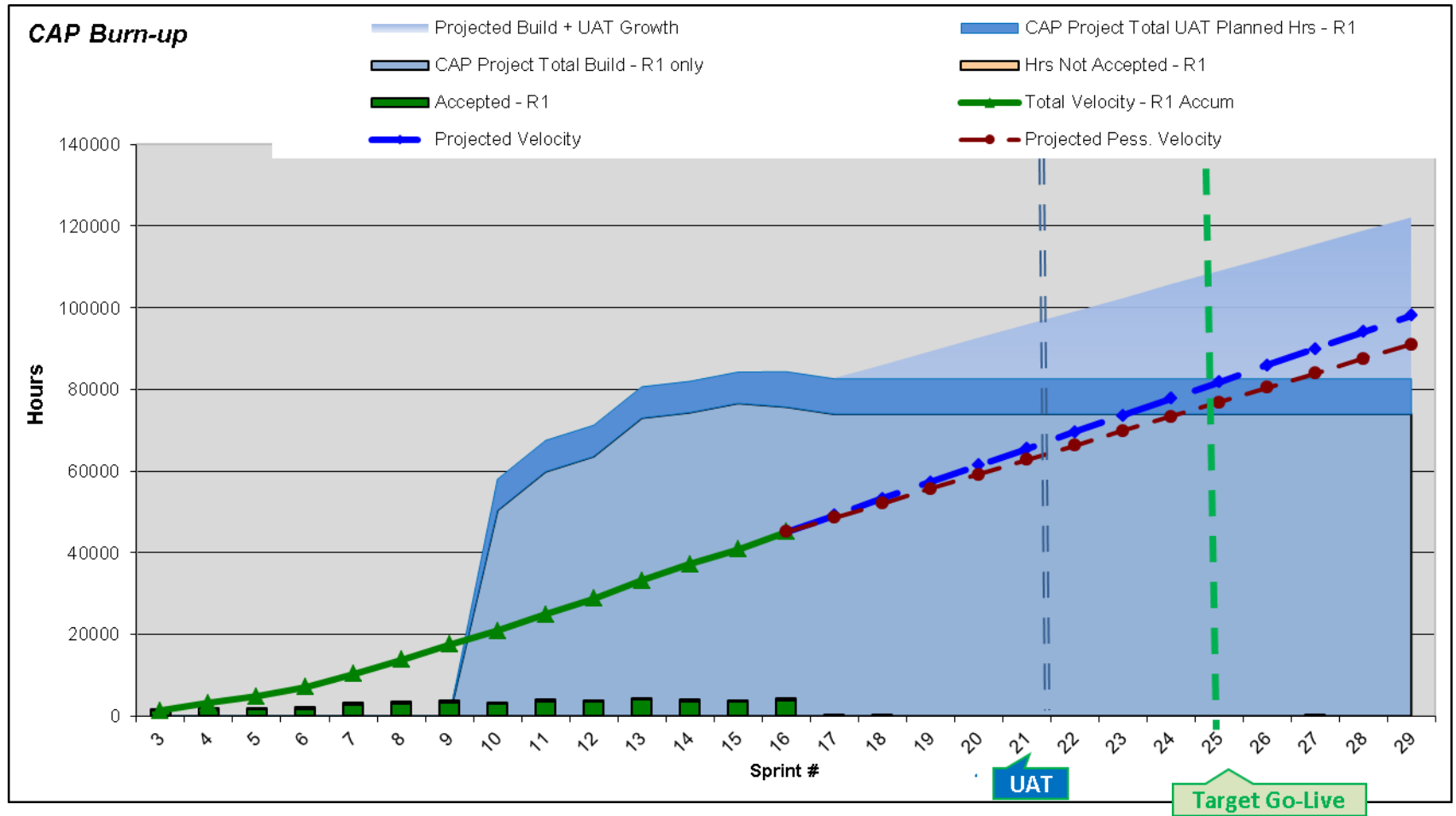
Program Metrics (cont'd)
Sample Team Velocity in Stories & Hours
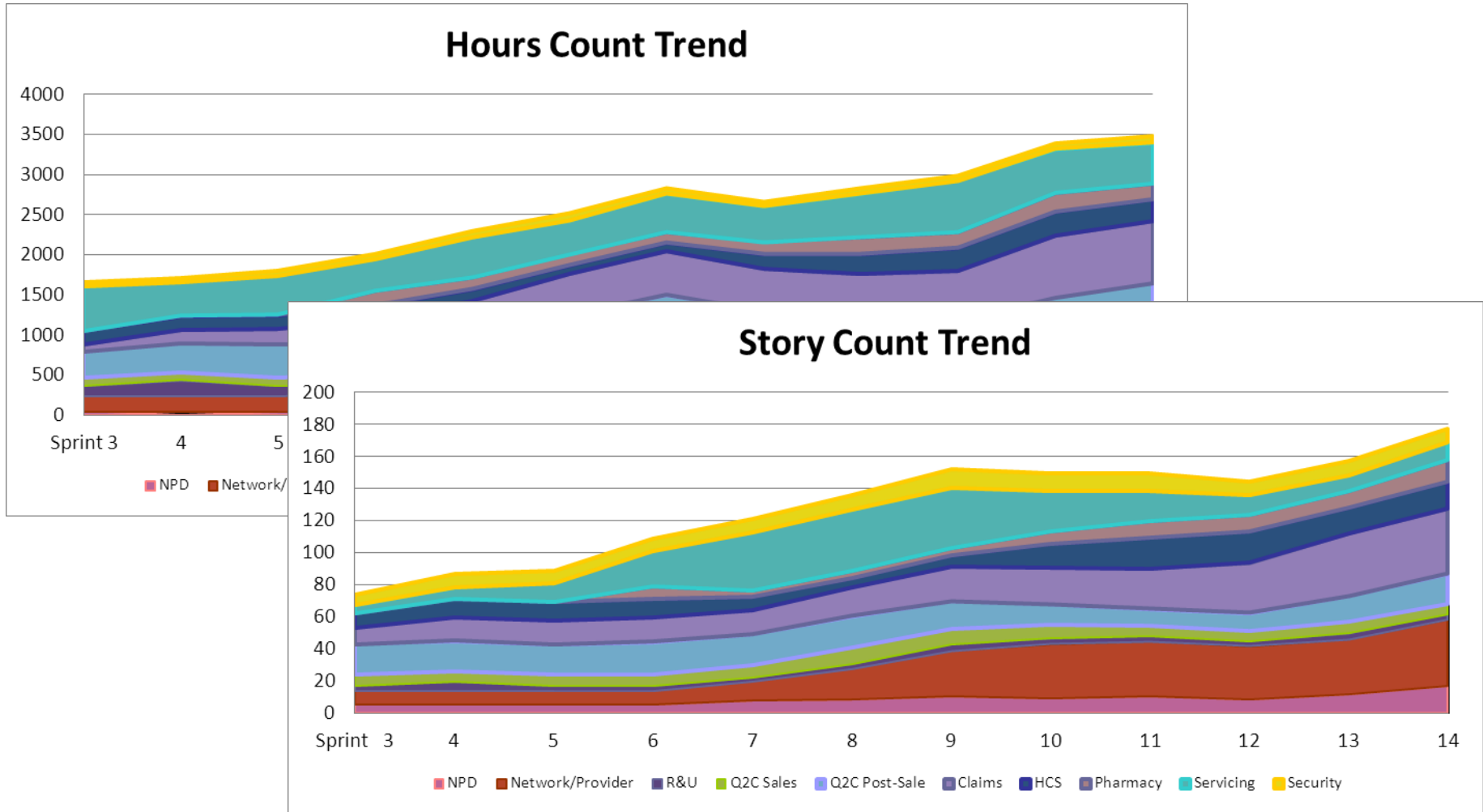
Program Metrics (cont'd)
Sample Cumulative Flow

- **Reporting Levels**
  - Team
  - Feature
  - Program

Iteration Cumulative Flow Diagram
New Product Development ↓ Sprint 17
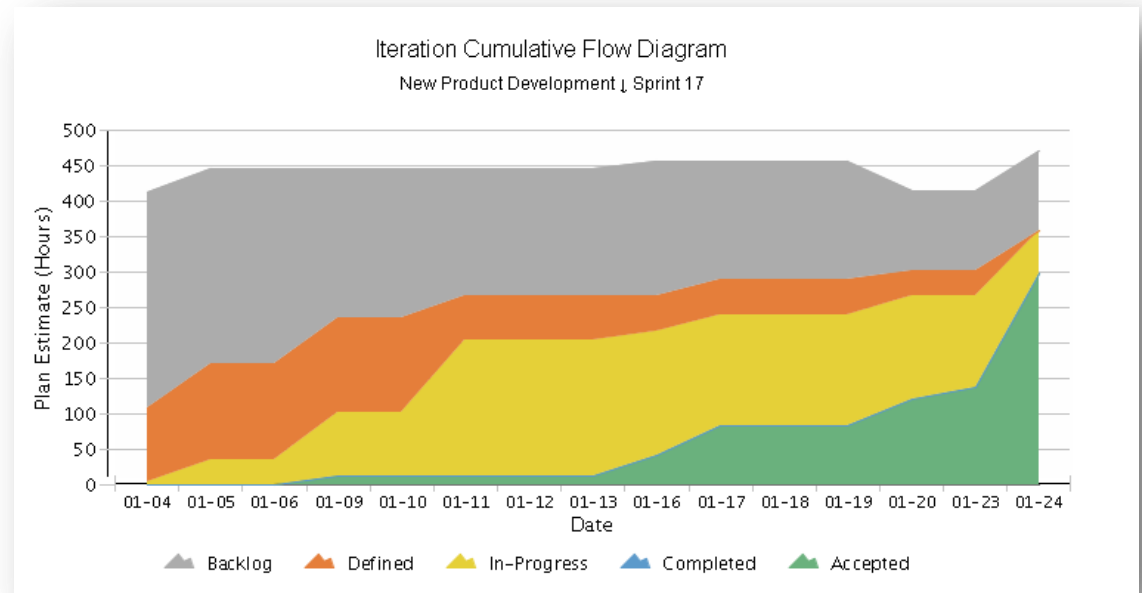
Technology
Agile PM Tools - Rally vs. MS Project

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Flexible, Fixed Time, Multiple Users simultaneously, Easy to learn and use, Agile terminology

*Note: There are many Agile PM tools available for your use. IH's use of Rally is one example.

Technology (cont'd)
Other New Tools…
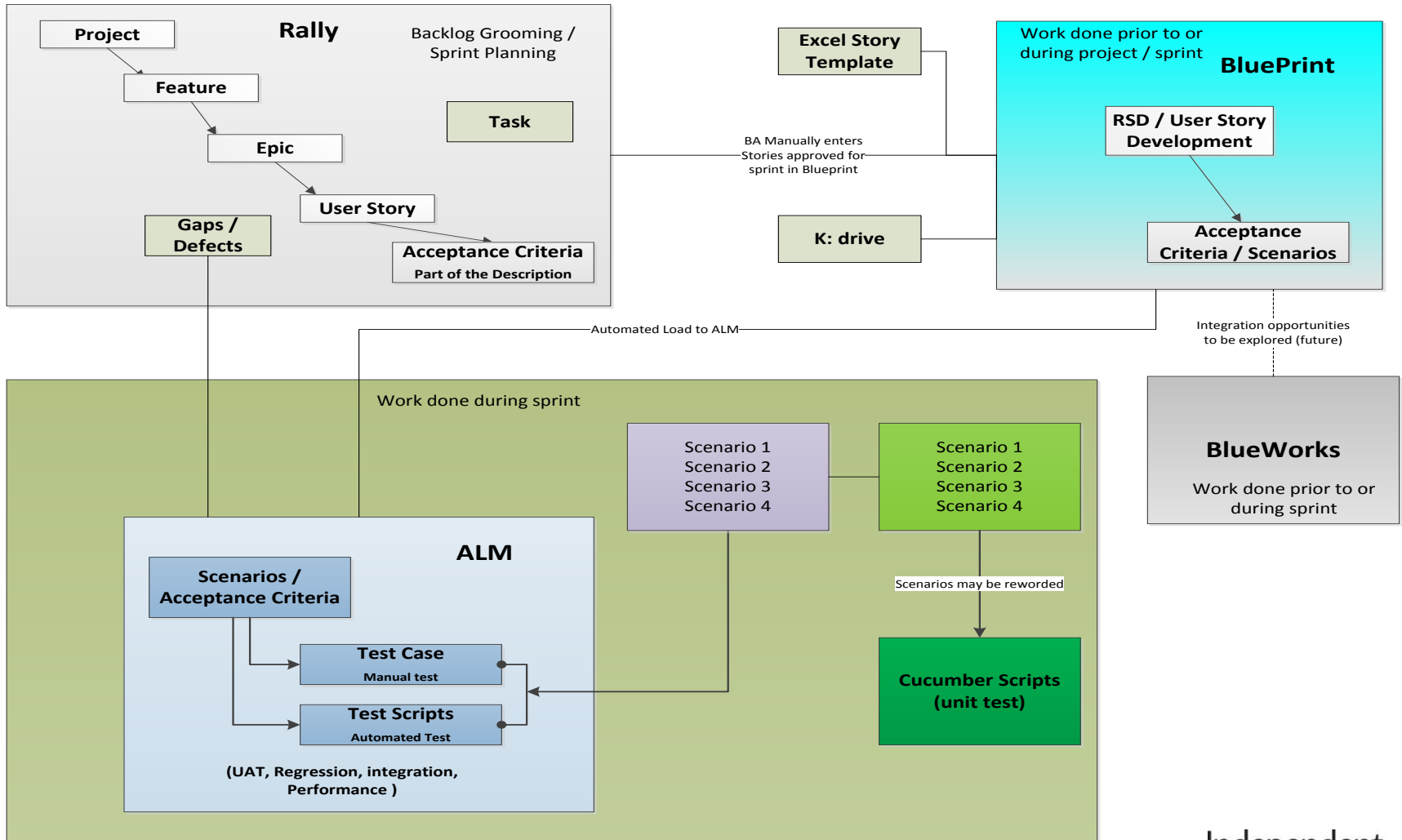
Challenges

Challenges of using Agile in a Waterfall Organization

- Sense of Urgency greater & constant in Agile
- Visibility / Transparency greater in Agile
- Documentation – getting stories accepted as requirements
- Metrics/Reporting – different way of reporting progress and predicting delivery dates
- Coordination with Waterfall Dependency projects – scheduling, hand off of responsibilities
- Iterative vs. sequential approach
- "Everyone does everything" attitude

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Tips & Tricks

Tips & Tricks

- **Do not underestimate the cultural impact of Agile**
  - Make sure you understand the soft skills the team needs and whether or not you have the right people
  - Choose change agents and those interested in learning new concepts
  - Start with education as early as possible
  - Anticipate resistance, use Organizational Change Management (OCM) tools
  - Anticipate attrition – not everyone will make it
  - Don't minimize importance of work environment – need quiet and collaborative spaces

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Tips & Tricks (cont'd)

- **Do not underestimate the cultural impact of Agile (cont'd)**
  - Prepare to manage in a matrix environment
  - Part-time resources are extremely challenging
  - Need I.T. sitting with business
  - Document Agile terminology and publish widely
  - New PM methodology needs to be sustained
  - Senior Management will still want to know what your % complete is and when you are delivering
  - Be ready to be a salesman!
  - Ensure your Executive Sponsor is a <u>strong</u> supporter

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Tips & Tricks (cont'd)

- If you are going to use an Agile PM tool, select it and implement it early
  - Determine what you will measure and how up front
  - Determine what metrics you will use for sizing
- Use first couple of sprints to build your backlog
- Have at least 2 sprint's worth of stories ready at all times
- New technologies need more care and structure (meet EA guidelines, standards)
- Use an Agile Coach if the methodology is new to your organization…then let them go….
- Practice and critique story writing – these are your requirements and therefore their quality is key to your success

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Tips & Tricks (cont'd)

- Ensure clear understanding of the definition of DONE
- Define up front whether you will use waterfall or agile for different aspects of your project
  - Work with your PMO to lay out your approach and ensure buy-in
  - If a vendor has a proven methodology and it is waterfall, use it, but agree with the vendor how it will "integrate" with your agile methodology
- Celebrate… celebrate… celebrate!

Finally… What Do We Like About Agile?

- It let's the business set priorities and lead
- It is easier to change path... and it's ok to change
- Visibility of Risks – you can see barriers/blockers coming
- Visibility drives Accountability
- It focuses on business value – if you are not delivering value, you shouldn't be doing it!
- Business, Technology and PM resources are <u>ONE</u> team

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