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Targeting success

A Guide to the

KANBAN BODY OF KNOWLEDGE (KBOK™ GUIDE)

2. Principles

The Practical Implementation Guide for Managing Workflows using Kanban

(Includes Examples from popular digital Kanban tools, facilitates integration with other Agile frameworks, and recommends ways to use AI for increased productivity.)

2 PRINCIPLES

Kanban principles form the foundation of the Kanban method. They can be applied to any type of Workflows or organizational process and must be adhered to in order to ensure the proper application of Kanban.

The key Kanban principles are:

- Empirical Process Control
- Iterative or Incremental Development
- Collaborative Leadership
- Value-based Prioritization
- Self-organization
- Visualization

2.1 Empirical Process Control

When applying Kanban to Workflows and other processes, planning and implementation decisions are based on observation and empirical evidence. Organizations should first understand their current Workflows and processes, then incorporate Kanban principles and artifacts to optimize them. By refining existing Workflows and processes, rather than creating new ones, Kanban minimizes resistance to change within the organization, facilitating smooth transitions and continuous improvements.

Empirical process control is a foundational principle in Kanban that emphasizes making decisions based on observation, experience, and actual data rather than assumptions or detailed upfront planning. It recognizes that in complex, evolving work environments (like software development, service delivery, or operations), it's impossible to predict everything in advance. Instead, continuous learning and adaptation are key.

This principle is built on three core pillars, Transparency, Inspection and Adaptation:

2.1.1 Transparency

Transparency means that the process, Workflows, and Work Items are visible and understandable to all stakeholders. In Kanban, this is achieved through visual tools like Kanban Board s, where Tasks are represented as cards and moved through different Workflows stages (e.g., To Do → In Progress → Done). This visibility enables better communication, shared understanding, and real-time insight into the current state of work.

2.1.2 Inspection

Inspection involves regularly reviewing both the process and the work. In Kanban, teams monitor metrics like lead time, cycle time, work-in-progress (WIP), and throughput. They also review Workflows efficiency, blockers, and bottlenecks. These inspections are often done during daily stand-ups, service delivery reviews, or retrospective meetings.

By examining the current flow and performance, teams can detect deviations, inefficiencies, or emerging issues before they become major problems.

2.1.3 Adaptation

Based on what is observed during inspection, teams make informed adjustments to improve the process. This might include:

- Limiting WIP more strictly to reduce multitasking
- Reallocating resources
- Reconfiguring the Workflows stages
- Changing policies or prioritization strategies

The goal is to continuously evolve the process to respond to changing demands and improve outcomes over time.

2.1.4 Summary

Empirical process control aligns perfectly with Kanban's focus on evolutionary change rather than radical transformation. It supports gradual, data-driven improvements without disrupting the existing system. It also helps teams become more adaptive, responsive, and resilient in the face of uncertainty or change.

By embracing empirical process control, organizations foster a culture of continuous improvement, accountability, and learning, leading to more effective and efficient service delivery.

2.2 Iterative or Incremental Development

Iterative development (or incremental development) requires that current Workflows and their performance be baselined first. Changes must be agreed upon by relevant stakeholders, and any agreed-upon changes are then implemented incrementally. Iterative development allows course correction. All stakeholders involved progressively gain a better understanding of what needs to be delivered as part of an initiative and, in turn, incorporate this learning into the process in an iterative manner.

Iterative and Incremental Development is a core principle in agile methodologies, including Kanban. While Kanban does not prescribe iterations (like sprints in Scrum), it naturally supports this principle through continuous flow and ongoing delivery. This allows teams to evolve their products and processes in small, manageable steps, leading to continuous improvement and value delivery.

2.2.1 What It Means

- Incremental development refers to delivering work in small, usable pieces that add value. Instead of waiting until an entire project is complete, Kanban Teams deliver features or improvements piece by piece.
- Iterative development means refining or revisiting work over time. After releasing an increment, the team gathers feedback, learns from it, and improves the next increment. This loop continues, allowing better alignment with customer needs and changing priorities.

2.2.2 How It Works in Kanban

Kanban promotes this principle through several practices:

- **Continuous Delivery of Value**

  Kanban Workflows are designed for flow-based delivery, meaning Work Items are pulled through the system as capacity becomes available, not bundled into fixed iterations. This encourages small, incremental releases that can be delivered to users more frequently.

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

  By limiting how much work can be in progress at once, Kanban promotes focus and completion of smaller Tasks. This inherently supports incremental delivery, as teams complete and deliver small units of work regularly.

- **Feedback Loops and Learning**

  After each Work Item or feature is completed, teams use feedback mechanisms (like customer feedback, analytics, or reviews) to learn and iteratively improve. This supports adaptive development where each new piece builds on lessons from the previous one.

- **Metrics and Flow Optimization**

  Using metrics like cycle time, lead time, and throughput, teams can observe trends over time, helping them make iterative improvements to the Workflows itself—not just the product.

2.2.3 Benefits in Kanban

- Faster time-to-market by delivering smaller chunks sooner
- Early and continuous feedback from stakeholders or customers
- Greater adaptability to change, as priorities can shift without disrupting the whole plan
- Reduced risk, since smaller changes are easier to test, revert, or adjust
- Steady progress, promoting team morale and stakeholder confidence

2.2.4 Summary

Although Kanban doesn't use time-boxed iterations like Scrum, it fully embraces iterative and incremental development by:

- Encouraging small, continuous improvements
- Delivering value frequently
- Adapting based on real-world feedback

This principle helps teams stay flexible, responsive, and focused on delivering the right value at the right time.

2.3 Collaborative Leadership

When applying Kanban principles, it is imperative to foster an environment where leadership is encouraged at all levels throughout the organization. The goal is to create an open work culture where people collaborate effectively by sharing information, suggesting improvements, and taking collective accountability for executing the work. Leaders should practice effective listening, empathy, commitment, and insight while sharing their power and authority with team members. They are expected to be stewards who achieve results by focusing on the needs of all team members.

Collaborative leadership is a vital principle in Kanban that emphasizes shared responsibility, active participation, and collective ownership of outcomes. Rather than relying on top-down authority or command-and-control management, Kanban encourages leadership at all levels and fosters a culture where decision-making is distributed, and teamwork drives success.

This approach is key to creating a culture of continuous improvement, one of the core goals of Kanban.

2.3.1 What Is Collaborative Leadership?

Collaborative leadership involves:

- Engaging team members in decision-making processes
- Encouraging diverse perspectives and ideas
- Fostering open communication and trust
- Empowering individuals to take initiative and ownership
- Aligning around shared goals, rather than enforcing hierarchy

In Kanban, leadership isn't limited to those with formal titles. Every team member can lead by example, suggest improvements, identify issues, and contribute to better outcomes.

2.3.2 How Collaborative Leadership Manifests in Kanban

Here's how this principle plays out in practice:

- **Leadership at Every Level**

  Kanban promotes "leader-leader" rather than "leader-follower" dynamics. Anyone—developers, testers, service desk agents, etc.—can propose changes, challenge inefficiencies, or highlight blockers in the Workflows. Authority is distributed, not centralized.

- **Facilitating Change Through Consensus**

  Rather than enforcing change top-down, Kanban uses collaborative discussion and data (such as flow metrics) to guide decisions. Teams are more likely to support and sustain change when they help design it.

- **Creating Safe Environments**

  Collaborative leadership fosters psychological safety. Teams feel safe to speak up, question existing processes, or suggest improvements without fear of blame. This leads to more experimentation and innovation.

- **Roles Become Guides, Not Gatekeepers**

  Roles like service delivery managers or coaches in Kanban act more like facilitators or mentors, supporting team growth, removing obstacles, and guiding improvement—not dictating how work should be done.

- **Shared Accountability**

  Outcomes are not the responsibility of a single person or department. Everyone contributes to—and is accountable for—the flow of work and the value delivered. This shared ownership strengthens team alignment and purpose.

2.3.3 Why It Matters in Kanban

- Encourages continuous improvement through collective insight
- Builds trust and respect within and across teams
- Increases buy-in and motivation since changes are co-created
- Enables adaptive leadership, suited for fast-changing environments
- Reduces bottlenecks caused by decision silos

2.3.4 Summary

Collaborative Leadership in Kanban means enabling everyone to lead, contribute ideas, and take part in evolving the system. It breaks down traditional hierarchies and supports a culture where people work together to continuously improve how value is delivered.

By practicing collaborative leadership, Kanban Teams become more empowered, resilient, and innovative, creating better outcomes for both the team and the organization.

2.4 Value-based Prioritization

This principle requires the team to gain a clear understanding of the needs and expectations of customers, those who use the Kanban Workflows and/or those who benefit from the work done through Kanban Workflows. To understand customers' needs, the team must gain insight into what is perceived as 'value' by the customers themselves. The team can then prioritize work in their Kanban Workflows based on business value and consider any risks and dependencies involved in executing the work effectively and efficiently.

Value-Based Prioritization is a core principle in Kanban that focuses on delivering the highest possible value to customers and stakeholders by ensuring that work is prioritized based on its potential impact, urgency, and alignment with business goals.

Instead of working on Tasks in the order they arrive or based on arbitrary deadlines, Kanban encourages teams to make informed prioritization decisions—guided by data, customer needs, and strategic objectives.

2.4.1 What Is Value-based Prioritization?

At its heart, value-based prioritization means:

- Working on what matters most
- Delivering the maximum value with minimal waste
- Continuously reassessing priorities as context, customer needs, or business goals evolve

This helps teams stay aligned with real-world demands and ensures that limited capacity is used in the most effective way possible.

2.4.2 How Kanban Supports Value-Based Prioritization

Kanban provides several tools and practices to help teams prioritize effectively:

- **Work Item Types and Classes of Service**

  Kanban allows different types of work (e.g., features, bugs, technical debt, emergencies) to be visually distinguished and assigned Classes of Service, such as:

  - Expedite (urgent, high business value)
  - Fixed Date (must be delivered by a certain time)
  - Standard (normal value)
  - Intangible (low visibility but important for the long term)

  This helps teams make data-driven decisions about what to pull next based on value and urgency.

- **Visual Prioritization on the Kanban Board**

  Kanban Board s clearly show which Work Items are queued and in progress. By reviewing the backlog or "ready" column, teams can have collaborative discussions about what to pull next, focusing on delivering the highest-impact items first.

- **Feedback Loops and Flow Metrics**

  By using flow metrics (like lead time, cycle time, throughput), teams can track how efficiently high-value items are being delivered. These insights help refine future prioritization decisions to better meet stakeholder expectations.

- **Regular Meetings**

  In Kanban, replenishment meetings (also known as commitment meetings) or daily stand-up meetings are used to regularly review and prioritize the backlog.

  During these meetings, stakeholders and team members collaborate to decide which items to bring into the system, focusing on those that will deliver the most value.

2.4.3 Why Value-based Prioritization Matters

- Ensures teams focus on delivering real business outcomes, not just completing Tasks
- Helps avoid wasting time on low-value or outdated requests
- Increases customer satisfaction by delivering what they care about most
- Enables faster ROI by tackling high-value items early
- Supports strategic alignment between the team and organizational goals

2.4.4 Summary

Value-Based Prioritization in Kanban means continuously evaluating and choosing work based on its potential value to customers and the business. By using visual tools, collaborative discussions, and flow metrics, Kanban Teams can focus their limited time and resources on what matters most.

This principle not only drives efficiency and impact but also fosters a culture of customer-centricity, strategic thinking, and continuous delivery of value.

2.5 Self-Organization

Kanban practices embrace the idea that team members are self-motivated and seek to take on greater responsibility. The team will deliver greater business value when it is self-organized. Self-organized teams consist of autonomous individuals who fully understand the requirements, devise the best means to deliver them, and take complete accountability for the results they deliver. Business leaders in a Kanban environment play a critical role in enabling a team to become self-organized. They should understand the team's maturity level and provide leadership that encourages the team to evolve into a group of peer professionals.

Self-organization is a key principle in Kanban that empowers teams to manage their own work, make decisions collaboratively, and continuously improve without needing constant oversight or direction from management. It promotes autonomy, accountability, and adaptability, allowing teams to respond more effectively to change and deliver better outcomes.

2.5.1 What Is Self-Organization?

Self-organization means that a team:

- Chooses how work is executed
- Manages its own Workflows
- Identifies and solves problems
- Improves processes continuously
- Collaborates to make decisions, rather than relying on top-down instructions

In Kanban, self-organization is not about working in isolation—it's about empowering the team to take ownership of their responsibilities and to drive improvement from within.

2.5.2 How Kanban Supports Self-Organization

Kanban's framework and practices naturally encourage and support self-organizing teams:

- **Visual Workflows (Kanban Board)**

  The Kanban Board makes all work visible, enabling team members to understand the current state of Tasks and decide what to work on next based on capacity, urgency, and value—without needing to wait for external direction.

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

  By setting WIP limits, teams manage their own workload, avoid overcommitment, and focus on finishing Tasks rather than starting too many. This encourages discipline and collaboration around managing flow.

- **Pull System**

  Instead of assigning work top-down, Kanban uses a pull-based system, where team members choose the next Work Item based on readiness and capacity. This gives individuals control over how and when they take on new work.

- **Feedback Loops**

  Kanban encourages frequent feedback through daily standups, flow reviews, and retrospectives. These discussions are led by the team, and they're opportunities to identify blockers, share ideas, and improve processes together.

- **Evolutionary Change**

  Kanban advocates for continuous, evolutionary change rather than radical overhauls. Self-organizing teams are in the best position to understand what's working and what needs adjustment—and they're empowered to make those changes themselves.

2.5.3 Why Self-Organization Matters

- Increases motivation and engagement by giving people control over their work
- Promotes accountability, since the team takes ownership of both the process and outcomes
- Enables faster decisions without needing constant approval or escalation
- Improves adaptability, allowing teams to quickly respond to new information or changes in priority
- Encourages innovation and learning, as team members experiment and improve the way they work

2.5.4 Summary

Self-organization in Kanban means that teams manage their own Workflows, make collaborative decisions, and take ownership of improvement. Kanban provides the structure, transparency, and flexibility that support this autonomy.

By fostering self-organization, Kanban helps teams become more empowered, efficient, and responsive, driving better results and a healthier work environment.

2.6 Visualization

Visualization of Workflows is a core principle of the Kanban method. Teams are encouraged to maintain a transparent work environment to identify areas for improvement, experiment with changes, and measure the results. This approach ensures that changes are made based on observation and collected data. Visualization of Workflows is facilitated in Kanban using a Kanban Backlog and a Kanban Board. The Kanban Backlog contains all the Tasks or Task Groups to be completed by the Kanban Teams involved in the initiative, while the Kanban Board reflects the status of the work the team is currently executing.

Visualization refers to making work visible—which means clearly representing Tasks, Workflows, statuses, and issues in a way that everyone can easily understand. By visualizing the work and the process it flows through, teams can improve collaboration, identify inefficiencies, and make more informed decisions.

2.6.1 Why Visualization Matters

In knowledge work (like software development, customer support, or marketing), most Tasks are intangible—they exist as ideas, documents, or digital items. Without visualization, it's hard to know:

- What work is being done
- Who is doing it
- Where things are stuck
- What's coming next

Visualization brings clarity and transparency, allowing teams and stakeholders to manage and improve the flow of work more effectively.

2.6.2 How Kanban Implements Visualization

Kanban offers several practical ways to make work and processes visible:

- **Kanban Workflows**

  A Kanban Workflows represents the sequence of steps that Task Groups or Tasks go through, from initiation and planning to delivery and completion. Keeping the Workflows transparent and lean is essential for successful and efficient work completion.

- **Kanban Board**

  The Kanban Board is the most iconic visualization tool in the Kanban method. It usually consists of columns representing stages in the Workflows (e.g., *To Do*, *In Progress*, *Review*, *Done*) and cards representing Work Items.

  As cards move across the board, it provides a real-time view of where work stands.

- **Kanban Backlog**

  The Kanban Backlog is a dynamic repository of Task Groups or Tasks to be completed by the Kanban Teams involved in an initiative. It provides a clear understanding of what needs to be done and facilitates flexibility and adaptability among the Kanban Teams to respond to changing circumstances. Each Kanban Team will have its own Kanban Backlog.

- **Work-In-Progress (WIP) Limits**

WIP limits are visually shown at the top of each column. If a column reaches its limit, no new Tasks can be pulled in until something moves forward—this helps avoid overloading the team and makes Workflows congestion immediately visible.

- **Card Details and Visual Cues**

Each card can include labels, color codes, tags, deadlines, or priority levels. For example:

  - Red tags for blockers
  - Green for high-priority items
  - Icons or avatars to show who's responsible

These visual cues make it easy to grasp critical information at a glance.

- **Cumulative Flow Diagrams and Metrics**

Charts and diagrams (like cumulative flow diagrams) visualize how Workflows function over time. This helps teams spot bottlenecks, analyze lead time, and track improvements.

2.6.3 Benefits of Visualization in Kanban

- Improves communication: Everyone can see what's happening at all times
- Builds shared understanding of goals, priorities, and progress
- Makes bottlenecks obvious, helping teams resolve them faster
- Increases accountability by clearly showing who is doing what
- Drives continuous improvement, as teams have visual feedback on how their process is performing

2.6.4 Summary

Visualization in Kanban turns invisible work into a visible, shared picture. By using boards, cards, WIP limits, and visual metrics, Kanban enables teams to see the current state of their work, understand the flow, and make better decisions.

This principle is the foundation for transparency, team alignment, and process improvement—making it one of the most powerful aspects of the Kanban method.

The Practical Implementation Guide for Managing Workflows using Kanban

The Kanban Body of Knowledge (*KBOK™ Guide*) offers guidelines for successfully implementing Kanban, a widely used Agile methodology for managing business workflows. Originally developed in manufacturing, Kanban is now applied across various industries and sectors, including software development, healthcare, education, human resource management, retail, sales and marketing, finance, and more. It works for organizations of all sizes, from small businesses to large enterprises.

The *KBOK™ Guide* is built on insights from thousands of workflows across industries, with significant input from the global Kanban community and the VMEdu® Global Authorized Training Partner Network, comprising over 2,000 companies in more than 50 countries. Its development was a collaborative effort involving experts and practitioners from diverse fields.

The *KBOK™ Guide* is a comprehensive yet easily accessible framework for managing workflows with Kanban. It includes practical examples of Kanban implementation using popular IT tools, helping readers apply the methodology in their organizations. The guide also covers how Kanban integrates with other Agile frameworks such as Scrum, DevOps, OKRs, and Lean. Recommendations about how Artificial Intelligence can be used to increase productivity in Kanban workflows are also included in the *KBOK™ Guide*.

The *KBOK™ Guide* serves as a resource for both experienced Kanban practitioners and professionals new to workflow management. It's also suitable for those with no prior Kanban experience. The widespread adoption of the *KBOK™ Guide* framework standardizes how Kanban is applied to workflows globally and significantly helps organizations improve their overall productivity and return on investment.

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