Go Agile. Go Rally.®

Build Your Agile Business

The Sourcebook

AGILE LESSONS LEARNED

Focus on Value

> "The benefits of Agile are multi-dimensional. But the most important change is that it focuses the entire organization on meaningful delivery to the customer. Instead of relying on indirect metrics describing degrees of our software's quality and progress... we ask, 'What percent of critical functionality is included in this release?' This emphasis on customer-perceived value impacts our entire project life cycle pretty significantly.

— *Vice President of Infrastructure Management*

bmcsoftware

1 Agile Teams

At this level, empowered, self-organizing, self-managing teams deliver valuable, fully-tested software increments every two weeks.

The Daily Meeting

The daily stand-up meeting is for and about the team and its commitments. In this meeting, the team checks in on how their work is progressing in the iteration, adjusts plans and gets assistance with removing impediments.

Who?

- Delivery team
- Product owner
- ScrumMaster
- Stakeholders can observe, but are not allowed to speak
- This is not a status meeting for the product owner

Timing

Every day, same time, same place, same people. This puts a regular rhythm and cadence on everyone's calendar. The meeting lasts no more than 15 minutes.

☑ Preparation

Individuals collect their achievements and impediments from the previous day. Remember to keep the burndown chart available for reference.

Process

Always stand to keep the meeting short. Only the team speaks. Each team member addresses these questions in a round-robin format:

- **What did I do yesterday?**
- **What am I committing to work on today?**
- **What is getting in the way of my commitments?**
- **What new information have I brought since yesterday?**

Results

As a result of the daily stand-up, individuals adjust their daily plans and get help removing impediments. No problem solving occurs in the daily stand-up. If problem solving must occur, the team ends the stand-up and starts a different meeting for this work to begin.

AGILE LESSONS LEARNED

Share Knowledge

> A culture shift was necessary to our survival. Sure, it takes time. But, if you invest a couple of sprints into a team and get them up to speed on a product area, they can forever share that knowledge and work on that product.

— *Chief Agile Methodologist*

GXS™

Iteration Planning

The purpose of the iteration planning meeting is for the team to commit to the completion of a set of the highest-ranked product backlog items. These commitments define the iteration backlog.

Before We Begin

The team has sized items in the product backlog and assigned relative story point values.

The product backlog has been stack-ranked to reflect the priorities of the product owner.

There is a general understanding of the acceptance criteria for these ranked backlog items.

Determine Capacity

The capacity for the team is derived from three measures for each team member:

1. Number of ideal hours in the work day
2. Days in the iteration that each person will be available
3. Percentage of time each person will dedicate to this team

The Planning Steps

1. The product owner describes the backlog item
2. The team determines completion tasks for that item
3. Team members volunteer to own the tasks
4. Task owners estimate the ideal hours they need to finish their task
5. Planning continues until the team reaches capacity

If an individual exceeds their capacity during planning, the team collaborates to better distribute the load.

Iteration Planning Agenda

1. Opening	ScrumMaster
2. Product Vision and Roadmap	ScrumMaster
3. Development status, state of our architecture, results of previous iterations	Product Owner
4. Iteration name and theme	Agile Team
5. Velocity in previous iteration(s)	ScrumMaster
6. Iteration timebox (dates, working days)	ScrumMaster
7. Team capacity (availability)	ScrumMaster
8. Issues and concerns	Agile Team
9. Review and update Definition of Done	ScrumMaster
10. Stories/items from the product backlog to consider	Agile Team
11. Tasking out: tasks, estimates, owners	Product Owner
12. New issues and concerns	Agile Team
13. Dependencies & assumptions	ScrumMaster
14. Commit!	ScrumMaster
15. Communication/logistics plan	Agile Team
16. Parking lot	ScrumMaster
17. Action items/plan	ScrumMaster
18. Retrospect the meeting	ScrumMaster
Close – CELEBRATE! Celebrate a successful planning meeting!	Agile Team

User Stories

User stories are value-focused units of delivery that are typically used in Agile projects. Written from the customer or stakeholder's perspective, user stories share what is needed and why.

Who?

The *who* in a user story is typically someone with a particular role or title, or it could be from the perspective of a persona: a fictitious user's behaviors and needs, spelled out in detail.

What?

The *what* in a user story specifies the need, feature or functionality that is desired by the *who*. This is what the team will build into the software or service.

Why?

The *why* in a user story specifies the value, keeping the needs of users and customers front and center.

The Template

The user story template is designed to help product owners and others tell stories with a clear who, what and why:

"As a registered user, I want to reset my password, so that I can get back into the site if I forget my password."

"As an unregistered user, I can sign up for the site, so that I'm able to have a personalized experience."

"As Tom, I want to only see updates from close friends, so that I can view relevant updates during my time online."

AGILE LESSONS LEARNED

Reward Collaboration

> At the most fundamental level, going to Agile is very rewarding to a team because the collaboration and the work they do together ultimately creates a product higher in quality with the correct functionality.

— Vice President of Development

McKESSON

Story Sizing

Agile uses points to size stories. These estimates are relative and are important inputs for good iteration and release planning.

Why Size Stories?

Story sizing is a way of gathering team insights about what they notice about items going into the product backlog.

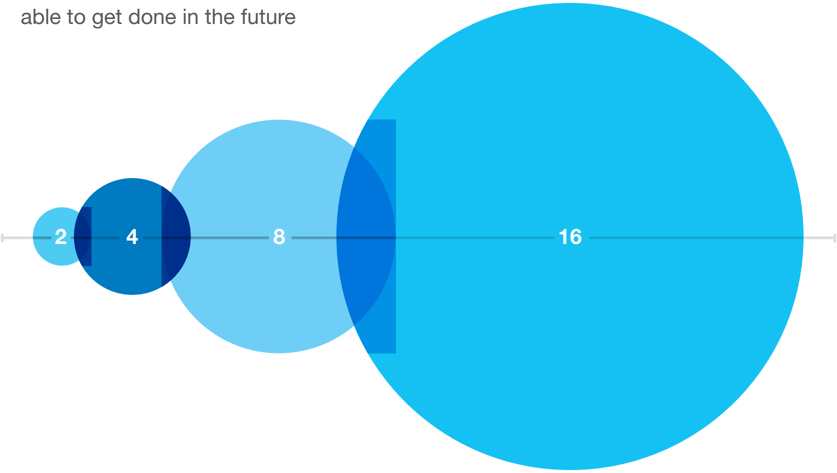
Story sizes:

- Inform the owner of the product backlog how they might move the priority of the item up and down in the backlog
- Set teams up for continuous improvement for how they plan and project what they might be able to get done in the future

Why Use Estimates?

Humans are good at comparing size, but are not very good at estimating absolute numbers. Can you tell the difference between a 1 and a 2? How about between a 33 and a 34?

- Relative size estimates don't change
- Estimating is faster
- Easier to reach accurate consensus on size
- Basic math still works 3 + 3 = 6



Helpful tip: Estimate by Analogy

"Richard's story is like Anne's story, so let's estimate Richard's story to be the same size as Anne's."

AGILE LESSONS LEARNED

Get Coaching

> “Make sure you get education. Make sure you get people to attend training and get adopted into the Agile environment so that they’re ready to hit the floor running when they start.”
>
> — *Agile Coach*

AVAYA

Patterns for Splitting User Stories

Pattern	Example
Workflow Steps As a content manager, I can publish a news story to the corporate website.	I can publish a news story …directly to the corporate website. …with editor review/with legal review.
Business Rule Variations As a user, I can search for flights with flexible dates.	...as "n days between x and y." ...as "a weekend in December." ...as "± n days of x and y."
Major Effort As a user, I can pay for my flight with VISA, MasterCard, Diners Club, or American Express.	I can pay with …one credit card type (VISA, MC, DC, AMEX). …all four credit card types (VISA, MC, DC, AMEX).
Simple/Complex As a user, I can search for flights between two destinations.	…specifying a max number of stops. …including nearby airports. …using flexible dates.
Variations in Data As a content manager, I can create news stories.	…in English. …in Japanese. …in Arabic.
Data Entry Methods As a user, I can search for flights between two destinations.	...using simple date input. ...with a fancy calendar UI.
Defer Performance As a user, I can search for flights between two destinations.	…slow (just get it done, show a "searching" animation). …in under 5 seconds.
Operations (e.g. CRUD) As a user, I can manage my account.	…sign up or cancel my account. …edit my account settings.
Break Out a Spike As a user, I can pay by credit card.	…investigate credit card processing. …implement credit card processing (as one or more stories).

Courtesy of Richard Lawrence, "Patterns for Splitting User Stories"
richardlawrence.info/splitting-user-stories/

20 Ways to Split User Stories

By Bill Wake

Easier	Harder	Why?
The Big Picture		
Research	Implement	What have others done?
Spike	Implement	Explore a quick solution
Manual	Automated	Often have to retain manual solution anyway
Buy	Build	Can go either way; trade cost of customizing
Build	Buy	...versus cost of implementing yourself
Single-User	Multi-User	Fewer worries about scale, user accounts
API only	Interface	Tests may function without user interfaces
Character or Script UI	GUI	Simple interface can prove out ideas
Generic UI	Custom UI	“Naked Objects” approach can be cheaper
-ilities		
Static	Dynamic	Do once and ignore updates
Ignore Errors	Handle Errors	Minimize error code (don’t ignore exceptions)
Transient	Persistent	Focus on behavior over persistence
Low Fidelity	High Fidelity	Quality of result (e.g., pixel depth)
Unreliable	Reliable	“Perfect uptime is very expensive.” – Wm. Pietri
Small Scale	Large Scale	Build load capacity over time
Less “ilities”	More “ilities”	Address non-fictional requirements later
Features		
Few Features	Many Features	Easier to do fewer features
Main Flow	Alternative Flows	Happy path vs. all possible paths
0	1	Nothing is easier than something
1	Many	One is easier than a bunch
One Level	All Levels	One level is the base case for all levels
Base Case	General Case	Base case must be done; other needn’t

Courtesy of Bill Wake, “Twenty Ways to Split Stories”
http://xp123.com/xplor/xp0512

Defining Done

Agile teams make an agreement about what constitutes potentially shippable software, called the Definition of Done. The Definition of Done serves as a contract the delivery team writes with its stakeholders, as well as the team's standard of excellence.

How to Create a Definition of Done

1. Write down all of the work necessary for a release. Write each item on a separate post-it note.
2. Draw three areas on your whiteboard to represent done for a user story, done for an iteration and done for a release.
3. For each item of work, place it in the appropriate section by considering if the team can deliver the work within the boundary.

Work that Can't Be Completed with the Story

4. Discuss what obstacles or impediments prevent the team from delivering the work with the story.
5. Think creatively about how you might incrementally address impediments.
6. If the impediment cannot be removed or incrementally addressed, capture it as part of a prioritized backlog of impediments.

Commit & Post

7. Call for a fist of five.
8. Prominently post the Definition of Done to serve as a reminder of the team's commitments to each other.
9. Continue to revisit the Definition of Done, practicing "kaizen" (improvement), continuously improving your team's operational excellence by moving work away from release boundaries.

AGILE LESSONS LEARNED

Product Out the Door

> We always had a working product running, and that saved us a great deal of time. When time started getting close, we could just add onto that to deliver other features as they were needed.
>
> — *Project Manager*

United States Census

ICS

2

Agile Programs

At this level, self-organizing, self-managing teams of Agile teams commit to continuous value delivery. They organize around enterprise value streams, and align to a common mission.

Source: Scaled Agile Framework® | www.scaledagileframework.com

About the Scaled Agile Framework®

The Scaled Agile Framework® is a proven knowledge base for implementing Agile practices at enterprise scale. Its primary user interface is a “Big Picture” graphic, which highlights the individual roles, teams, activities and artifacts necessary to scale Agile from the team, to teams of teams, to the enterprise level.

For more information, please visit www.scaledagileframework.com

Source: Scaled Agile Framework® | www.scaledagileframework.com

Program Level Definitions

Value Stream: A sequence of activities intended to produce a consistent set of deliverables of value to customers. This strategy creates the greatest economic benefit to customers.

Feature: At a level higher than stories, Features are services provided by the system that fulfill one or more stakeholder needs. They are maintained in the Program Backlog, and are sized to fit in PSI/Releases.

Program Backlog: The single, definitive repository for all of the upcoming work anticipated to advance the Agile Release Train solution. It contains all of the work under consideration.

Potentially Shippable Increment: A PSI reflects a milestone, including integration and testing of software assets, across all teams in a Program. It represents a development timebox that facilitates planning, portfolio-level consideration, and roadmapping.

PSI/Release: Release whenever you like. Organizations can decide to release more or less frequently than every PSI, or simply release at designated PSI boundaries.

Architectural Runway: Architectural runway exists when the enterprise's platforms have sufficient technological infrastructure to support the implementation of the highest priority business epics in the portfolio backlog without excessive, delay-inducing redesign.

Source: Scaled Agile Framework® | www.scaledagileframework.com

The Agile Release Train

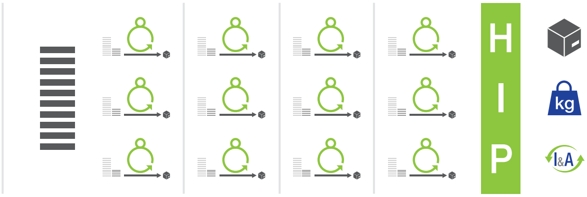
Develop on cadence, deliver on demand.

The Agile Release Train provides a continuing series of incremental releases of value in a value stream – a flow of value in which optimized development and delivery strategy create the greatest economic benefit.

Dates are fixed.

Quality is fixed.

Scope is variable.



Agile Release Train Principles

1. The train departs the station and arrives at the next destination on a reliable schedule
2. It delivers its cargo to customers (Release) or is used for internal evaluation and proof of incremental system robustness and quality (PSI/Release)
3. If an Agile Team wants its “cargo” (code, documentation, etc.) to go, it has to put it there on time. The train will not come to them nor wait to get their content

Train size:
best with 50-100 people

Backlog:
includes features and non-functional requirements

Timebox:
scaling up to an 8-10 week timeframe.

Team:
includes new roles
(see Program Roles page)

Source: Scaled Agile Framework® | www.scaledagileframework.com

Multi-Team Release Train

Successful delivery includes:

- ✓ A set of “SMART” objectives for each individual team.
- ✓ A PSI Plan, which highlights the new features, anticipated delivery dates and any other relevant milestones.
- ✓ A vote of confidence/commitment from the entire program to these objectives.

Agenda Day 1

8:00 - 9:00	Business Context	Senior Executive(s)
9:00 - 10:30	Product / Solution Vision	Product Manager(s)
10:30 - 11:30	Architecture Vision & Development Practices	CTO, Enterprise Architect or System Architect
11:30 - 1:00	Planning Context & Lunch	Release Train Engineer
1:00 - 4:00	Team Breakouts	Teams
4:00 - 5:00	Draft Plan Review	Teams, business owners, stakeholders
5:00 - 6:00	Management Review & Problem Solving	Management

Agenda Day 2

8:00 - 9:00	Planning Adjustments	Management Team
9:00 - 11:00	Team Breakouts	Teams
11:00 - 1:00	Final Plan Review & Lunch	Teams
1:00 - 2:00	Program Risks	Teams
2:00 - 2:15	PSI Confidence Vote	Teams
2:15 - ?:??	Plan Rework?	Teams
	Planning Retrospective & Moving Forward	Release Train Engineer / Facilitator

Source: Scaled Agile Framework® | www.scaledagileframework.com

Program Level Roles

Product Manager

Has content authority for the release train, and is responsible for defining and prioritizing the Program Backlog. Works with Product Owners to optimize feature delivery to customers.

System Architect

Has design authority for technological decisions. Understands stakeholder needs, and helps teams define and implement a technological solution suitable for hosting current and upcoming features.

UX Designer

Responsible for implementing a consistent user experience across the teams. Works at the program level to provide cross-component and cross-program design guidance.

Release Train Engineer

Acts as the Uber-ScrumMaster at the program level. Runs the Scrum of Scrums meetings. Coordinates all of the train activities, facilitates program level processes and program execution.

System Team

Responsible for providing assistance in building and using the development environment infrastructure as well as integrating code from Agile teams.

Release Management

Cross-functional team responsible for scheduling, managing, and governing synchronized releases (PSIs) across programs or product lines. Coordinates the delivery of software by its associated Agile Release Train.

Source: Scaled Agile Framework® | www.scaledagileframework.com

AGILE LESSONS LEARNED

Pick the Right Pilot Projects

> "A large project carries a certain level of risk, but in turn also encourages inputs from the right people to expose how Agile is needed across the rest of the organization. We really wanted a project that people would care about. We needed that level of interest and company investment. Scrum exposes problems that exist in the organization, so we wanted to have all eyes on where we could improve."

— Director, Special Plans & Projects

ChoiceHotels.com

3 The Portfolio

At this level, business strategy and development teams align. They collaborate to build realistic roadmaps and prioritize work according to its value and support of the strategic vision.

Strategic Portfolio Planning for Innovation: 5 Key Questions

1 Portfolio Planning

Where do you want to be in 3-5 years? Focus efforts in that direction.

Balancing a portfolio begins with vision. In today's world of innovation, shifting plans, and expectations of the unexpected, a vision points the way and focuses efforts toward value.

Determining acceptable investment risks for innovation is a fundamental first step, but many companies lack the visibility needed— across their entire portfolio—to correctly analyze risk, return and value. Do you have the visibility to be smart about the risks you take?

2 Financial Management

Which investments are you choosing to fund now?

Given a 3 to 5 year strategy, which investments should you make this year that will incrementally deliver towards your strategy? Carefully selecting where to invest, and especially where NOT to invest, is challenging but critical to having enough funding left for innovation.

3 Capacity Management

Do you have the resources you need for these investments?

Do you have the people, the technical expertise and the tools you need to execute on your investments? And if not, what is the plan to get them?

4 Value Management

What value do you expect to get from your investments?

When conditions change, do you reevaluate the expected return on your investment? A clear understanding to desired outcomes puts you in the driver's seat. Will you speed up, slow down, or hit the brakes?

Determining acceptable investment risks for innovation is a fundamental first step, but many companies lack the visibility needed— across their entire portfolio—to correctly analyze risk, return and value. Do you have the visibility to be smart about the risks you take?

5 Work Management

What work do you currently have in flight?

Understanding what work you currently have in-flight, and when you anticipate to complete that work will guide the sequence of future work to minimize wasteful context-switching and frustrating disruption.

6 Portfolio Performance

Are your portfolio plans informed from past performance?

The empirical knowledge of past work represents the best predictability indicator for future work in similar conditions. Understanding your organizational throughput increases the likelihood to create realistic portfolio plans.

AGILE LESSONS LEARNED

Become a Trusted Partner

> “We now look at how we can better partner with our customers and make them more successful with our solutions. When we partner, we’re better able to understand our customers’ interests and ultimately, build long-term relationships.
>
> — *DevOps ScrumMaster*

GE Healthcare

Transform Portfolio Management with Lean Thinking

The Old Way	The New Way
Value Management • Traditional financial models inhibit innovation • Big budgets create risk-averse behavior • Delayed benefits realization • Subjective, emotional prioritization	**Value Management** • Economic value models support innovation • Taking more, smaller risks increases value creation • Faster, incremental benefits realization • Objective, explicit prioritization
Capacity Management • Assign specialized FTEs to projects to maximize resource utilization • Lost knowledge with constantly reformed project teams • “Precisely wrong” capacity planning with FTE hourly availability	**Capacity Management** • Flow work through cross-functional teams to maximize value delivery • Retain knowledge with persistent teams • “Roughly right” capacity planning with cross-functional teams
Financial Management • Fixed-scope, schedule and budget inhibits innovative thinking • Long funding cycles • Cost overruns	**Financial Management** • Highest-value-scope-first informs accurate cost and schedule projections • Incremental funding cycles • Cost controlled with “just enough” scope
Work Management • Large requirements documents • Risky big bang releases • Work Breakdown Structure (WBS) • Diverging from changes to strategy	**Work Management** • Just enough features, just in time • Minimal Viable Products (MVP) • Validated learning • Aligned to evolving strategy
Portfolio Planning • Big batch approval processes • Ad-hoc investment funding • Silo-ed and infrequent planning cycles	**Portfolio Planning** • Smaller batch continuous flow • Investment funding matches strategy • Collaborative and iterative prioritization
Portfolio Performance • “On time and on budget” metrics • Late delivery discovered late • Subjective progress status • Infrequent and subjective reviews	**Portfolio Performance** • Customer value metrics • Fact-based information from real-time work progress • Demonstrable status of high quality increments of value • Frequent and objective feedback

AGILE LESSONS LEARNED

Make Work Visible

> It is critical to make our release forecast visible to the product owner, so when we add functionality to a release, we understand what we have to do to add this, or what we'll have to give up to include that functionality. Those decisions are critical to our business, and most importantly, are now determined by a group discussion earlier in the process.

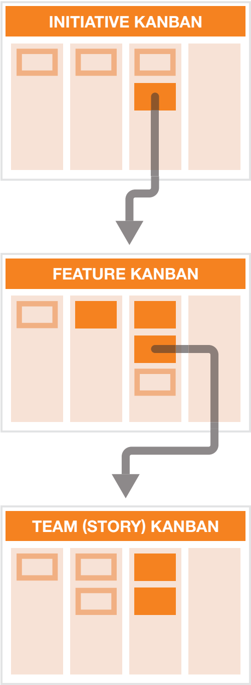
— *Project Manager*

marketforce

How to Design a Portfolio Kanban

Agile organizations can use Kanban systems at many different levels. For example, an initiative Kanban can feed a feature Kanban, feeding a team's story-level Kanban:

Agile organizations can use Kanban systems at many different levels. Here are a few options:



A Kanban of initiatives or projects.

Recommended for teams new to portfolio Kanban. An initiative is a set of work with clear success criteria that one or more teams can complete in a few months.

A Kanban of features or enhancements.

Recommended if you're releasing frequently. This gives you an additional level of Kanban below the initiative.

A Kanban of implementation, content or professional services projects.

Recommended to help you accelerate the speed at which content or studies are completed and reduce coordination overhead.

AGILE LESSONS LEARNED

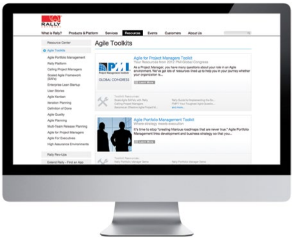
Be Flexible

> “Drop what you are doing, make time and be prepared to be impressed with the results delivered by an expert team of professionals as they conduct their planning session. Plan on leaving energized and filled with ideas and enthusiasm to take back to your organization.

— *Director of Project Management*

Want more guidance for building your Agile business?

Check out Rally's Agile Toolkits at
www.rallydev.com/agile-toolkits



Agile Toolkits

Agile for Project Managers Toolkit
Your Resources from 2012 PMI Global Congress
As a Project Manager, you have many questions about your role in an Agile environment. We've got lots of resources lined up to help you in your journey whether your organization is...

Toolkit Resources:
Scale Agile SAFely with Rally
Calling Project Managers
Become an Effective Agile Project M...
Rally Guide for Implementing the Sc...
PMPT Your Toughest Agile Questio...
and more...

Agile Portfolio Management Toolkit
Where strategy meets execution
It's time to stop "creating hilarious roadmaps that are never true." Agile Portfolio Management links development and business strategy so that you...

Toolkit Resources:
Rally Portfolio Manager Demo
Rally Portfolio Manager Demo

- Agile for Project Managers Toolkit
- Agile Portfolio Management Toolkit
- Rally Platform Toolkit
- Scaled Agile Framework® (SAFe) Toolkit
- Enterprise Lean Startup
- User Stories Toolkit
- Agile Kanban Toolkit
- Iteration Planning Toolkit
- Definition of Done Toolkit
- Agile Quality Toolkit

...and more.

Go Agile. Go Rally.®

RALLY®
SOFTWARE