Scrum vs. Kanban:
6 Tips for Choosing the Right System
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Scrum and Kanban are two of the most popular project management (PM) methodologies used by agile teams. Today, many PM software vendors offer products with a rich feature set specifically designed to help support and structure Scrum and Kanban workflows.

Current and prospective agile teams may not know where to begin when choosing PM software. With so many Scrum and Kanban platforms available, it can be hard to know which systems have the capabilities you need.

To help narrow your search, Software Advice turned to several industry experts. Using their guidance, we’ve put together the following tips for selecting Scrum or Kanban software:

1. **Start Off Simple**
2. **Analyze Your Team’s Workflows**
3. **Know Which Methods Are Best For Which Teams**
4. **Assess Purchase Drivers**
5. **Evaluate Integration Requirements**
6. **Identify Tools and Vet Products**
1: Start Off Simple

Experts agree: The best way to guarantee your agile team stumbles right out of the gate is to implement software before establishing basic workflow processes.

**Without a solid foundation in place before implementation, teams are likely to adapt their workflows to the software, rather than use it as a tool to help them become more efficient and successful.**

According to Andy Hunt (one of the 17 founders of the Agile Manifesto), the unconstrained nature of any new tool can be a death sentence for an inexperienced agile team.

In other words, it’s imperative for a team to start out simple—even if that means using actual physical tools that have physical limits as the first step in ironing out workflows and figuring out which processes work and which don’t.

“You can only fit so much on a sticky note, you can only fit so much on a whiteboard, or a wall, or whatever physical product you’re using. There are natural built-in constraints.”

— Andy Hunt  
Author, Publisher, Consultant, Programmer

Only once a team has established a solid foundation and understands how to work together in the most productive way should managers consider investing in PM software to support the team’s workflow processes.
2: Analyze Your Team’s Workflows

**How developed and structured are your team’s workflows?** This question is crucial for managers considering Kanban and Scrum software solutions.

While the Kanban framework is more flexible and doesn’t have formal guidelines in place, the Scrum framework is fairly prescriptive in how teams should set up workflows.

As such, managers should question if their team can remain productive while “governing” themselves using Kanban software, or if they need to follow a more rigid guide using Scrum software.

Here’s a quick breakdown of the difference between **Scrum** and **Kanban** workflows:

**Scrum Workflows:** Scrum teams set up their workflows under a “timebox” approach. This involves working to meet a strict deadline and then evaluating performance (rather than taking as much time as needed to work through to completion and then evaluating how long it took).

With a timebox approach, Scrum teams break projects down into smaller items, called **user stories**, that they complete during timed **sprints**. Sprint progress is tracked on a Scrum board.

*(For a detailed description of Scrum, see our guide to essential Scrum functionality.)*

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**User stories:**
An overarching project requirement that teams must complete over the course of one iteration, or sprint. The requirement is then broken down into any tasks, issues or bugs that teams must resolve in the process of completing the story.

**Sprints:**
A unit of time given to complete a set of tasks. Typically, a sprint is two weeks long, although teams can vary this time frame from one to four weeks to accommodate their workflows.
**Kanban Workflows:** Kanban teams have more continuous workflows, where tasks are placed on a Kanban board in a “to-do” column. A team member then takes ownership of the task, moving it across the board from “in-progress” to “complete,” at which point they move on to the next task in the queue.

“I find Kanban to be very clean, very simple ... very light. I have a hard time even saying that agile can be/would be bloated, but Kanban is really stripped down: [You] have a list of tasks of what [you’re] going to work on next ... you pull it over, you’re done and then you move on.”

— Bob Paulsen
Senior Software Project Manager at The Nerdery

Rather than working on a strict schedule, Kanban teams regulate their workflows using two methods:

- Setting **Work-in-Progress (WIP)** limits
- Calculating **lead and cycle time** (the later helps teams evaluate how long it took to complete each task)

*(For a more in-depth description of the Kanban methodology and tools, check out our report on key Kanban software features.)*

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**Work-in-Progress (WIP):**

WIP limits help regulate the flow of tasks along the team’s Kanban board by limiting the number of open and in-progress items allowed for any one team member or workflow stage.

**Lead and Cycle Time:**

Lead and cycle time diagrams help teams manage their workflows by measuring the time from when a task is placed on the board to when the task is completed.

“Lead time” begins when the task is placed in the teams’ queue on the Kanban board and ends when the task is completed.

“Cycle time” refers to the time spent actually working on an open item until completion.
Key Takeaway for Analyzing Workflows

If the team requires a strict sprint-flow to successfully deliver on projects, **Scrum** software might be the best fit. If the team is more productive when working under a continuous flow, managers should consider **Kanban** software.

“I would characterize Kanban as probably dangerous for beginners, something that only more experienced teams should venture on with. The rhythm and “doneness” of a timeboxed Scrum iteration is an easier environment to understand work worth for beginning teams.”

— Andy Hunt
Author, Publisher, Consultant, Programmer

3: Know Which Methods Are Best for Which Teams

Depending on what industry your company is in, some teams are better equipped to follow Scrum or Kanban principles (and thus use Scrum or Kanban software) than others. Let’s take a closer look:

**Scrum teams:** Scrum works well for teams and industries with definitive work cycles, e.g., those who can plan to execute a certain amount of tasks in a sprint and then work for two weeks without changing that plan. Any change mid-sprint would throw off the team’s commitments.

Tony Solomita, principal consultant and agile service area lead for Excella Consulting (a business management and technology consulting firm) says it is much harder for teams to change priorities mid-sprint.
This is because Scrum teams forecast what they will get done in two-week cycles and make commitments based on that plan, so even a small change has a large ripple effect.

Scrum is a popular methodology for software development teams. This is because the strict sprint iterations are conducive to how software is typically developed: an initial planning session followed by a short release cycle, after which teams receive feedback and plan any required updates/changes for future iterations.

“Scrum fits well in software development project companies or shops ... it’s really well suited to that. Every two weeks you do an iteration planning meeting, choose all the user stories that you’re going to take on in that two week period of time and then you go off and work for two weeks.”

— Dave White
Principal Consultant for Depth Consulting

Developers plan out the stories and tasks they can complete in the course of one sprint (typically a specific feature or functionality of the software), which they deliver to the client for review at the end of each sprint.

Working in two-week iterations thus allows Scrum teams to deliver completed pieces of a project more frequently, increasing opportunities for feedback and improvement.

“Having a sprint and having a strict deployment schedule based on your sprints [where] you can measure velocity works out best, because the client is seeing deliverable product and you have [velocity] reports to show what we’ve worked on and the pace of the team.”

— Bob Paulsen
Senior Software Project Manager at The Nerdery
How Scrum software helps:

- **Using backlog tools**, teams can plan out the user stories they will complete over the course of each sprint.

- **Running burndown and velocity reports** helps teams evaluate their performance over the course of the sprint and the accuracy of their forecast. This helps them keep track of how many user stories and/or story points they can reliably expect to complete every sprint.

**Kanban teams:** Kanban works well for teams who experience frequent change, and thus cannot prevent changes from occurring during a two or four week sprint.

> "Industry teams who are using Kanban ... their work doesn’t fall into these iteration plans."

— Dave White  
Principal Consultant for Depth Consulting

Excella Consulting’s Solomita says that Kanban works best for fast-paced industries, such as marketing and communications, because it is more accepting of change and allows teams to efficiently re-prioritize commitments.

> "From a Kanban perspective, when you have a backlog that is continually evolving and you can prioritize on a continual basis, that tends to work really well for marketing and communication teams."

— Tony Solomita  
Principal Consultant and Agile Service Area Lead, Excella Consulting
How Kanban software helps:

- **Activity streams** help teams stay apprised of changing needs and status updates by facilitating real-time communication among team members.

- **Cumulative flow diagrams** help teams identify bottlenecks and project scope changes which can affect a project’s timeline.

**Key Takeaway for Deciding Which Method Is Best for Your Team**

Industry teams that have a definitive start and end date to their work cycles and that can work on several items at once without altering timelines are likely to benefit most from **Scrum** software.

Teams that have less defined work cycles, begin and finish work sequentially and frequently have to re-prioritize tasks to accommodate changing requirements are likely better off with **Kanban** software.

“*Scrum allows you to determine what you’re going to fit into your sprint for the next two or four weeks and then run without change. Kanban allows change to happen.*”

— Scott Cordeiro
Managing Director for Eliassen’s agile consulting practice
4: Assess Purchase Drivers

The need to meet certain business requirements is typically the biggest driver in leading teams to look for new software solutions. The most common requirements of a new system are:

- It must help the company meet regulatory compliance
- It must have the ability to create Service Level Agreements (SLAs)
- It must be able to distribute work to remote teams

Here is how Scrum and/or Kanban software can address these needs:

**Meet Regulatory Compliance**

Teams that seek software to help with compliance often need to establish a permanent record, or audit trail, that documents each stage of the project process—something that can’t be captured with physical whiteboards or post-it notes.

In fact, 45 percent of first-time small business buyers cite the need to increase transparency as a key driver of their search for new software:

**Top Purchase Drivers for First-Time Buyers: 2015**

- Need to organize: 54%
- Automate/streamline processes: 48%
- Increase transparency: 45%
- Increase productivity/efficiency: 37%
- Need more functionality: 34%
- Need PM-specific tool: 24%
- Increase collaboration/communication: 23%
- Improve client management: 9%

While both Kanban and Scrum software platforms can help teams meet regulatory compliance, let’s look at an example of how Scrum software does so:

**Scrum software** can track bugs and issues and document each stage of their resolution. The software focuses on accountability and provides a permanent record of each stage of issue management.

Scrum tools, such as JIRA Software and Pivotal Tracker, are specially designed to help teams with early detection and resolution of bugs or issues by having teams “review” or “test” a work item before it can be marked as “complete.”

Any work item that doesn’t test correctly is flagged for further analysis. These systems will also differentiate between “open” and “re-opened” tasks or issues, which can help teams prioritize which issues to address first.

Issue tracking, meanwhile, lets teams capture issues, record key information, prioritize issues for importance, resolve issues and review or test the solution.

**Ability to Create Service Level Agreements (SLAs)**

In PM, Service Level Agreements (SLAs) are contracts between the business providing a service and the customer receiving the end product. An SLA outlines the scope, tentative budget and timeline required to deliver the completed project to the customer.

Due to changing customer requirements (which affect project scope, budget and timeline), SLAs are not fixed promises—they are created to address provisional expectations around how long a project can be expected to take.

While both Kanban and Scrum software platforms can help teams create SLAs, let’s look at an example of how Kanban software does so:

**Kanban software** such as Rally (recently acquired by CA Technologies) and LeanKit helps teams calculate lead and cycle time to determine throughput, which measures the number of work items a team reliably completes within a specific timeframe.

By tracking these metrics, Kanban software can help teams more accurately forecast timelines for new projects based on the data they’ve gathered from past projects. The longer teams use Kanban software to track lead time and cycle time and throughput, the more accurate these predictions will be.

This allows project teams and clients to enter into SLAs with confidence, as teams can provide historical data that backs their initial timeline estimate.
Able to Distribute Work to Remote Teams

Both Scrum and Kanban software can help managers distribute work to remote teams. According to The Nerdery’s Paulsen, software is helpful for replicating team dynamic across geographic locations by making it possible to connect users and facilitate real-time communication.

Within Scrum and Kanban software, remote teams can access a shared, virtual task board and quickly view the status on an open work item. Communication tools, such as activity streams, allow workers to receive automatic updates on work items to stay up-to-date on teammates’ activities.

Some Scrum and Kanban tools also include built-in time tracking, while others may offer time tracking as an add-on to give managers visibility into the individual performance of remote workers.

In particular, cloud-based tools, such as VersionOne, act as a shared database for project teams. They help facilitate collaboration and increase transparency (and traceability) among team members.
5: Evaluate Integration Requirements

An additional purchase consideration is how the new PM platform will integrate with existing tools. For example, Excella Consulting’s Solomita says that for software development, teams will want a platform that integrates with their current code repository tools (such as Git).

Additional integration considerations may include:

- Communication and collaboration tools, such as Slack
- Time-tracking tools, such as Hubstaff
- Customer relationship management (CRM) platforms, such as Salesforce or Freshdesk

The majority of online Scrum and Kanban project management solutions have vast online marketplaces of add-ons and integrations. This allows users to enhance a platform’s functionality and configure the tool to their unique needs; which is particularly useful when teams across horizontal industries use the same tool.

Additionally, these vendors often provide an open, publicly available API (application programming interface), which third-party developers can build applications upon to further customize the platform according to the needs of vertical industries.

Rather than using siloed, industry-specific tools, this allows users to extend the reach and capabilities of their PM platform and ensure that each extension is synchronized with the main tool.

**API (application programming interface)**

An open API provides developers access to allow proprietary technologies to interface and share data with each other.
6: Identify Tools and Vet Products

At this final stage, managers should have a pretty good idea as to which type of software is the best fit for their team. The next step is to take a closer look at the platforms that offer the capabilities that best meet their team’s needs.

1. Identify Tools

The following product descriptions provide a more in-depth review of the Scrum and Kanban project management tools mentioned in the previous sections.

**JIRA Software**

- **Price:** $ (Free 7-day trial)
- **Deployment:** Cloud-based, On-premise
- **Size of Business Served:** S, M, L
- **Scrum vs. Kanban Support:** JIRA Software supports both Scrum and Kanban capabilities. Features include Scrum Boards, Kanban boards, burndown charts, product backlogs, issue management, lead and cycle time calculations and more.
Pivotal Tracker

Multiproject workspace in Pivotal Tracker

**Price:** $ (Free for up to 3 users)

**Deployment:** Cloud-based

**Size of Business Served:** S, M, L

**Scrum vs. Kanban Support:** Although not a self-proclaimed Scrum solution, Pivotal Tracker includes several capabilities common in Scrum tools, such as the ability to create stories and calculate story points as well as team velocity. Users can also prioritize backlog items and track essential milestones.
Price: $ (Free for up to 10 users)

Deployment: Cloud-based

Size of Business Served: S, M, L

Scrum vs. Kanban Support: Rally supports both Scrum and Kanban capabilities. With Rally, teams can choose between timebox planning and tracking (Scrum) as well as flow-based planning and tracking (Kanban). Teams can measure progress via burndown charts or cumulative flow diagrams and can measure cycle time and throughput.
LeanKit

Kanban board in LeanKit

**Price:** $ (Free 30 day trial)

**Deployment:** Cloud-based

**Size of Business Served:** S, M, L

**Scrum vs. Kanban Support:** LeanKit adheres to Kanban’s historical background in lean manufacturing and principles, and supports Kanban workflows with features such as Kanban boards, WIP limits and reporting on metrics such as lead and cycle time.
VersionOne

PlanningRoom view (used for higher level program and portfolio planning) in VersionOne

**Price:** $ (single-team edition is free)

**Deployment:** Cloud-based

**Size of Business Served:** S, M, L

**Scrum vs. Kanban Support:** VersionOne is a solution that fully supports Scrum and Kanban capabilities. The platform can scale to all three levels of enterprise agile PM, from team to program to portfolio, according to the needs of each organization. Features include Scrum and Kanban task boards, issue management, burndown and velocity reports as well as workitem cycle time reports.
2. Vet Products

The tools listed above are just a few examples of the many products available to agile teams. Once teams have their shortlist of Kanban and/or Scrum project management solutions, they should demo each and every one.

These demos should provide teams with an overview of the software’s interface and all available features, which can give teams a feel for the product’s ease of use.

Additionally, teams should read reviews about the products they’re interested in to learn what other customers have to say about these products when it comes to things such as ease of use and support options.

Finally, as most vendors will offer either a free starter package or a free trial period, teams are encouraged to try out several products to ensure the system they choose aligns with established workflows and supports their industry needs and team requirements.

**It’s especially critical that the team demoing, trialing and evaluating the product’s features and ease of use is the team that will actually be using the tool.** The needs of every team will vary, so a tool that works well for one team may not support the needs of another.

“A common problem is over-tooling ... [Make] sure that the people who will be doing the hands-on, day-to-day use of the tool are the ones involved with choosing it.”

— Scott Cordeiro
Managing Director for Eliassen’s agile consulting practice
This also helps ensure that teams select a tool with a feature set representative of what they need at the time. Flexibility and scalability is important, but teams should only purchase a system that has the features they will use.

“You don’t want to kill a fly with a sledgehammer … Let the teams pick the depth of functionality they need.”

— Tony Solomita  
Principal Consultant and Agile Service Area Lead, Excella Consulting

To make this decision easier, the pricing model and tiered feature set of many cloud-based systems mirrors how teams should approach tool selection: only purchase what you need now, then get feedback from your team and re-evaluate needs as they change over time.

“Don’t just get the first vendor’s tool that looks good. Get three on a trial, test each one out, get feedback and see which one actually works for you … The fundamental premise of agile is to inspect and adapt. To do something, to get feedback, to change what you’re doing and to be responsive. To be agile. That’s where we came up with the word!”

— Andy Hunt  
Author, Publisher, Consultant, Programmer
Conclusions

Buyers in search of Kanban or Scrum project management solutions have several variables that factor into their software selection process. To quickly recap, tips for choosing the right system include:

- **Start simple and establish basic processes first.** Learn what your team needs before introducing a PM solution into the mix.

- **Identify workflow and industry-related influences.** Be aware of any specific feature or compliance requirements that may impact software selection.

- **Stay agile!** Continue to demo products, ask for feedback and re-evaluate needs as your team evolves. If a product isn’t working out, don’t be afraid to search for a new one.

For even more help with the software selection process, simply contact one of Software Advice’s trusted PM advisors. In one short phone consultation, our project management experts can help you evaluate your needs and narrow your search for the right solution.

For your free consultation, call (888) 918-2745.
Meet the Experts

Andy Hunt is an established author, publisher, consultant and programmer. As one of the 17 founders of the Agile Manifesto and co-author of The Pragmatic Programmer (just two among many of the publications he has authored/co-authored), Hunt is a well-regarded expert on the subject of agile management and software development. Hunt also writes a popular, self-titled blog, Andy, where he discusses how the agile movement has evolved and where it is headed.

Bob Paulsen is a senior software project manager and team lead at The Nerdery (a custom software design and development company), where he is an advocate for agile management. Paulsen has hands-on, day-to-day knowledge of both Kanban and Scrum methodology and software and has managed teams using both methods.

Dave White is a principal consultant at Depth Consulting Ltd. (a consulting firm specializing in agile software development and IT practices). White began his career as a developer and has over 15 years experience in the IT Industry. Now, as an Agile/Kanban practitioner, White coaches and teaches around North America. White also authors a popular industry-blog, Agile Ramblings, where he discusses Agile, Lean and Kanban leadership.

Scott Cordeiro is the managing director for agile consulting services at Eliassen Group (a technology staffing and consulting services firm). With over 20 years experience in the IT staffing industry, Cordeiro leads Eliassen’s agile practice by providing team, portfolio and enterprise level coaching and support for clients looking to adopt agile practices into their operations.

Tony Solomita is principal consultant and agile service area lead for Excella Consulting (an agile IT consultancy based in Washington, D.C.). Solomita has over 15 years consulting experience and holds several certifications (including both Certified Scrum Professional and Certified ScrumMaster) and leads the DC Chapter of the Agile Leadership Network (ALN).
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