Kanban
a beginner’s guide
About Naimuri
We exist to create a world where any organisation can achieve perpetual forward motion and continuous competitive edge. Our dedicated approach to technology services, cyber and information security services, and business change consultancy can help you achieve this through ever-evolving technology, culture and processes.

About the author
Rachel Webb is an expert in business process, agile and all things kanban. She is a kanban trainer accredited by Lean Kanban University. She has transformed the ways of working for several teams and organisations throughout her career. Rachel is an advocate of perpetual improvement and is currently Naimuri’s director of business transformation, helping to improve the agility and efficiency of Naimuri, our customers and our partners.
What is Kanban?

The word “Kanban” is a Japanese word for ‘visual sign’ or ‘card’. Its popularity as a way of managing work stems from the late 1940’s when it was adopted by the Japanese motor industry (namely Toyota) to successfully drive improvements in quality and throughput.

Since the late 2000’s kanban has been gaining in popularity in the software development industry as a way for teams and projects to easily and smoothly move to Agile and Lean techniques from a more traditional Waterfall delivery approach.

Kanban is a tool for managing flow in a process. Most projects and services can be viewed as a process - a series of steps or tasks that achieve a desired result.

How can kanban help me?

Are you in a team where everyone is busy and yet nothing seems to get done?
Is it hard to answer questions such as:

Where are we now?
When will it be done?
Who is working on what?
What should I be doing next?

Providing answers to critical questions such as these, which in turn leads to improvement and eliminating waste, is one important way that using kanban can help you and your team.
**What will I have to change?**

Kanban is about evolution, not revolution.

Kanban does not ask you to change your existing process, it encourages you to evolve it collaboratively with your team.

Applying kanban to your current ways of working means you can identify ways to improve what you are already doing, without losing the things you are already doing well. You and your team make incremental improvements to your existing processes. You don’t have to change how you work until you have identified what will bring the greatest benefits and your team is ready to make a change.

**The key concepts of kanban**

**Visualise everything**
Any process and any task within it can be visualized, whether complex or simple. Once all the work can be seen (including work that is usually invisible such as risk mitigations or dependencies), it is possible to manage the work and the blockers to progress better and to do so collaboratively with your team.

**Limit work in progress (WIP)**
Whether the work is simple or complex or the team is small or large, there is an optimal amount of work that can be in the process at any one time without sacrificing efficiency. You can also avoid the problems caused by switching between tasks and reduce the need to constantly prioritise conflicting items.

**Measure and Manage flow**
The flow of work items across your kanban system should be
monitored and reported on. The metrics gathered can be used as evidence for (or against) improvement actions, to confirm or adjust milestone plans and to justify resource changes.

**Improve collaboratively based on evidence**
The team should make time to regularly review the workflow and the metrics gathered, reflect on what has been accomplished and how it felt, and consider which changes to the process may yield further improvements.

A commitment to continuous improvement lies at the heart of any successful kanban team.

**Nine steps for implementing kanban**

**Step One** Visualise your workflow
Create a kanban board to allow you to see at a glance, the status of work being done.

Visualise your workflow in a physical way (on a whiteboard, wall or other surface). Map out your workflow as it is now - not the ideal process or the process you would like to have. Each step in the workflow gets its own column on the kanban board.

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<th>Development</th>
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Kanban a beginner’s guide
**Step Two** Visualise your work

Once you have visualised your workflow and created your kanban board, you can start adding tasks to it.

Visualise each task with a card on the kanban board. Tasks should represent something that has to be done and something that is worth doing. Each task should have a name that everyone recognises and understands. In order to make decisions about the task in the daily stand-up (see step five), cards may also need to show other information such as system, deadline or priority.

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<tr>
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| ![Task: Integrate order system into product website](image)
  
  **Ref:** 123
  
  **Priority:** H |

**Step Three** Visualise the way work should be done

Create rules for each step of your workflow process and visualise them by adding them to your board.

Without an explicit understanding of how a project works and what ‘done’ looks like, it is often hard to hold a discussion about improving it. The people doing the work should be the ones who
devise the rules to help the team retain focus on delivering a quality product. These rules should be clear, specific, readily available, and reviewed regularly.

**Step Four** Set initial work in progress (WIP) limits

There is a limit to the number of things you can be working on and still do them well. This limit is often lower than you think. Work-in-progress (WIP) limits highlight bottlenecks in a team’s process that they may not even know are there.

It is important to get buy-in from the rest of the team when setting WIP limits to ensure that everyone understands the benefits of limiting the WIP before you take this step.

At the start, it is hard to know the ideal amount of work in progress, but you have to start somewhere, so begin with your best guess.

Once you agree a WIP limit for each stage (column) within your kanban system, visualise them on your kanban board.
Now everyone is aware of the limits, they should make an effort not to exceed them.

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**Step Five** Hold a daily stand up

Now that you’ve set up your kanban board, everyone can see at a glance what is being worked on, who is doing the work, and at what stage in the workflow every task is.

Every day, meet around your kanban board to understand where the work is up to and focus on unblocking the blockers to progress.

Always start your discussion on the right hand side of your board; this ensures you are always thinking about customer delivery. Time-box your discussion; the focus of the stand up should be on the status of the work on the kanban board rather than the team completing it.
Step Six  Manage your workflow

By limiting WIP, your kanban system intuitively becomes a ‘pull’ system.

Pull means that when someone is ready to do work, they look on the board to see what needs to be done, and pull their next task into a column representing the next step in the process. The task becomes their responsibility until they finish that step in the process and someone pulls it into the next column.

In practice, this means that your team stops starting new work and starts finishing the work currently within the kanban system.
**Step Seven** Gather metrics to measure flow

Your team should measure the effectiveness of their kanban system by tracking flow (lead) time, throughput, and other metrics. These metrics can be gathered through tools such as Jira or a spreadsheet. It is important to gather metrics from day one so that all changes can be assessed as to whether they make a positive impact on flow.

**Lead Time** - we are interested in the speed and smoothness of movement across a kanban board. Ideally we want a smooth, fast flow, meaning our kanban system is creating value quickly, in a predictable fashion.

**Throughput** - we are interested in how many tasks we usually complete in a week, a sprint, or some other period of time. We want to understand the variations in throughput so we can compare the work completed from one time period to another, with the aim of becoming predictable.
Improvement should always be based on objective measures and kanban is no different. The metrics that can be gathered will give you the information needed to make changes to your ways of working and see the results of these changes on flow.

![Work Completed Chart]

**Step Eight** Invite your customer to get involved

Kanban gives teams more flexible planning options, predictable output, clearer focus and transparency of delivery.

Whether your customer is internal or external they will want to reap the benefits of this approach.

If your customer is in the same location as you then they will be able to see for themselves how the work is visualised. If they are not, you may want to think about sharing this information electronically in some way.

Once your process is working well you may find you need to talk to your customer more often about what they want you to work
on next in order to have a steady feed of work for the team. The rules that your team have agreed about how the work is done may have implications to your customer in terms of acceptance or release. The metrics gathered should help to justify any changes in working practices your team may wish to adopt.

The metrics you gather can be included in the reporting you are already doing. You can then report how your improvement actions have made a difference to the lead times and the throughput.

**Step Nine** Improve collaboratively based on evidence

The power of kanban is that it makes it easy for everyone to see a problem forming. Early awareness of the problem means that a solution can be found before you have a large pile of partially completed work.

If there are any bottlenecks or missing or unnecessary steps, they will come to light on your kanban board. Action can then be taken by the team to remove bottlenecks or amend the workflow.
As your understanding of the work and how it should be completed improves, this should be reflected in your kanban board, your process policies and your metrics gathering.

No project stands still and neither should your approach to kanban and continuous improvement.

**Conclusion**

You have now implemented a kanban system and your team have started along the path of continuous improvement.

Taking these first steps to implement kanban with your team is not easy and you won’t get it right first time. These steps will enable everyone to understand what is going on within your current process and easily identify the frustrations and how the team are constrained in the way they work.

This in turn will empower your team to improve the way they work for everyone’s benefit.
Further Reading & Resources

Recommended books
Kanban: Successful Evolutionary Change for Your Technology Business by David J. Anderson

Kanban from the Inside by Mike Burrows

The Phoenix Project: A Novel About IT, DevOps, and Helping Your Business Win by Gene Kim

Recommended blogs
The Naimuri blog has helpful articles and tips on how to implement kanban and general process improvements. naimuri.com/blog

Other blogs:
anderson.leankanban.com/blog
hakanforss.wordpress.com/tag/kanban-kata
blog.deming.org
iancarroll.com

Training
Naimuri can provide one or two day training courses tailored to your project team or organisation. These courses are certified by LeanKanban university. Email askus@naimuri.com for more information.
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