How Agile Leads to a Win-Win Software Implementation

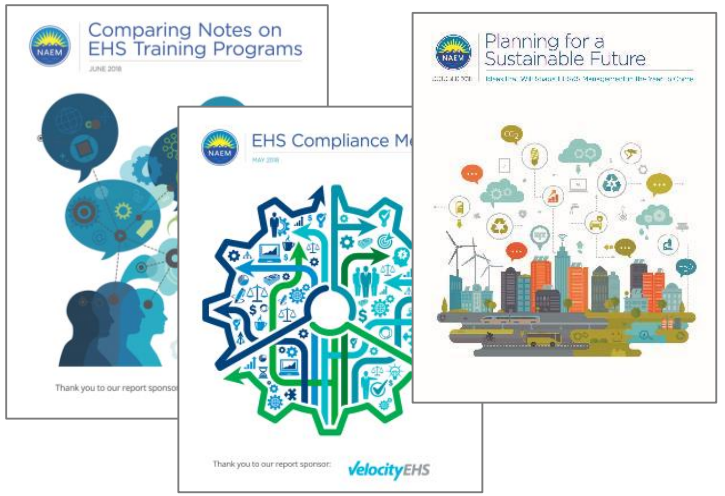
December 5, 2019

NAEM

Welcome to NAEM

Peer Forums

Research Insights



Targeted Networking

Actionable strategies that empower EHS&S leaders to make an impact

We Connect EHS & Sustainability leaders

120

Corporate Members

4,700

Individual Members

60

Affiliate Members

Reaching a community of Practice

100K+

Today's Speakers

Sandeep Khabiya
Vice President of Software Engineering
Locus Technologies

Tristan Mecham
Director of Compliance & Sustainability Programs
Locus Technologies

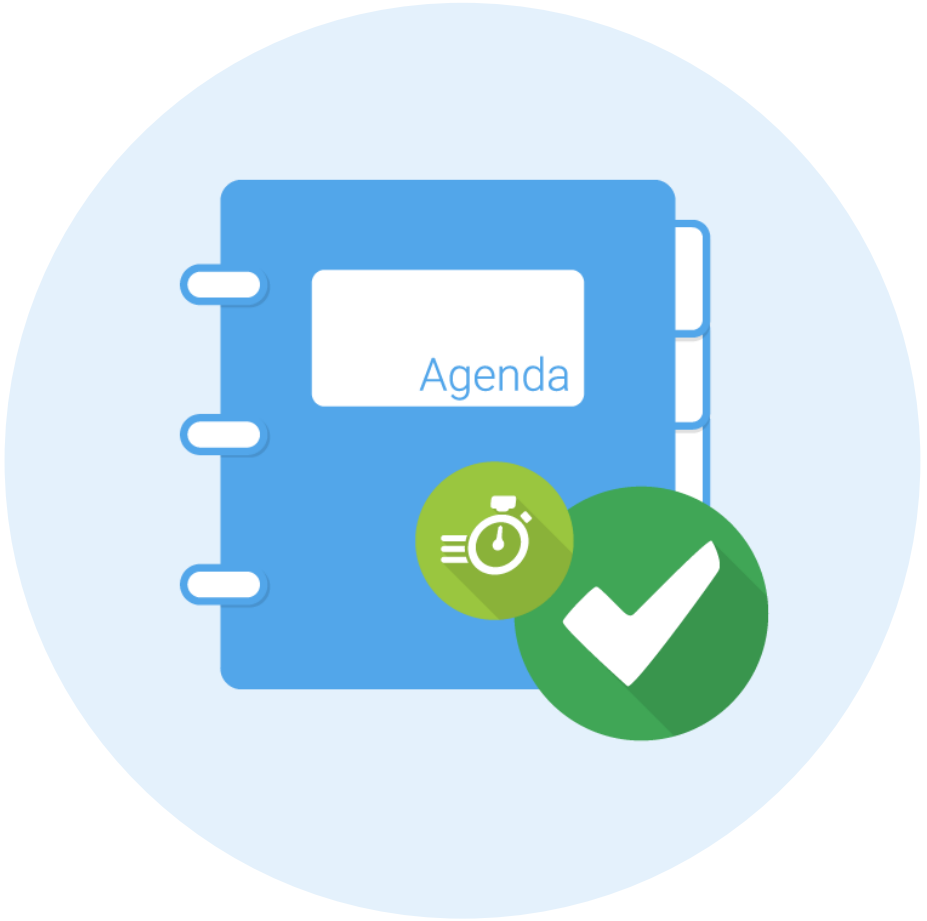
Elain Skaare
Project Manager, Scrum Master
Locus Technologies

How Agile Leads to a Win-Win Software Implementation

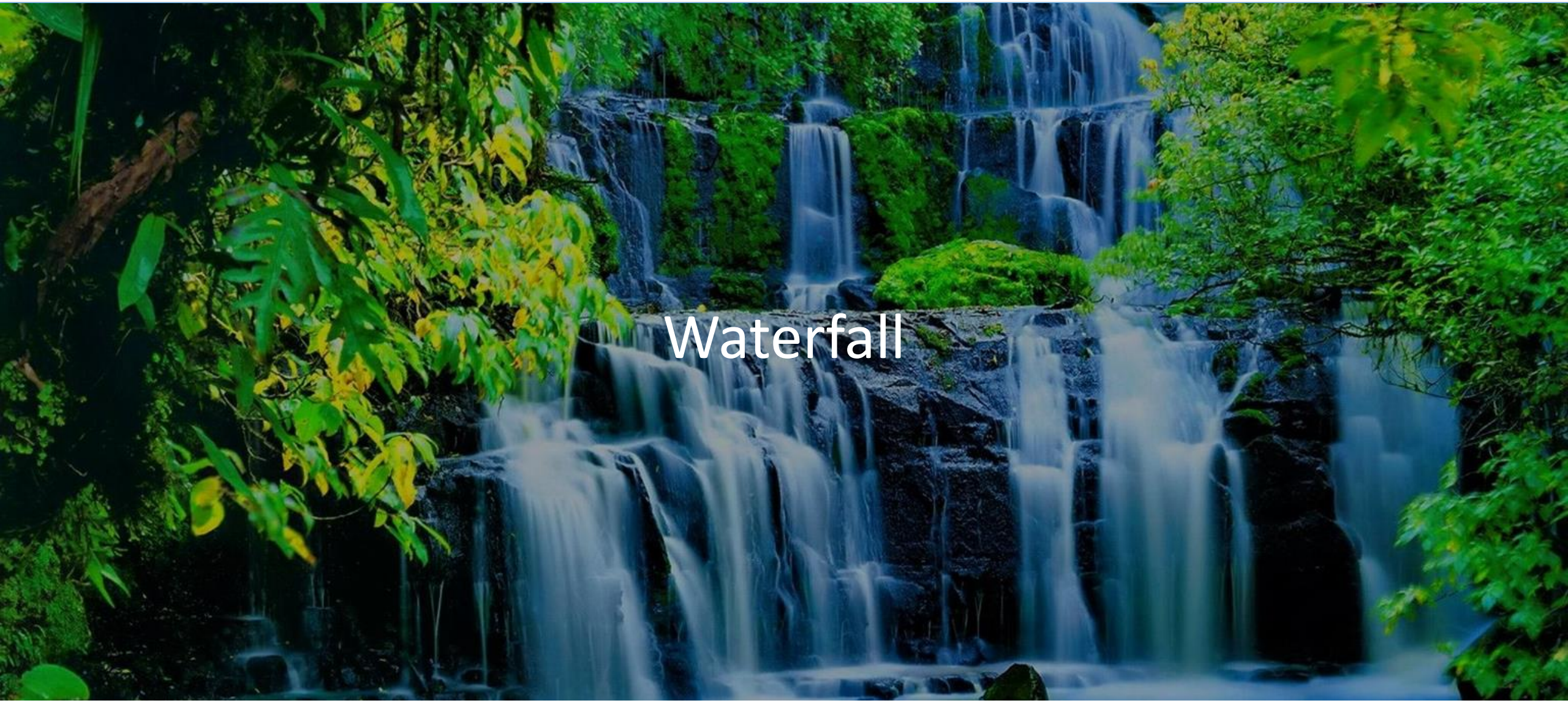
Locus Technologies

Webinar Agenda

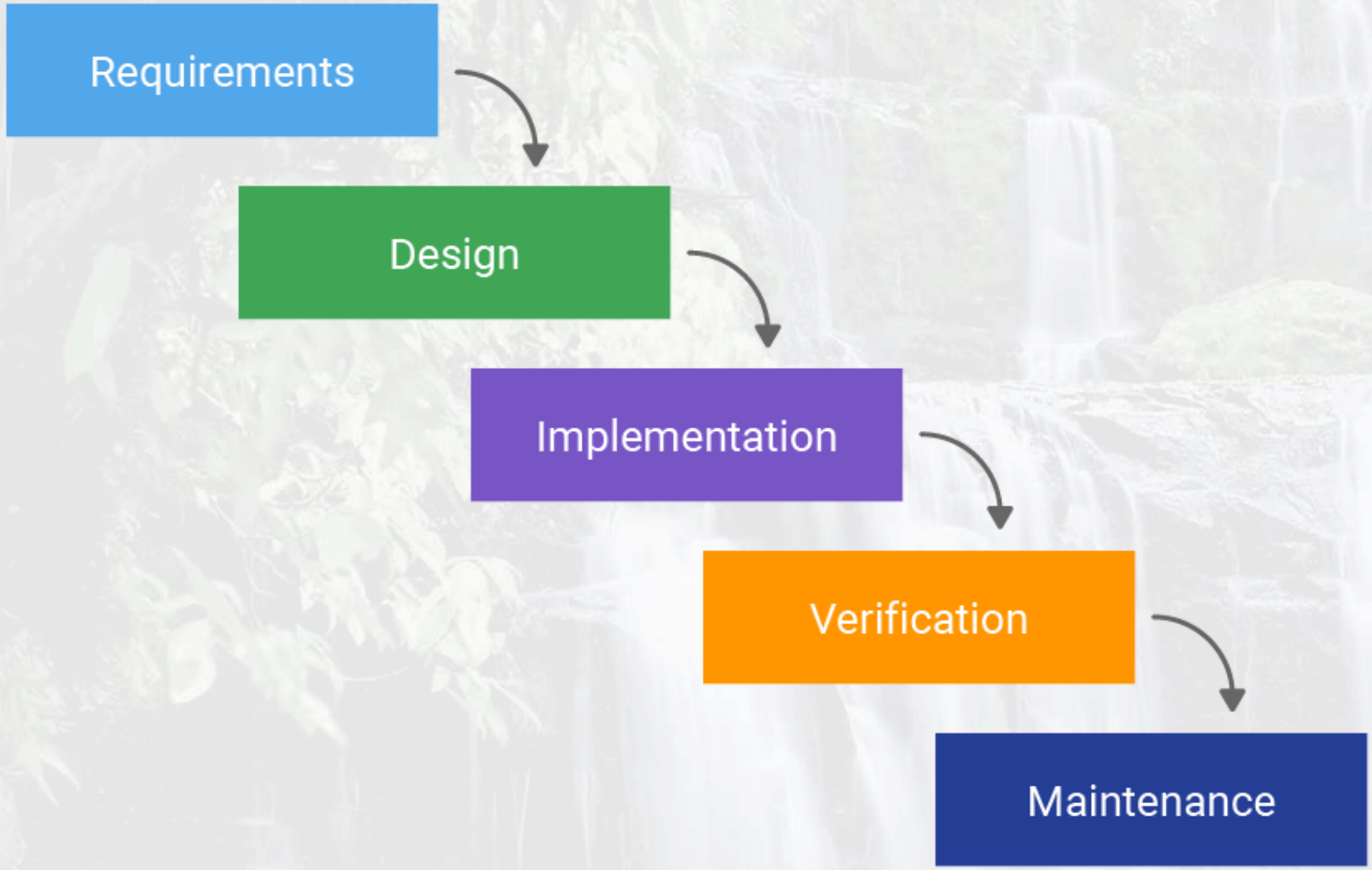
- What is Agile approach in software implementations?
- Key concepts of the Agile approach
- Why you may want to consider the Agile approach
- A look at the Agile approach for a EHS software implementation
- Pros and Cons
- Common Pitfalls (learn from our mistakes)



How are Implementations/Configurations Normally Done?



What is Wrong With This Picture?



Traditional Waterfall

Problems with the Waterfall Approach

- Scope is locked down
- Change is discouraged
- New phase cannot start until previous phase is nearly complete
- Users cannot see working software until end of the process
- Less opportunity for user feedback
- Project gets delivered but may fail in the business objective
- More friction due to scope discussions

What is the Agile Approach?

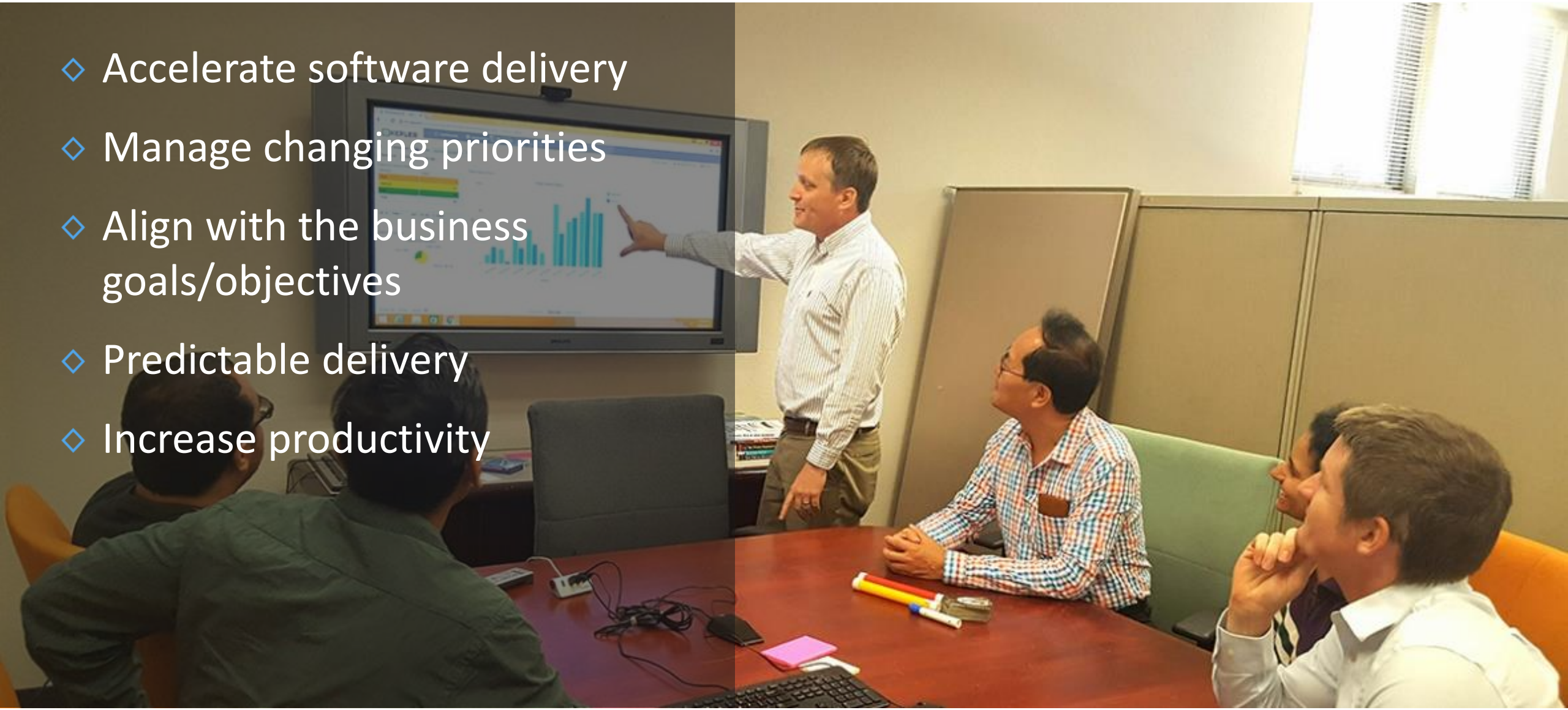
- Focus on delivering the highest business value in the shortest time
- Rapidly and repeatedly inspect actual working software (every two weeks to one month).
- Teams self-organize to determine the best way to deliver the highest priority features
- Every two weeks to a month anyone can see real working software and decide to release it as is or continue to enhance it for another sprint

Poll Question 1

Has anyone used or been involved with Agile development/configuration/implementation?

1. Yes at my current company
2. Yes – previous life
3. No – never been exposed to this approach

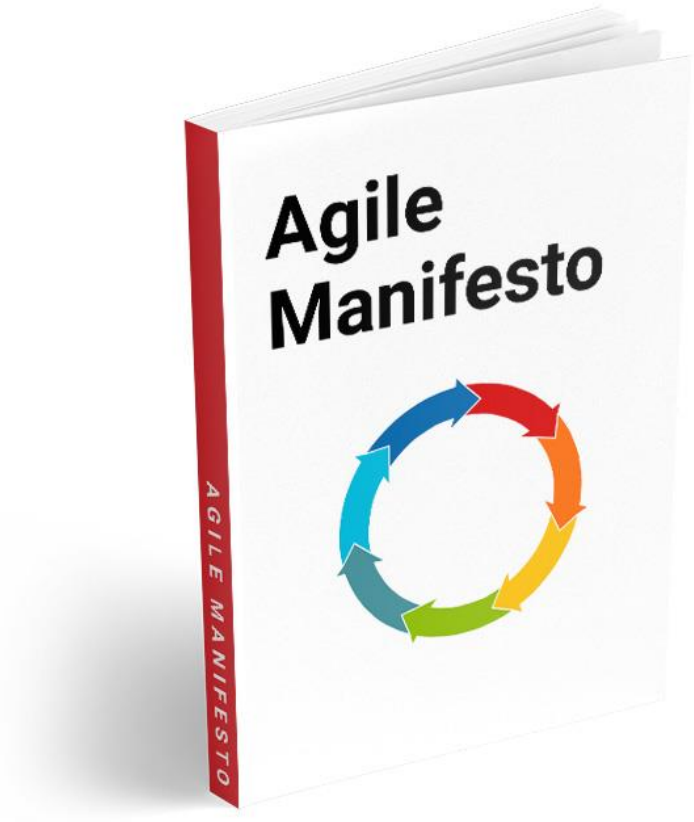
Why Use the Agile Approach?



- Accelerate software delivery
- Manage changing priorities
- Align with the business goals/objectives
- Predictable delivery
- Increase productivity

Agile Manifesto

- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan



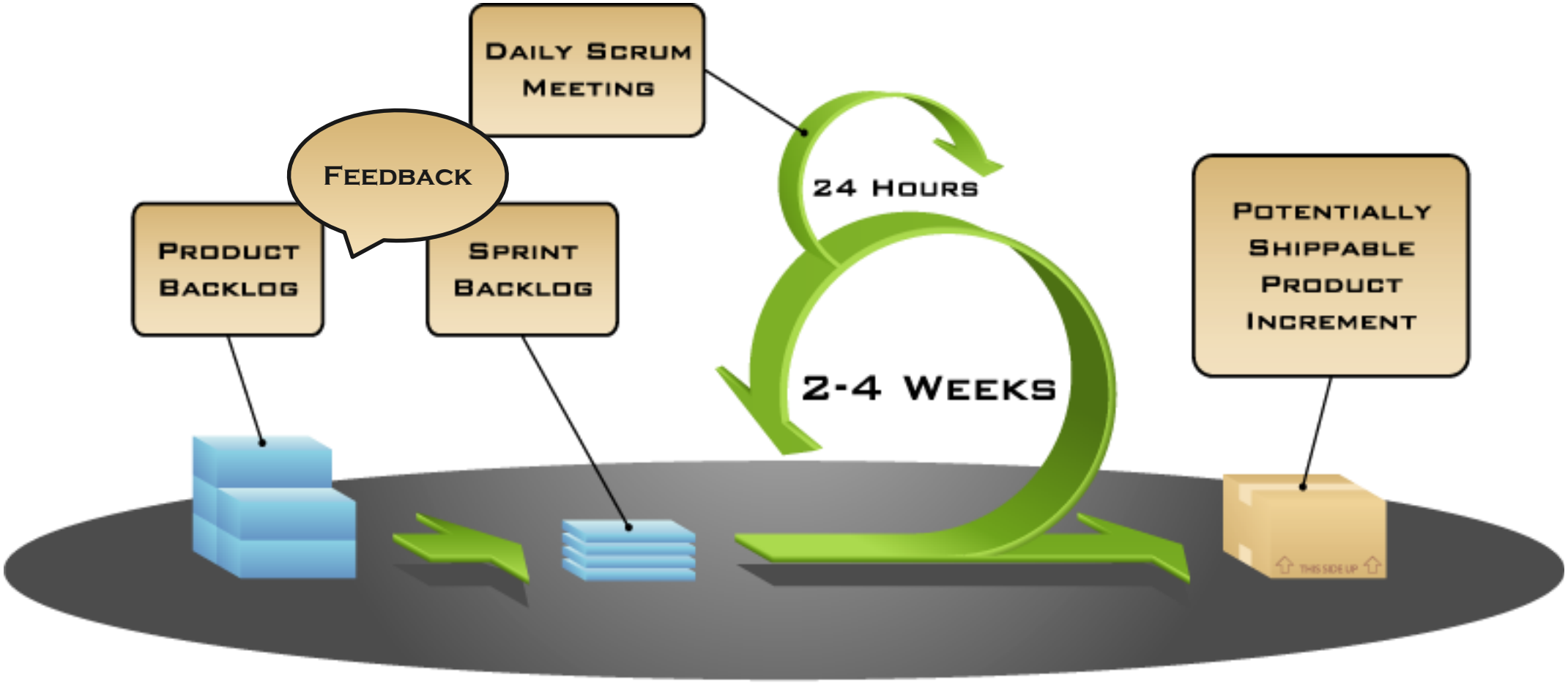
Some Key Definitions

- Scrum
- Scrum Master
- Sprint
- Product Backlog

Scrum Characteristics

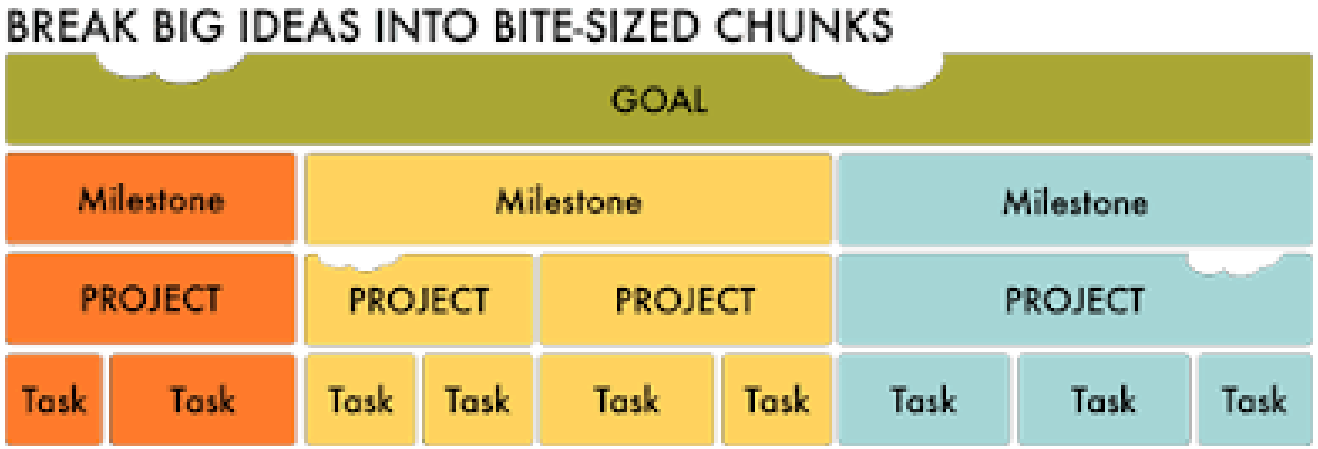
- Self-organizing teams
- Product progresses in a series of short duration “sprints”
- Requirements are captured as items in a list of “product backlog”
- No specific engineering practices prescribed
- Uses generative rules to create an agile environment for delivering projects

Scrum

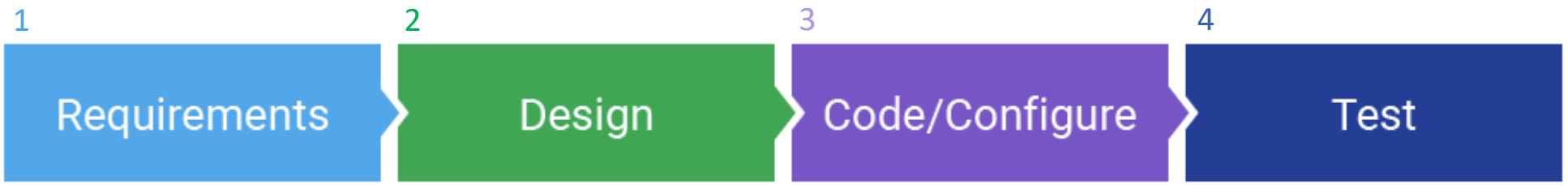

Daily Scrum Meeting
Feedback
Product Backlog
Sprint Backlog
24 Hours
2-4 Weeks
Potentially Shippable Product Increment
Copyright © 2005, Mountain Goat Software

Sprints

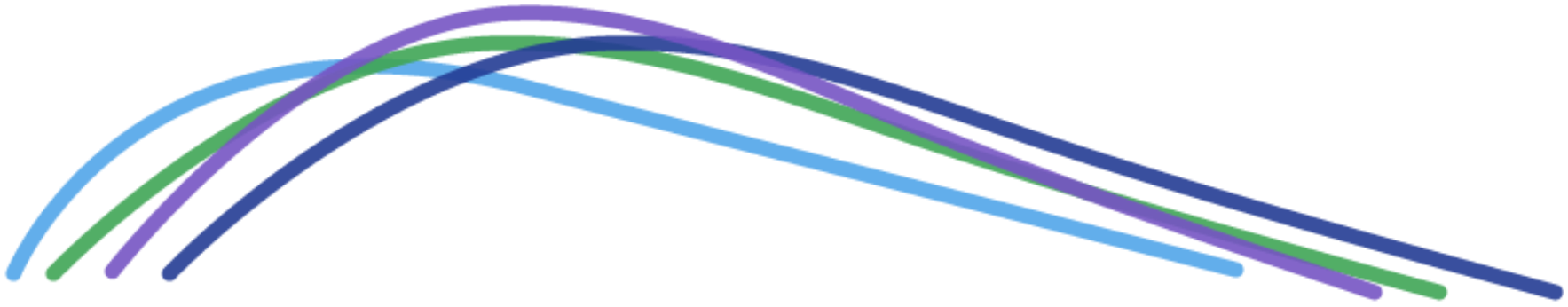
- Scrum projects make progress in a series of “sprints”
- Typical duration is 2–4 weeks or a calendar month at most
- A constant duration leads to a better rhythm
- Product is designed, coded, configured and tested during the sprint



Waterfall vs Agile

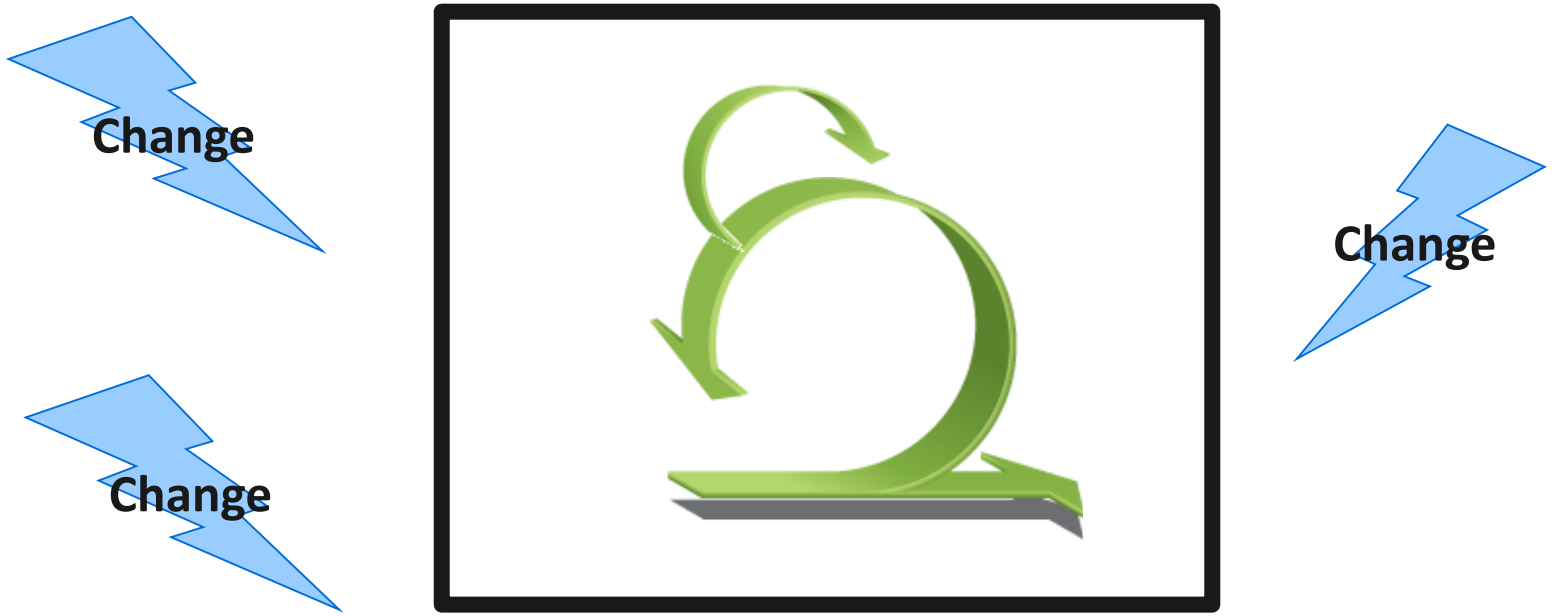


Rather than doing all of one thing at a time,
Scrum teams do a little of everything all the time.



No Changes During a Sprint

Important Key



Scrum Framework

Roles

- Product owner
- Scrum Master
- Team

Ceremonies

- Sprint planning
- Sprint review
- Sprint retrospective
- Daily scrum meeting

Artifacts

- Product backlog
- Sprint backlog
- Burndown charts

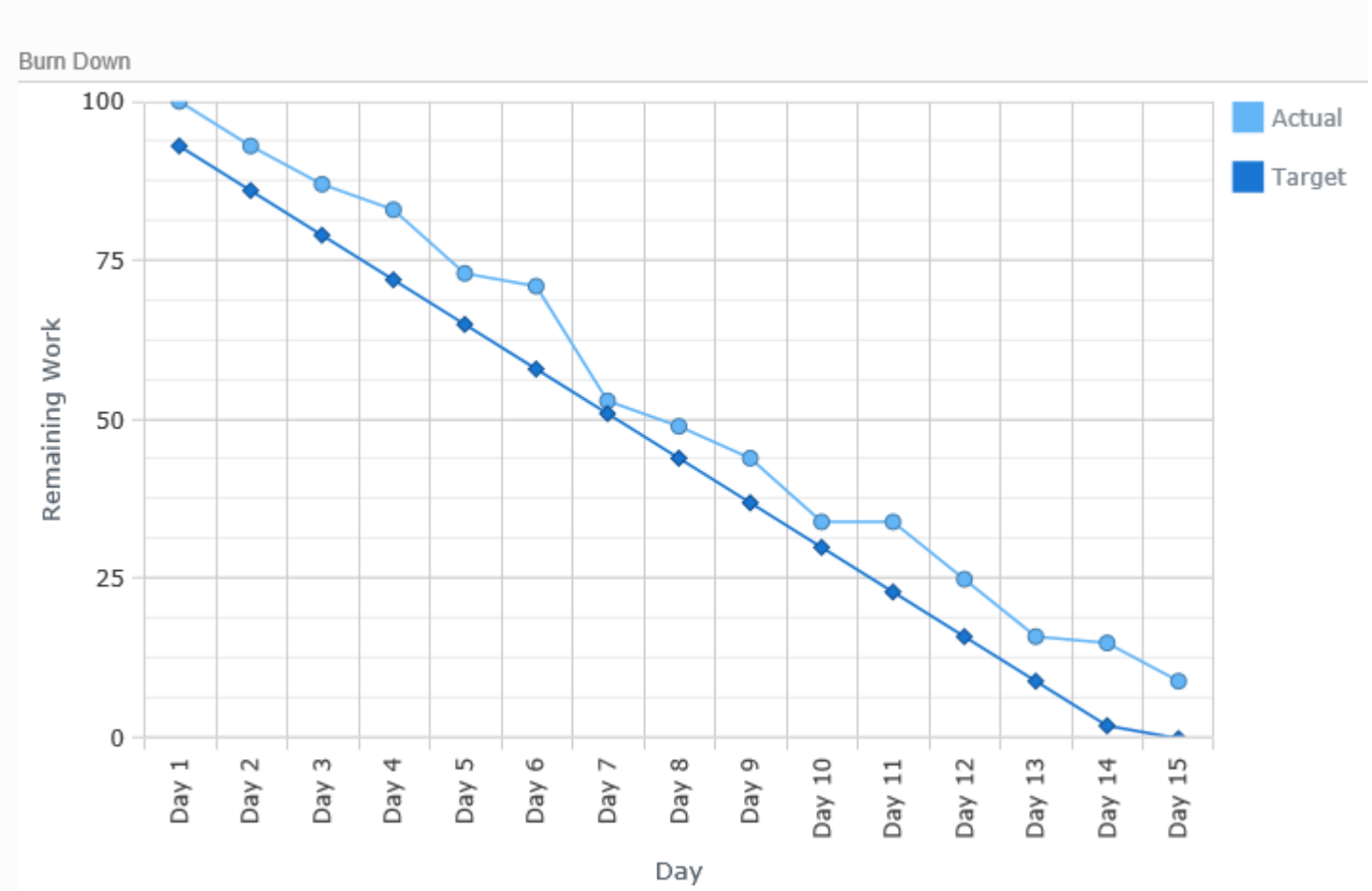
Product Backlog

- The requirements
- A list of all desired work on the project
- Ideally expressed such that each item has value to the users/ customers
- Prioritized by the product owner
- Reprioritized at the start of each sprint

ID	Name	Estimated Story Points
106675	As a configurator I can add a portlet to the entity forms	20.00
103805	Add more font styling options to "Informational" component validation type	8.00
106103	As a configurator I can choose section to be accordion or tabs	8.00
106638	As a user I can export pages to PDF	8.00
101432	Add SQL info to Entity Types	8.00
106705	Search for fields in View column selector	3.00

> The way to ensure feedback incorporated in the project.

The Burndown Chart—Key Management Approach



Summary

- Scrum is an agile process that allows us to focus on delivering the highest business value in the shortest time.
- It allows us to rapidly and repeatedly inspect actual working software (every two weeks to one month).
- 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 anyone can see real working software and decide to release it as is or continue to enhance it for another sprint.

Poll Questions #2

Would you consider using this approach in the future for a software implementation?

- Yes
- No
- Maybe
- Not sure

Do you think your management would allow such process ?

- Yes
- No
- Maybe
- Not sure

Agile in the Wild

Benefits, Pitfalls, and Real-Life Examples

Agile Implementation Benefits

- Visibility into the product immediately
- When using a configurable solution, options may not be apparent in the contracting phase but can be incorporated
- Greater comfort/trust between customer and vendor
- Customer participation leads to internal expertise on the software well before “Go Live”
- You can change course if needed to get what you really want

Real-Life Example: EHS Compliance Application

- EHS software implementation – compliance application
- Create the product backlog = Final product (the compliance app!)
  - Reminder – the product backlog is a living growing set of requirements
- Create the team
- Start!
  - Sprint planning
  - Sprint
  - Sprint Review
  - Sprint Retrospective
  - Repeat

Create Product Backlog

- Created by the customer – this step can take a while….
- Detail – a lot or a little
- Often found in the RFP/Contract
- Living document
- Prioritized 1,2,3,4… etc. by the product owner

Create The Team

- How big???
  - 5-9 people
- Disciplines
  - Programmers/Configurators
  - Testers
  - UI Designers
- Major roles
  - Scrum master—agnostic
  - Product owner (customer—authority and respect key requirements)
  - Team (software vendor/customer) IT/Env departments etc.

Ready, Set, GO!

- Sprint Planning - Plan your first sprint (2-4 weeks)
  - Team selects items from product backlog what they can complete in Sprint 1
  - Estimate time for each item in sprint backlog
  - Team commits
- Sprint
  - Daily sprint meeting 15 min or less – to solve road blocks
    - Public commitment

> Sprint durations are static. They don't change until the project is delivered.

Sprint Review

- What was accomplished
  - Pieces of content - such as creating a task calendar or dashboard tracking overdue tasks
- NO SLIDES – show your stuff
- Whole team and Stakeholders
- Duration 1 hr. plus

Sprint Retrospective

- What went well/not went well/what to do differently
- Speak freely — which can be a challenge
- Take action items
  - Incorporate into next sprint and resolve issues
  - Example - Test plans that are executed
    - Change style of test plan
    - Test script not specific enough for testing
    - Make more specific in next sprint

Some Companies Using Agile

Poll Question 3

- Have you ever contracted out work a very defined scope and needed a mid-course correction?
  - Yes
  - No
  - Not sure

Why Agile May Work For You

- Easier to incorporate feedback/direction change
- Easier to “swap” features/functionality
- Do you need a custom application
- You are not completely clear on everything you need but want a way to control cost and schedule

Why Agile May Work For You (2)

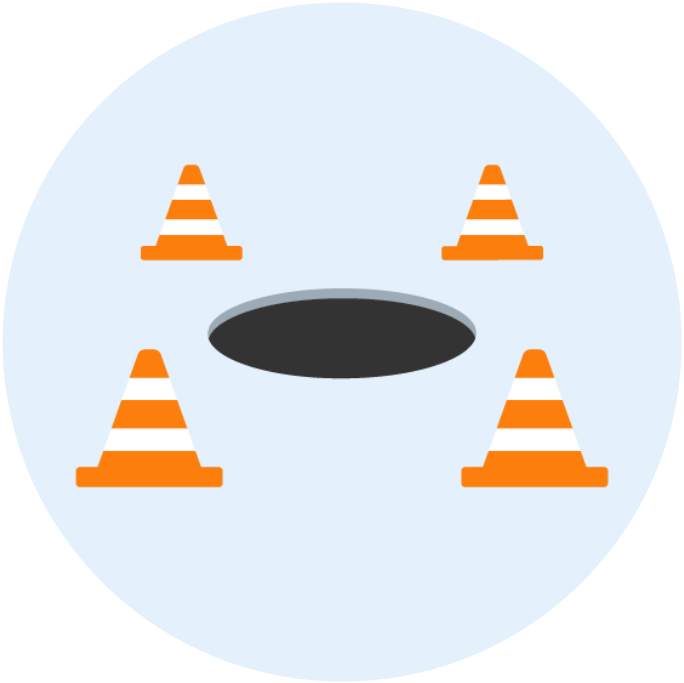
- See parts of the product much sooner
- Happier teams – empowered and see results along the way
- Well defined process /easy to understand and follow
- See and show results early and often
- Easier to get what you want, but you have to follow a strict process

Why Agile May Not Work For You

- You are looking for something simple and out of the box
- Vendor may want this approach but customer may not be able to commit in the process
- Dedicated teams are hard to come by in EHS groups
- Contracts may not be designed to handle a this approach
- You have a very clear scope of work—flexibility is not needed

Common Pitfalls

- Lack of a dedicated team
- Inability to relinquish control to the scrum master—regardless if with the vendor or the customer
- Fear of open and honest feedback in a mixed customer and vendor environment
- Time commitment of all participants
- Lack of strong leadership from the product owner
- Lack of understanding the fluidity of the product backlog document



Contracts Have to Support the Process

- Box the scope or box the time
- Like building a house on a fixed budget – to get a fancy kitchen some other enhancement needs to be eliminated (goodbye walk in closet…)
  - If you want both = change order
  - If you can prioritize = agile decision making

How to Decide if You Want to Try Agile

- Can you commit the resources for the duration of the project (i.e., more commitment and time from the customer)?
- Have you tried the traditional approach and the end result was less than satisfying?
- Do you have complex needs, custom workflows, and demanding requirements needing customization?
- Do you have strong and supportive management?

Conclusion

- If all parties are willing to commit, you may find the process results in a better end product
- There is no perfect project management approach
- If you don't know, talk to a vendor or Agile Coach to discuss the process
- Engage your contracts department and your vendor – both sides have to have an agreement that works for both parties.

Poll Question 4

Do you think you will consider this approach now that you have seen the pros/cons?

- Yes
- No
- Maybe

Thank You!

Make sure to follow us on social media to get the latest company & product news:

linkedin.com/company/locus-technologies

facebook.com/LocusTechnologies

twitter.com/Locustec

youtube.com/user/locustechnologies

locustec.com

Credits

Portions of this presentation are from *Introduction to Scrum* by Mountain Goat Software, LLC.

Save the Date for NAEM's 2020 Conferences

EHS Software, Innovation & Technology Showcase	EHS Operational Excellence	Sustainability Impact From Aspiration to Operation	EHS&S Management Forum
March 3-5	**May 5-7**	**Aug. 3-5**	**Oct. 20-23**
New Orleans, LA	**Columbus, OH**	**Denver, CO**	**Fort Worth, TX**

To learn more or to register, visit
www.naem.org

Connect with NAEM

- Online: www.naem.org
- Via email: caitlin@naem.org
- Social media:
  - Twitter: @NAEMorg
  - Facebook: www.facebook.com/NAEM.org
  - LinkedIn: https://www.linkedin.com/company/naem