Kanbanstudy
Targeting success

A Guide to the

KANBAN BODY OF KNOWLEDGE (KBOK™ GUIDE)

7. Plan

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.)

7 PLAN

This chapter includes the processes related to planning of a Kanban initiative: Form Kanban Team, and Optimize Workflows and Determine Stakeholders.

Plan, as defined in *the Kanban Body of Knowledge (KBOK™)*, is applicable to the following:

- Kanban initiatives in *any* industry
- Products, services, or any other results to be delivered to Stakeholders
- Kanban Initiatives of any size or complexity

Kanban can be applied effectively to any initiative in any industry—from small initiatives or teams with as few as two team members to large, complex initiatives with up to several thousand members in several teams.

To facilitate the best application of the Kanban framework, this chapter identifies inputs, tools, and outputs for each process as either "mandatory" or "optional." Inputs, tools, and outputs denoted by asterisks (*) are mandatory, or considered critical to success, whereas those with no asterisks are optional.

It is recommended that the inexperienced Kanban practitioners and those individuals being introduced to the Kanban framework and processes focus primarily on the mandatory inputs, tools, and outputs; while experienced Kanban professionals, including Sponsors and relevant Stakeholders strive to attain a more thorough knowledge of the information in this entire chapter.

This chapter is written from the perspective of a single Kanban initiative within the company or a specific department and follows the *Setup* chapter, where the Kanban function is established for the entire organization or a specific department. The outputs from this chapter will serve as valid inputs to *Execute* (Chapter 8), and *Enhance* (Chapter 9) Kanban activities, which are discussed in subsequent chapters.

The Plan phase begins with forming the Kanban Team which would work on the Kanban initiative. The team responsible for implementing the Kanban Workflows includes the Product Owner, Kanban Manager, and Team Members. The Product Owner and Kanban Manager are central to managing Workflows and ensuring outputs that drive value creation. Depending on the team's needs, the Product Owner may also take on the role of Kanban Manager. Team Members are skilled individuals who develop specialized products or deliver solutions that support the Kanban initiative. Together, they ensure the effective application of Kanban practices to optimize processes and outcomes.

This is followed by optimizing Workflows and determining Stakeholders of the Kanban initiative. To implement Kanban effectively, organizations must review existing Workflows, map processes, identify bottlenecks, and assess value streams. Applying Kanban principles streamlines processes, reduces waste, and boosts efficiency. Key stakeholders include customers, leadership, project sponsors, and anyone impacted by Workflow outcomes. Involving stakeholders early is crucial to optimize Workflows, gain buy-in, and ensure a smooth, successful Kanban implementation.

The goal of the Plan phase is to form the Kanban Team and identify stakeholders to establish optimized Kanban Workflows for the Kanban initiative.

It is also important to realize that although all phases and processes are defined uniquely in the Kanban Body of Knowledge, they are not necessarily performed sequentially or separately. At times, it may be more appropriate to combine some phases and/or processes, depending on the specific needs of each initiative.

Figure 7-1 provides an overview of the Plan phase processes, which are as follows:

7.1 Form Kanban Team— In this process, the Kanban Team is identified, consisting of the Product Owner, Kanban Manager, and Team Members. The Product Owner and Kanban Manager are crucial in managing Workflows and delivering value. Depending on the team's structure, the Product Owner may also serve as the Kanban Manager. Team Members possess the necessary skills to develop specialized products or provide solutions that support the Kanban initiative.

7.2 Optimize Workflows and Determine Stakeholders— In this process, the Kanban Team review existing Workflows by mapping processes, identifying bottlenecks, and assessing value streams. This analysis helps identify opportunities to apply Kanban principles for streamlining, reducing waste, and improving efficiency. Key stakeholders include customers, leadership, project sponsors, and anyone influencing or impacted by Kanban Workflows. Identifying and involving stakeholders early is essential for optimizing Workflows, securing buy-in, and ensuring a smooth and successful Kanban implementation.

Figure 7-1 shows all the inputs, tools, and outputs for processes in the Plan phase.

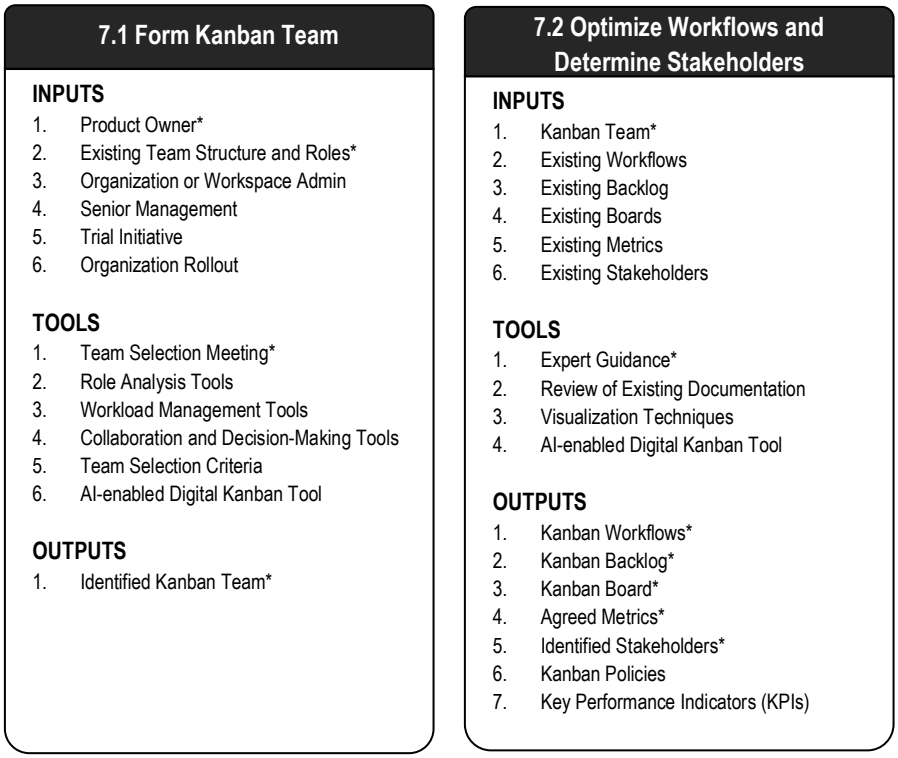

Figure 7-1: Plan Phase Processes Overview

Note: Asterisks (*) denote a "mandatory" input, tool, or output for the corresponding process.

Figure 7-2 below shows the mandatory inputs, tools, and outputs for processes in Plan phase.

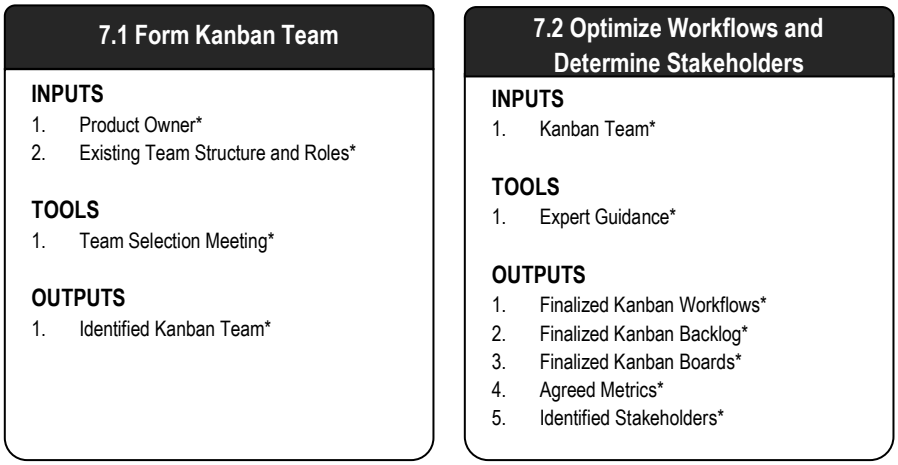

Figure 7-2: Plan Phase Processes Overview (Essentials)

Note: Asterisks (*) denote a "mandatory" input, tool, or output for the corresponding process.

7.1 Form Kanban Team

In this process, the team responsible for implementing the Kanban Workflows is identified. The Kanban Team consists of the Product Owner, Kanban Manager, and Team Members. Together, they ensure the effective application of Kanban practices to optimize processes and outcomes.

The Product Owner and Kanban Manager play key roles in managing the Workflows and producing outputs that drive value creation. In some cases, the Product Owner may also serve as the Kanban Manager, depending on the team's structure and requirements. Team members are individuals with the necessary skill sets to develop specialized products or deliver solutions that support the Kanban initiative.

Figure 7-3 shows all the inputs, tools, and outputs for *Form Kanban Team* process.

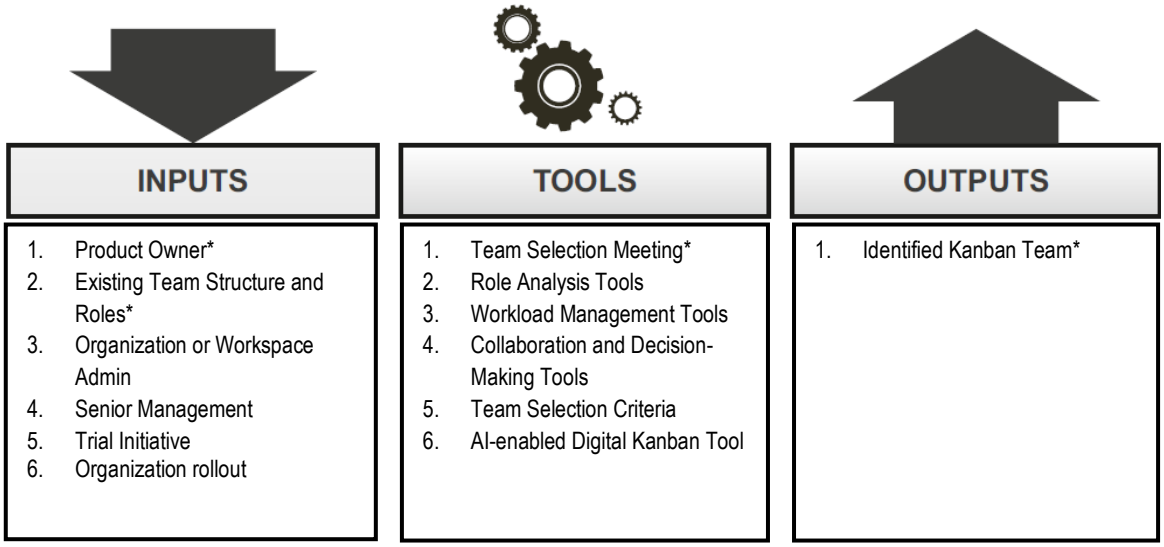

Figure 7-3: Form Kanban Team—Inputs, Tools, and Outputs

Note: Asterisks (*) denote a "mandatory" input, tool, or output for the corresponding process.

7.1.1 Inputs

7.1.1.1 Product Owner*

Product Owner provides vision, priorities, and backlog items, ensuring alignment with stakeholder needs to support the formation of a focused, collaborative, and value-driven Kanban team.

Product Owner(s) role is described in section 3.1.1.

7.1.1.2 Existing Team Structure and Roles*

The current team structure and roles provide a foundation for establishing the Kanban Team. By analyzing existing roles, responsibilities, and the overall team structure, organizations can identify potential Kanban roles and define their corresponding responsibilities. For example, Project Managers can transition into Product Owner roles, while Developers and Testers can become part of the Development Team within the Kanban method. Understanding the team's strengths, weaknesses, and communication styles is crucial for forming an effective Kanban Team. This analysis ensures that roles are aligned with individual skill sets, fosters better collaboration, and supports the smooth implementation of the Kanban Workflows.

7.1.1.3 Organization or Workspace Admin

When using a digital Kanban tool or SaaS product to implement Kanban, an Organization or Workspace Admin is essential for setting up and managing the organization and its workspaces. The Organization Admin typically holds a leadership role, ensuring strategic alignment and providing operational oversight across the organization. Their key responsibilities include:

- Overseeing the Entire Organization: Managing the overall structure within Kanban tool to ensure Workflows align with organizational goals.
- Managing Workspaces, Users, and Settings: Controlling access, configuring settings, and managing users across all workspaces to maintain consistency and security.
- Ensuring Transparency: Facilitating seamless coordination across teams and Workflows by promoting visibility into Workflows, Tasks, and performance metrics.
- Having a dedicated admin ensures efficient setup, smooth operations, and effective collaboration within the Kanban environment.

Figure 7-4 displays an interface for setting up a new organization within the software platform Vabro. The form captures essential details such as the company name, contact information, website, employee count, and industry, likely for account registration or profile creation.

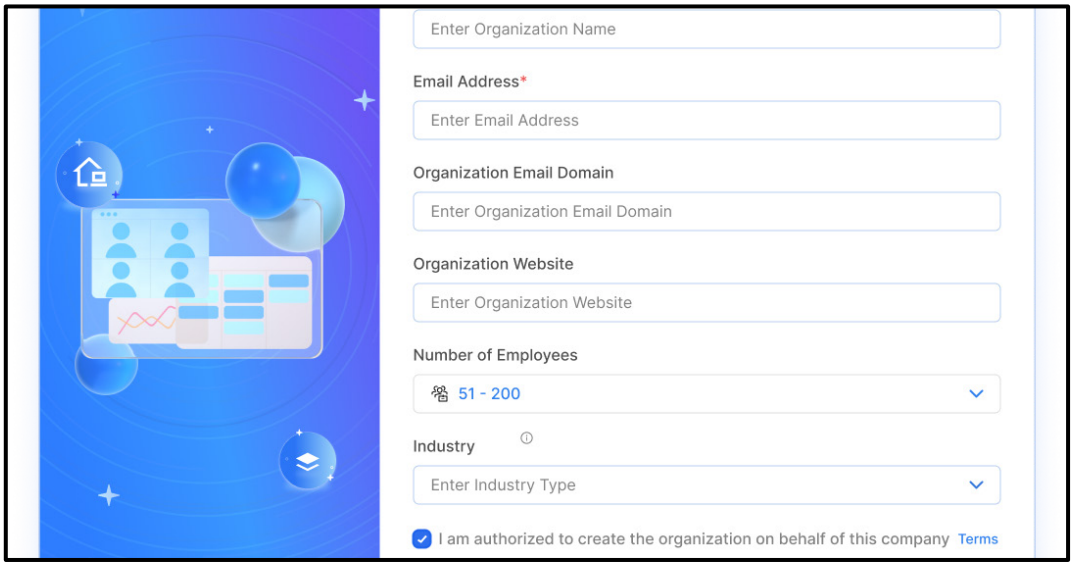

Figure 7-4: Organization Setup (Source: Vabro)

A Workspace Admin is responsible for:

- Managing specific workspaces, including Workflows, users, and configurations.
- Bridging overarching organizational strategies with day-to-day activities.
- Ensuring smooth Workflows execution within individual workspaces.

Figure 7-5 illustrates the Vabro workspace setup interface, featuring an AI tool called Vabro Genie. It guides users through selecting workspaces and templates tailored to their organization, offering options such as Customer Service, Finance, and IT, with predefined Workflows like Ticket Management and Kanban Boards.

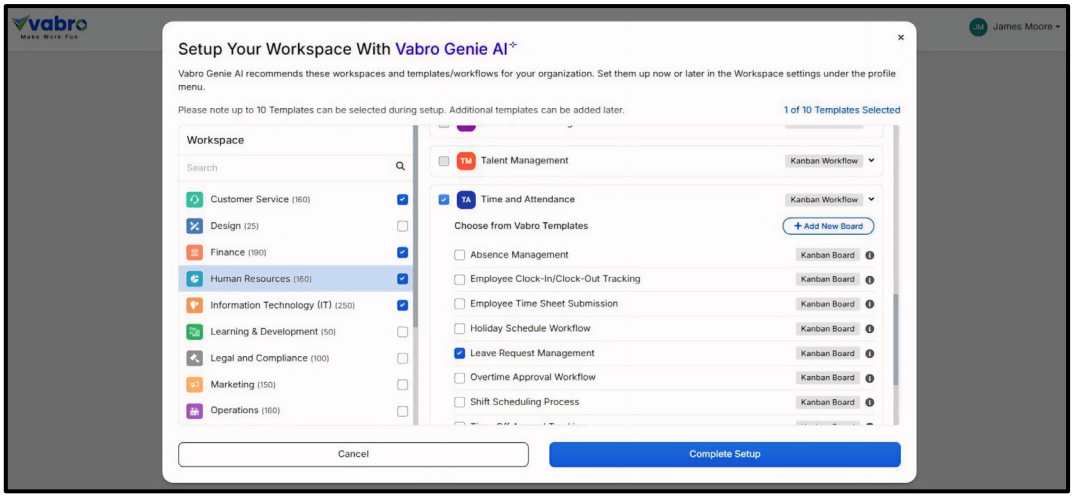

Figure 7-5: Workspace Setup (Source: Vabro)

7.1.1.4 Senior Management

Senior management offers strategic direction, organizational goals, resources, and support, enabling the formation of a Kanban team aligned with business objectives and empowered for success.

Senior Management role is described in section 6.1.1.1.

7.1.1.5 Trial Initiative

Trial initiative provides a focused objective, scope, and experimental framework, helping shape the Kanban team structure, roles, and Workflows for learning and continuous improvement.

Described in Section 6.1.3.3

7.1.1.6 Organization Rollout

Organization rollout offers standardized practices, training, and governance, guiding the Kanban team's formation to align with broader transformation goals and ensure consistency across teams.

Described in Section 6.1.3.4

7.1.2 Tools

7.1.2.1 Team Selection Meeting*

A well-structured team selection meeting is crucial for forming a high-performing Kanban Team. During this meeting, the team's goals, required skills and experience, and desired team dynamics should be discussed. Key factors to consider include technical expertise, problem-solving abilities, and communication skills. A collaborative approach should be used to select team members who complement each other's strengths and weaknesses, fostering a balanced and effective team.

7.1.2.2 Role Analysis Tools

In Kanban, forming effective teams involves clearly understanding roles, responsibilities, and Workflows. While Kanban doesn't prescribe specific roles like Scrum, there are tools and techniques that can help with role analysis to form high-performing Kanban teams. Here are some tools and approaches you can use:

1. RACI Matrix (Responsible, Accountable, Consulted, Informed)

Purpose: Clarifies who is responsible for what within the Workflows.

Application:

- Map each process or Kanban lane to team members.
- Identify overlaps or gaps in responsibilities.
- Helps define roles even in flat or flexible team structures.

2. Value Stream Mapping

Purpose: Visualizes the entire flow of work from request to delivery.

Application:

- Identify key stages and who is involved.
- Spot bottlenecks or unclear ownership.
- Align team members to specific parts of the value stream based on skills or availability.

3. Skills Matrix

Purpose: Evaluate current team capabilities vs. needed skills.

Application:

- Helps form balanced teams by matching roles to skills.
- Encourages T-shaped skill development to increase flexibility.

4. Team Member Role Canvas

Purpose: A template to capture what each person contributes.

Application:

- Each team member outlines their responsibilities, preferred Tasks, and improvement areas.

- Promotes self-awareness and team alignment.

5. Persona Mapping (Internal Team Personas)

Purpose: Understand the motivations and pain points of team roles.

Application:

- Especially useful for cross-functional teams.
- Helps align role expectations and avoid misunderstandings.

6. Work Item Types Analysis

Purpose: Understand what kinds of workflow through the system.

Application:

- Identify if certain team members specialize in certain item types.
- Match team structure to the type of work (e.g., support vs. innovation vs. maintenance).

7. Kanban Cadences and Role Fit

Purpose: Align meeting participation with role responsibilities.

Application:

- Decide who should attend Kanban meetings (e.g., Replenishment, Service Delivery Review, Risk Review).
- Ensures the right people are involved in the right decisions.

7.1.2.3 Workload Management Tools

Managing workload effectively is crucial when forming and running Kanban teams. Since Kanban is all about flow efficiency and limiting work in progress (WIP), workload management is integrated directly into the system. Here are some powerful tools and techniques used in Kanban to manage workload while forming and maintaining balanced teams:

1. Work In Progress (WIP) Limits

Purpose: Prevents team overload and context switching.

Application:

- Set WIP limits per column (e.g., “In Progress”) or per person.
- Adjust based on team capacity and flow metrics.
- Encourages finishing work before starting new Tasks.

2. Cumulative Flow Diagram (CFD)

Purpose: Visualizes flow stability and highlights bottlenecks.

Application:

- Identify stages with growing queues = overloaded teams.
- Use to adjust staffing, WIP limits, or split roles.
- Helps in balancing demand vs. capacity.

3. Throughput Tracking

Purpose: Measures how much work a team completes over time.

Application:

- Helps determine realistic team capacity.
- Compare throughput across roles or work types to balance workload.
- Useful for forecasting and setting expectations.

4. Cycle Time & Lead Time Metrics

Purpose: Understand how long Work Items take from start to finish.

Application:

- Spot inconsistencies in delivery that may indicate uneven workloads.
- Teams can rebalance work if some members are slower due to overload.

5. Swimlanes and Card Assignments

Purpose: Visual organization of work by person, class of service, or team.

Application:

- Use swimlanes to track workload across people or teams.
- Helps visually balance work and avoid overloading specific individuals.

6. Skills Matrix (Again!)

Purpose: Map skills to availability for better load distribution.

Application:

- Rotate work more fairly.
- Plan cross-training to reduce dependency on overloaded roles.

7. Blocked/Flagged Items Tracking

Purpose: Highlight work that's stuck or waiting.

Application:

- Blocked cards = potential for workload imbalance or over-commitment.
- Use to analyze root causes and adjust how work is distributed.

8. Team Utilization Charts (Tool-Specific)

Purpose: Used in tools like Jira, Trello, or Kanbanize to track team capacity.

Application:

- See at a glance who is over/underutilized.
- Adjust incoming work or reassign Tasks.

Kanban Mindset for Workload

Unlike rigid planning, Kanban encourages:

- Pull-based systems: People pull work only when they're ready.
- Visualizing capacity: So everyone can see who's free or overloaded.
- Continuous flow: Instead of batch assignments or sprints.

7.1.2.4 Collaboration and Decision-Making Tools

Collaboration and decision-making are critical when forming and running Kanban teams, especially since Kanban thrives on transparency, continuous improvement, and shared ownership. While Kanban itself doesn't prescribe specific collaboration tools, it provides cadences, visualizations, and lean principles that foster team alignment and smart decision-making.

Here is a breakdown of the best Collaboration and Decision-Making Tools/Practices in Kanban to help form and guide effective teams:

1. Kanban Board (Physical or Digital)

Purpose: Shared visual space for all team members.

Application:

- Enables team-wide visibility into who's doing what.
- Facilitates discussions around priorities, blockers, and progress.
- Great for distributed teams when using digital tools (e.g., Jira, Trello, Kanbanize, Azure DevOps).

2. Daily Kanban (Stand-Up) Meetings

Purpose: Promote daily collaboration and alignment.

Application:

- Discuss flow of work, blockers, and next actions.
- Focuses on movement of work, not status updates.
- Builds team habit of shared responsibility.

3. Service Delivery Review

Purpose: Evaluate how well the team is delivering.

Application:

- Team reviews metrics like lead time, throughput.
- Decisions on improvements are based on data, not opinion.

- Encourages data-informed collaboration.

4. Replenishment (Commitment) Meetings

Purpose: Decide collaboratively which work to pull into the system.

Application:

- Aligns team members and stakeholders on priorities.
- Helps balance customer demand with team capacity.

5. Feedback Loops & Retrospectives

Purpose: Continuous improvement and open discussion.

Application:

- Teams reflect on how they collaborate and make decisions.
- Often facilitated using lean/agile retrospective formats.
- Focus on psychological safety and team learning.

6. Explicit Policies

Purpose: Set clear team agreements on how work gets done.

Application:

- Policies like WIP limits, Definition of Done, pull rules.
- Shared understanding reduces friction and improves decision-making.
- Written on the board or in the team charter.

7. Kanban Cadences Chart (for team roles)

Purpose: Aligns recurring meetings with team responsibilities.

Application:

- Each cadence supports a different type of decision.
- Helps decide who should be involved in what.
- Cadences include Strategy Review, Risk Review, Operations Review, etc.

Decision-Making Tools & Approaches

1. Work Item Prioritization Frameworks

Tools like:

- WSJF (Weighted Shortest Job First)
- Cost of Delay
- Class of Service

Help teams decide what to pull and when, based on real value.

2. Decentralized Decision-Making

Purpose: Empower individuals and sub-teams.

Application:

- Use Kanban Board visibility and explicit policies to allow autonomous decisions.
- Reduces bottlenecks and over-reliance on leadership.

3. Risk Review Meetings

Purpose: Proactively manage risk.

Application:

- Identify risky or uncertain work early.
- Make collaborative decisions on mitigation or escalation.

4. Obeya Room (Big Visual Room) — Optional Advanced

Purpose: Cross-functional collaboration for strategic alignment.

Application:

- Shared space with visuals, metrics, goals.
- Used in larger, scaled Kanban environments.

Summary Table:

Tool/Practice	Type	Helps With
Kanban Board	Visual	Team alignment, transparency
Daily Standups	Meeting	Flow coordination, blockers
Service Delivery Review	Meeting	Performance decisions
Replenishment Meeting	Meeting	Work selection & prioritization
Explicit Policies	Agreement	Consistent decision rules
Metrics (Lead Time, CFD, etc.)	Data Tool	Informed discussions
Feedback Loops/Retros	Meeting	Continuous improvement
Prioritization Models (WSJF, etc.)	Framework	Decision-making logic

Table 7-1: Collaboration and Decision-Making Tools - Summary

7.1.2.5 Team Selection Criteria

Unlike Scrum, Kanban does not require specific roles or fixed teams, so the team selection criteria for forming Kanban teams are more flexible — but they should still be intentional and aligned with the flow of work.

1. Alignment with the Value Stream

Why: Kanban teams should be formed around services or value streams, not arbitrary org charts.

Look for:

- People who contribute to the flow of a particular type of work.
- Ability to manage a shared backlog of customer requests from start to finish.

2. Cross-Functional Coverage (as Needed)

Why: Even though Kanban can work with specialized roles, it's ideal to cover all skills needed to move work to "done."

Look for:

- Skills balance across analysis, design, development, testing, support, etc.
- T-shaped individuals for flexibility.

3. Workload Capacity and Availability

Why: Kanban uses real capacity to guide work intake.

Look for:

- Team members who have bandwidth and time to contribute meaningfully.
- Avoid overloading individuals with multiple team commitments.

4. Collaboration Willingness

Why: Kanban relies on shared ownership and flow-based thinking.

Look for:

- Team members who are comfortable with transparency and collaboration.
- Willingness to engage in daily standups, retrospectives, and feedback.

5. Systems Thinking & Flow Awareness

Why: Kanban teams are expected to manage and optimize flow, not just do Tasks.

Look for:

- Ability to understand the bigger picture beyond personal Task lists.
- Open to metrics like lead time, throughput, WIP limits.

6. Commitment to Continuous Improvement

Why: Kaizen (continuous improvement) is a core Kanban principle.

Look for:

- People who are open to retrospectives, experiments, and adjusting Workflows.
- Constructive mindset toward feedback.

7. Role Flexibility (Nice to Have)

Why: Work often shifts dynamically in Kanban.

Look for:

- Individuals who are okay stepping out of strict role boundaries when needed (e.g., a dev helping with testing).

8. Clear Customer or Stakeholder Interface

Why: Teams need a way to manage incoming requests.

Look for:

- Someone who can act as a Service Request Manager or represent the customer's voice.

Traits of Ideal Kanban Team Members

Criteria	Must Have / Nice to Have	Notes
Contributes to value stream	Must	Core team function
Availability (capacity)	Must	Part-time OK if realistic
Skill coverage for Workflows	Must	Can include specialized roles
Collaboration mindset	Must	For meetings, feedback
Systems thinking	Must	Understands dependencies
Flexible role boundaries	Recommended	Encourages agility
Open to improvement	Must	Key for team growth

Table 7-2: Traits of Ideal Kanban Team Members

7.1.2.6 AI-enabled Digital Kanban Tool

An AI-enabled digital Kanban tool enhances team formation by analyzing Workflows data, skill sets, and workload capacity to suggest optimal team compositions. It leverages predictive analytics to forecast delivery timelines and identify potential bottlenecks. These tools support intelligent Task assignment, real-time collaboration insights, and continuous improvement by automating feedback loops. By using AI, organizations can form balanced, efficient Kanban teams aligned with the value stream, leading to improved productivity, agility, and decision-making in dynamic environments.

Figure 7-6 shows Vabro's workspace setup interface with a progress pop-up. It displays the "Human Resources" workspace being configured with suggested templates, while a modal window indicates that the setup is 40% complete and in progress.

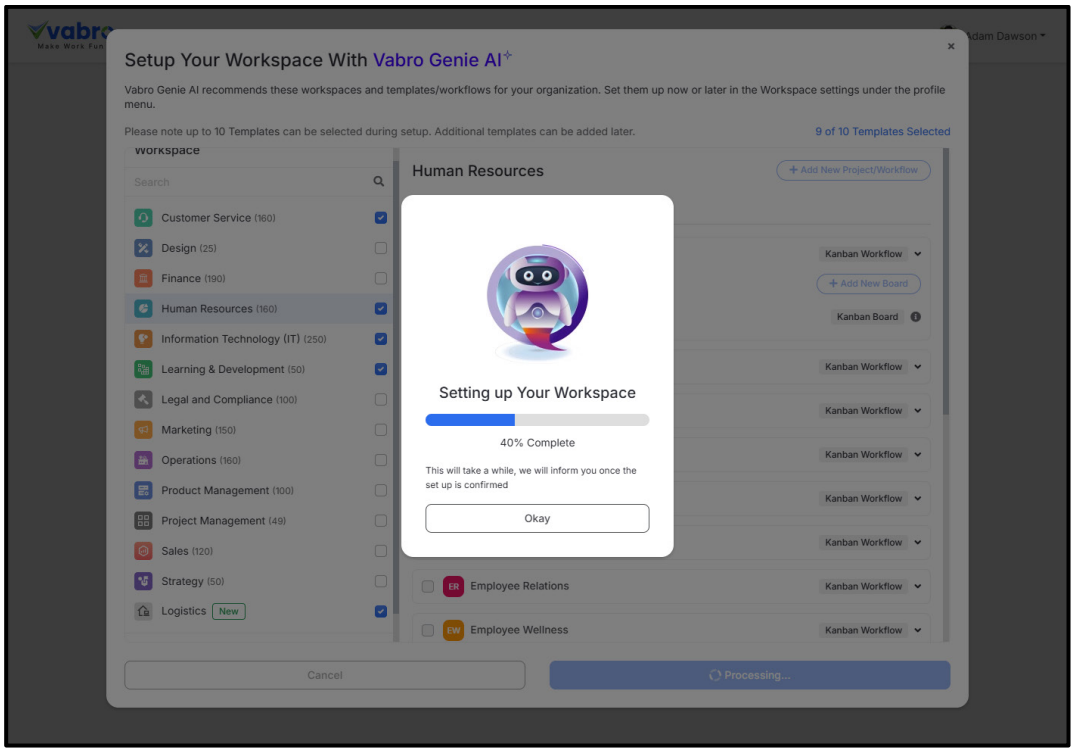

Figure 7-6: Use of AI in Digital Kanban Tool (Source: Vabro)

7.1.3 Outputs

7.1.3.1 Identified Kanban Team*

The Product Owner reviews the current team structure and roles to identify suitable candidates for the Kanban Manager and Kanban Team Members. This evaluation ensures that the selected individuals align with Workflows needs and possess the necessary skills to effectively contribute to the success of Kanban initiatives.

This process results in the finalization of the Kanban team, which includes the Product Owner, Kanban Manager, and Kanban Team Members.

For more information on the Kanban Team, see section 3.1.

7.2 Optimize Workflows and Determine Stakeholders

To effectively implement Kanban, it is essential to start by reviewing and understanding existing Workflows. This involves mapping current processes, identifying bottlenecks and delays, and assessing value streams. By analyzing these elements, organizations can pinpoint areas where Kanban principles can be applied to streamline processes, reduce waste, and improve efficiency. Stakeholders in Kanban include the customers, leadership, project sponsors, and any individuals impacted by or influencing Kanban Workflow outcomes. Determining stakeholders and involving stakeholders to optimize Workflows is crucial to ensure buy-in and facilitate smooth implementation.

In this process, the Kanban Team and stakeholders work together to determine an improved Workflows for Kanban implementation. It is important to break down work into smaller, manageable units, such as Task Groups and Tasks. A visual Kanban Board should be created with columns representing different Workflows stages, such as “To Do,” “In Progress,” and “Done.” To prevent overloading and improve focus, work-in-progress (WIP) limits should be set for each column.

Clear Workflows rules and policies should also be defined to govern the movement of Work Items between columns and to handle exceptions. Continuous monitoring and improvement are critical; regular retrospectives and feedback loops help identify areas for optimization. By iteratively refining the Workflows, organizations can achieve significant improvements in efficiency, quality, and customer satisfaction through Kanban implementation.

Figure 7-7 shows all the inputs, tools, and outputs for *Optimize Workflows and Determine Stakeholders* process.

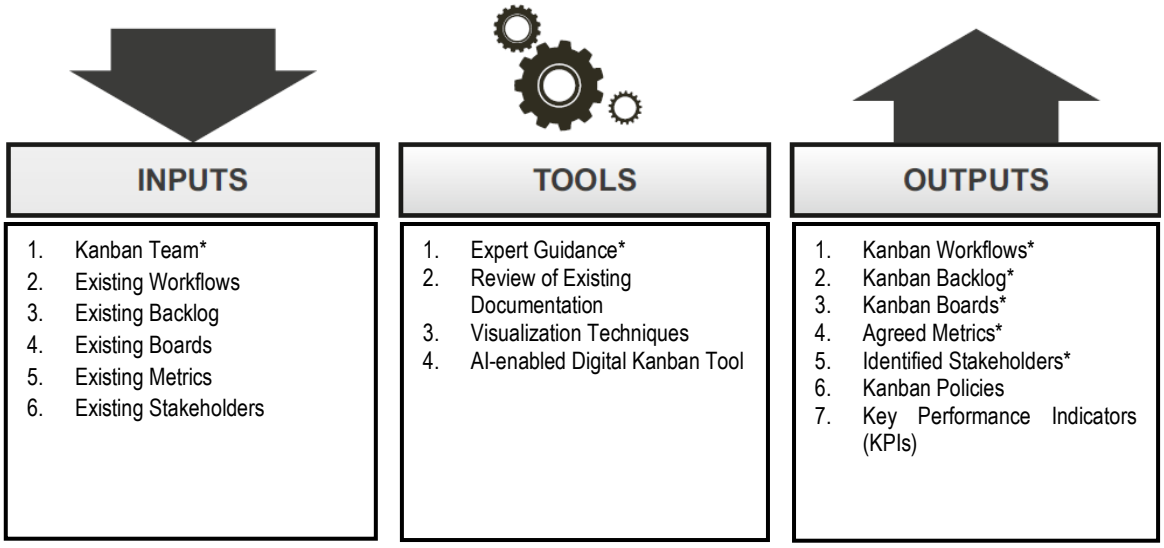

Figure 7-7: Optimize Workflows and Determine Stakeholders—Inputs, Tools, and Outputs

Note: Asterisks (*) denote a “mandatory” input, tool, or output for the corresponding process.

7.2.1 Inputs

7.2.1.1 Kanban Team*

For more information, see section 3.1.

7.2.1.2 Existing Workflows

Existing Workflows, if already in place, serve as critical inputs to the Optimize Workflows and Determine Stakeholders process. They provide insights into current practices, bottlenecks, and inefficiencies, enabling the team to make data-driven improvements. Analyzing these Workflows helps align future processes with actual work patterns and enhances overall efficiency and flow.

For more information, see section 3.4.2.

7.2.1.3 Existing Backlogs

The existing Kanban Backlog, if already available, serves as a valuable input to the Optimize Workflows process. It offers visibility into pending work, prioritization patterns, and flow issues. Analyzing the backlog helps identify inefficiencies, refine Work Item types, and ensure smoother, more predictable delivery in future Workflows iterations.

For more information, see section 3.4.3.

7.2.1.4 Existing Boards

The existing Kanban Backlog, if already available, serves as a valuable input to the Optimize Workflows process. It offers visibility into pending work, prioritization patterns, and flow issues. Analyzing the backlog helps identify inefficiencies, refine Work Item types, and ensure smoother, more predictable delivery in future Workflows iterations.

For more information, see section 3.4.4.

7.2.1.5 Existing Metrics

The Existing Metrics refer to the current performance indicators used to measure the effectiveness of the Workflows. These metrics may include lead time, cycle time, and throughput. Analyzing these metrics provides valuable insights into the current state of the Workflows, helping to identify areas for improvement. It is important to select metrics that are aligned with the organization's goals and can be easily tracked and measured.

For more information, see section 4.1.

7.2.1.6 Existing Stakeholders

Where existing stakeholders are associated with a Workflows or process targeted for optimization, their early engagement is essential to gather input and ensure alignment.

For more information, see sections 3.2.

7.2.2 Tools

7.2.2.1 Expert Guidance*

Expert guidance plays a critical role in enhancing the effectiveness of Kanban Workflows. Experienced professionals help teams assess their current Workflows, identify bottlenecks, and uncover inefficiencies that may hinder progress. They facilitate a comprehensive review process, ensuring alignment with organizational goals and industry best practices. Experts provide valuable insights into optimizing work-in-progress (WIP) limits, improving Task prioritization, and ensuring smoother Task flow across Kanban Boards.

Additionally, they guide teams in leveraging data-driven metrics such as lead time, cycle time, and throughput to monitor performance and make informed decisions. Through collaborative workshops and retrospective meetings, experts foster a culture of continuous improvement, encouraging teams to adapt their processes based on evolving needs. Their external perspective helps teams identify hidden issues and implement tailored solutions that enhance Workflows efficiency, ultimately driving better delivery outcomes and supporting sustainable growth within the organization.

Here is a step-by-step guide on how to plan for improving processes in a Kanban system—whether optimizing an existing Board or starting from a basic setup:

1. Understand the Current Workflows

- Map out the actual steps Tasks go through (even informal ones).
- Identify stakeholders, handoffs, wait times, and frequent blockers.

2. Visualize the Workflows

- Translate the current Workflows onto a Kanban Board with meaningful columns (e.g., “Ready,” “In Progress,” “Review,” “Done”).
- Add swimlanes or tags to distinguish types of work (e.g., bugs, features, enhancements).

3. Set Clear Goals

Decide what you're optimizing for:

- Faster delivery?
- Fewer bottlenecks?
- More predictable flow?

Align with team and stakeholder priorities.

4. Apply WIP Limits Thoughtfully

- Add Work-In-Progress (WIP) limits to identify overloading or stalled work.
- Start with soft limits, adjust as needed.

5. Measure Key Metrics

- Cycle Time: How long it takes to complete a Task once it starts.
- Lead Time: From request to delivery.
- Throughput: How many Tasks are completed over time.
- Use tools like Cumulative Flow Diagrams (CFD) to track trends.

6. Identify Bottlenecks & Waste

- Watch where work gets stuck or sits idle.
- Look for duplicate steps, unclear ownership, or excessive review cycles.

7. Engage the Team and Stakeholders

- Gather input from everyone involved in the process.
- Facilitate collaborative discussions about pain points and ideas.

8. Experiment and Iterate

- Introduce small changes (e.g., new policy, automation, lane split).
- Track their impact before committing long-term.

9. Hold Regular Retrospectives

- Review what's working and what's not.
- Create an improvement backlog (Kaizen mindset).

10. Make Policies Explicit

- Document rules clearly (e.g., "No more than 3 items in QA," or "Code must be peer-reviewed before Done").

7.2.2.2 Review of Existing Documentation

Reviewing existing documentation, such as process manuals, standard operating procedures, or Workflows plans, can provide a baseline understanding of the current Workflows and help identify areas for potential improvement. It can also highlight existing challenges or constraints.

7.2.2.3 Visualization Techniques

Using tools like flowcharts, swimlane diagrams, or Kanban Boards to visualize the Workflows can help identify bottlenecks, inefficiencies, and opportunities for improvement. It also increases team visibility and enhances understanding of the work.

Visualization techniques include:

- **Value Stream Mapping(VSM):**

  Value Stream Mapping is a Lean management method that visually maps the steps required to deliver a product or service, from start to finish. Each step is categorized as either:

  - Value-Added (VA) – Directly contributes to customer value.
  - Non-Value-Added (NVA) – Does not add customer value (e.g., wait time, rework, approvals).

  In a Kanban context, VSM helps you optimize flow by focusing on Workflows efficiency rather than just Task management.

Key Components of a VSM in Kanban

1. Customer Need / Trigger

- Start point of the value stream (e.g., customer request or internal demand)

2. Process Steps

- Represented as boxes or stages in your Kanban Board (e.g., "Design", "Develop", "Review", "Deploy")

3. Information Flow

- Shows how Tasks are triggered, assigned, or updated (e.g., automated notifications, meetings)

4. Material or Work Item Flow

- The actual movement of work through stages—your Kanban cards moving across columns.

5. Cycle Time / Lead Time

- Time taken for each step and the full process (lead time = request to delivery)

6. Wait Time

- Time work sits idle between stages (revealed through analysis of queues in Kanban)

7. Value-Added vs. Non-Value-Added Time

- Helps calculate process efficiency

How to Create a VSM in a Kanban System

Step 1: Map the Current Workflows

- Use your Kanban Board as the base.
- Note each stage as a process box.
- Include swimlanes for types of work (optional).

Step 2: Collect Data

Use metrics like:

- Lead time per card
- Time spent in each column
- Bottlenecks (work piling up)
- Blocked Tasks
- Rework frequency

Step 3: Identify Value vs. Waste

Analyze each stage:

- Does this step add value to the end user?

- Is this step required for compliance or internal needs?
- Can we streamline or eliminate it?

Step 4: Calculate Flow Efficiency

$$\text{Flow Efficiency} = \frac{\text{Total Value-Added Time}}{\text{Total Lead Time}} \times 100$$

Low efficiency = High wait or waste time.

Step 5: Propose Improvements

Ideas might include:

- Reducing WIP
- Automating handoffs
- Removing redundant steps
- Improving Task definitions

Step 6: Iterate and Re-measure

- Use retrospectives and metrics to monitor improvements over time.
- Keep your VSM updated.

Benefits of Using VSM in Kanban

- Better visibility into how work really flows
- Identifies waste and inefficiency
- Highlights bottlenecks and blockers
- Improves decision-making with real data
- Supports continuous improvement and Lean thinking

Example of Value Stream Mapping of a Software Development Kanban Board

Step	Avg. Time	Value-Added?	Comments
Backlog	—	No	Queuing delay
Ready for Dev	1 day	No	Waiting for team availability
In Progress	3 days	Yes	Active coding
Code Review	2 days	Partial	Quality control
QA	2 days	Partial	Functional testing
Ready to Deploy	1 day	No	Waiting for release slot
Deployed	—	Yes	Delivered value

Table 7-3: Example of Value Stream Mapping

Flow efficiency here might be ~43%, meaning over half of the process time is non-value added.

- **Flowcharts:** A flowchart is a powerful visualization technique used to review and improve Workflows in Kanban. It visually maps the sequence of Tasks, decision points, and process steps, enabling teams to identify bottlenecks, redundancies, or delays. By illustrating the flow of work, a flowchart helps teams analyze Task progression, streamline processes, and enhance efficiency. It fosters better understanding, supports data-driven decisions, and promotes continuous improvement in Kanban Workflows management. Flowcharts illustrate the sequence of steps and decisions within a process. Tools like Lucidchart, Microsoft Visio, and Draw.io are popular for creating flowcharts.

Figure 7-8 shows a flowchart that outlines a healthcare process: patients schedule appointments, check in, and are assessed for urgency. Based on results, they receive treatment or emergency care, ending with discharge from the facility.

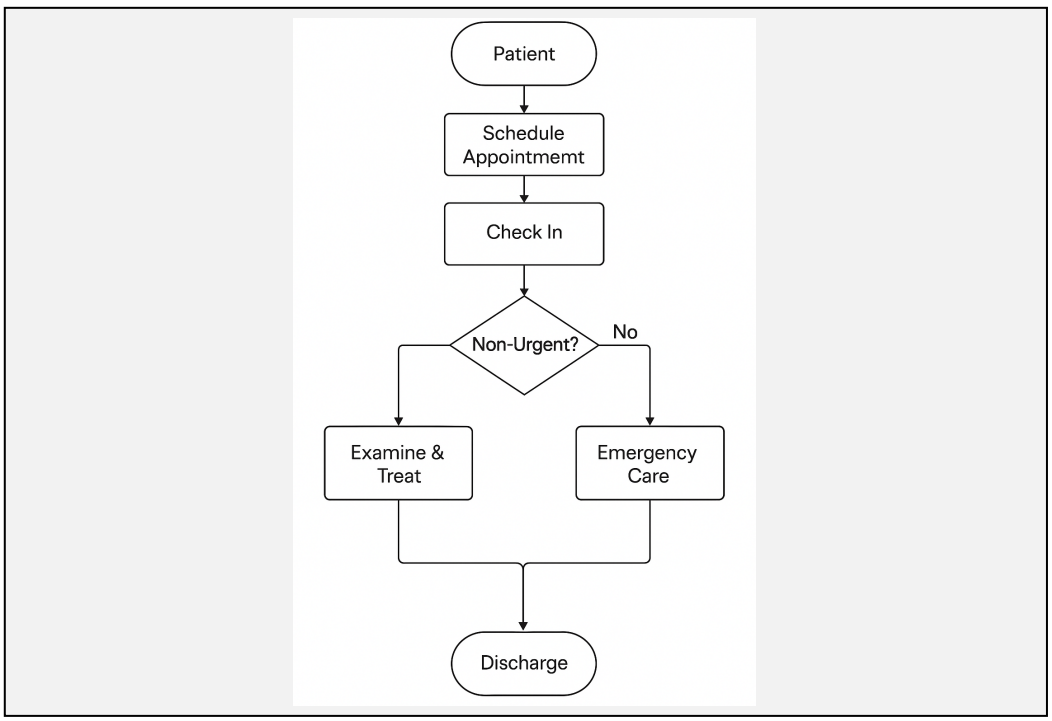

Figure 7-8: Flowchart for patients in the healthcare industry

- **Swimlane Diagrams:** A swimlane is a visual aid used in various Workflows and processes to categorize and organize Task Groups or Tasks based on specific criteria. Swimlanes are represented as horizontal sections within Workflows management tools. For more information, see section 3.5.3.2.

Figure 7-9 shows a swimlane diagram that illustrates order processing: the customer submits an order, sales prepares an invoice, the warehouse ships the order, and sales sends the invoice upon order confirmation.

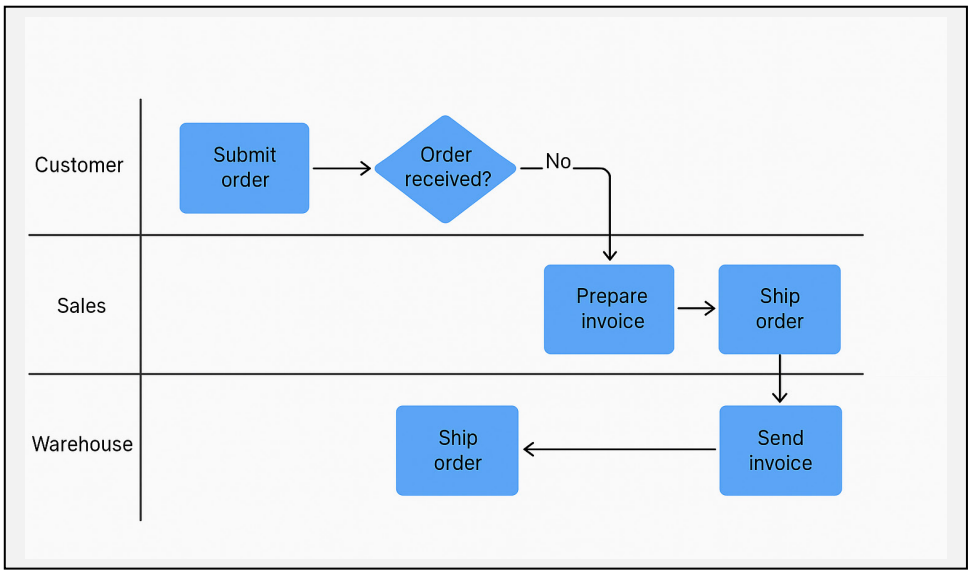

Figure 7-9: Simplified Swimlane Diagram

- **Process Maps:** Process maps graphically represent each step in a process, highlighting the flow of Tasks from initiation to completion. By mapping out the entire process, teams can easily identify bottlenecks, inefficiencies, or areas causing delays. Process maps provide clarity on Task dependencies and handoffs, enabling teams to optimize their Workflows. They support data-driven analysis, help eliminate waste and promote continuous improvement. Using process maps, teams gain a clearer understanding of their Workflows, ensuring better alignment with Kanban principles and enhancing overall delivery efficiency and performance. Process Maps provide more detailed insights than flowcharts, including specific information about each step in a process.

Figure 7-10 shows a Process Map that visualizes a software development workflow: from backlog to deployment, moving tasks through development, peer review, QA/testing, and finally marking them as done after successful delivery.

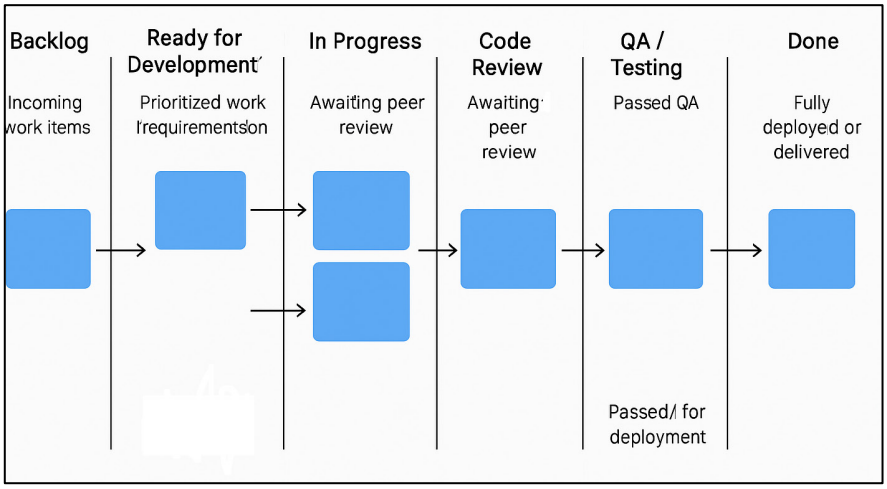

Figure 7-10: Process Map for a Small Delivery Project

Visualization techniques can be used to map out the existing Workflows in the following ways:

- Identify Steps: List all steps involved in the Workflows, from start to finish. For example: in a software development team using Kanban, the Workflows steps could include: Backlog Refinement → Task Prioritization → Development → Code Review → Testing → Deployment.

- Determine Inputs and Outputs: Specify the inputs required at each step and the outputs produced. For example:
    - Development Step: Input – detailed requirements and design specifications; Output – developed feature ready for review.
    - Testing Step: Input – developed code; Output – validated, bug-free feature ready for deployment. Mapping inputs and outputs reveals dependencies and potential gaps that could disrupt the flow.
- Define Roles: Identify who is responsible for each step in the process. For example, in the same software development process:
    - Developers are responsible for “Development.”
    - QA Testers handle “Testing.”
    - Release Managers oversee “Deployment.” Clearly associating Tasks with roles prevents confusion, ensures accountability, and improves handoffs between team members.

Combining these visualization techniques enables teams to better understand their Workflows, uncover inefficiencies, and implement targeted improvements.

7.2.2.4 AI-enabled Digital Kanban Tool

An AI-enabled digital Kanban tool enhances Workflows optimization by integrating artificial intelligence to streamline Task management, predict bottlenecks, and improve efficiency.

Figure 7-11 shows how Vabro Genie AI simplifies Kanban Workflows setup by recommending tailored workspaces and templates. Users can efficiently select and configure Workflows for departments like HR, IT, and Finance, enhancing productivity and automation.

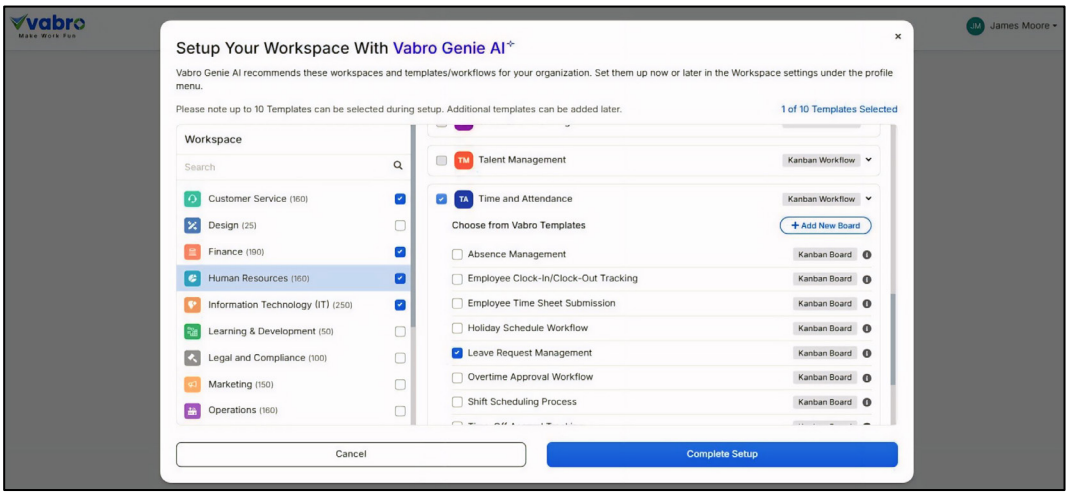

Figure 7-11: Workflows Setup using AI (Source: Vabro)

AI can analyze existing Workflows to clone similar Workflows in the future, ensuring consistency and efficiency across different Workflows or initiative. It also suggests best practices for Workflows across various solutions and workspaces, optimizing processes dynamically.

Figure 7-12 shows how Vabro Genie AI simplifies Workflows creation by allowing users to clone entire Workflows or customize specific properties like Tasks, approvals, priorities, and dependencies. This feature streamlines process replication, ensuring efficiency and consistency.

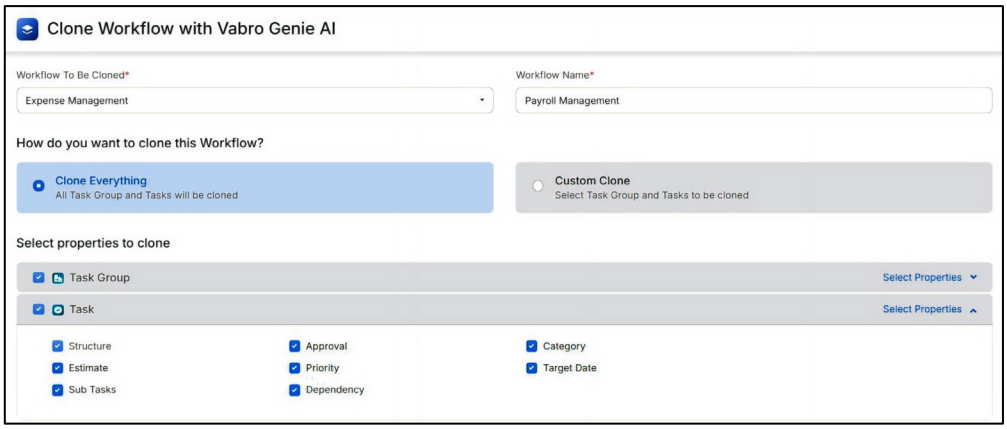

Figure 7-12: Cloning a Workflows using AI (Source: Vabro)

By continuously analyzing work patterns, AI identifies bottlenecks, improvement opportunities, and strategies to boost productivity and ROI. Real-time insights, predictive analytics, and automation empower teams to refine Workflows, enhance collaboration, and maintain agility.

7.2.3 Outputs

7.2.3.1 Kanban Workflows*

A Kanban Workflows visualizes Tasks, enhances transparency, identifies bottlenecks, and supports continuous improvement, aligning stakeholders and optimizing processes for efficient, collaborative work management.

Kanban Workflows is described in Section 3.4.2.

7.2.3.2 Kanban Backlog*

A Kanban backlog, created through Optimize Workflows and Determine Stakeholders process, organizes and prioritizes Tasks, ensuring clarity, alignment, and efficient Task flow to support continuous improvement and effective project execution.

Kanban Backlog is described in Section 3.4.3.

7.2.3.3 Kanban Board*

A Kanban Board provides a visual representation of Tasks across various stages. It enhances transparency, facilitates collaboration, and aligns team efforts. By incorporating stakeholder input, the board supports prioritized Task management, identifies bottlenecks, and promotes continuous delivery and process improvement.

Kanban Board is described in Section 3.4.4.

7.2.3.4 Agreed Metrics*

Agreed Metrics are a set of metrics used to measure the performance of Kanban implementation. These metrics should align with the organization's strategic goals and be easy to track and interpret. They should be reviewed regularly and adjusted as needed to ensure continued relevance.

For more information about Metrics, see section 4.1.

7.2.3.5 Identified Stakeholders*

Identified Stakeholders are key individuals or groups with a vested interest in the Kanban initiative. Recognizing them ensures clear communication, aligns expectations, and supports effective decision-making. Their input is crucial for refining Workflows, setting priorities, and achieving successful Kanban outcomes.

The Stakeholders role is described in Section 3.2.

7.2.3.6 Kanban Policies

Although not mandatory, it is recommended to create Kanban policies that are relevant to specific Kanban teams or even to the broader organizational hierarchy.

Kanban policies are formal rules and guidelines that govern how work is managed and moved across a Kanban system. These policies help teams align on expectations, ensure consistent decision-making, and foster transparency in Workflows. Below is a detailed and formal description of Kanban policies:

Kanban policies are explicit agreements that define how tasks are handled within each stage of a Kanban Workflow. These rules clarify when and how work items can be started, advanced, paused, or completed, ensuring uniformity and predictability in the process.

Key Characteristics of Kanban Policies

- Explicit
  Policies must be clearly documented and visible to all team members. Ambiguity is avoided to ensure consistency.

- Agreed Upon
  All stakeholders should be involved in the creation and maintenance of policies to encourage ownership and adherence.

- Transparent
  Policies should be posted prominently on the Kanban board (physical or digital) so that team members and external stakeholders understand how work is processed.

- Context-Sensitive
  Policies are tailored to fit the specific nature of the team's Workflow, domain, and work item types.

Common Types of Kanban Policies

- Entry and Exit Criteria (Definition of Ready / Done):
- Define what must be true before a work item can enter a column (e.g., "In Progress").
- Define what must be completed before moving the item to the next stage (e.g., tests passed, peer review complete).
- Work-In-Progress (WIP) Limits:
- Set a maximum number of items allowed in a column or swimlane to manage capacity and prevent overburdening.

Class of Service Policies:

- Define how different types of work items (e.g., standard, fixed date, expedite) are prioritized and handled.
- Pull Criteria: Establish rules for when team members can pull new work into a stage, based on availability and readiness.
- Escalation Rules: Define how blockers, delays, or urgent tasks should be managed and escalated.
- Replenishment and Commitment Policies: Describe how and when the team selects new items to enter the Workflow (e.g., weekly replenishment meeting).

Benefits of Formal Kanban Policies

- Predictability: Enhances the reliability of delivery by standardizing decision-making.
- Accountability: Clarifies responsibilities at each Workflow stage.
- Improved Flow: Reduces waste and delays by defining smooth handoffs.
- Continuous Improvement: Provides a baseline for evaluating Workflow efficiency and identifying improvements.

Example of Kanban Policies for a particular column in a Kanban Board:

Column: "In Development"

Entry Criteria:

- Work item has been selected during the replenishment meeting.
- Acceptance criteria are defined.
- No unresolved dependencies.

Exit Criteria:

- Code is written and unit tested.
- Code has been committed to the repository.
- Peer review is completed.

WIP Limit: 3 items

Pull Policy: Developers pull the next highest-priority item when capacity is available.

7.2.3.7 Key Performance Indicators (KPIs)

Kanban Metrics and Key Performance Indicators (KPIs) both provide valuable insights into the performance of a team, but they serve different purposes. While they can overlap in some areas, the key difference lies in their scope and application. Kanban Metrics are used to measure how effectively the team is managing its Workflow and delivery process on a micro level. KPIs, on the other hand, are focused on high-level organizational goals and customer satisfaction. Together, they form a comprehensive approach for continuous improvement: Kanban Metrics help optimize the system's flow, and KPIs ensure that the overall business goals are being met.

Kanban Metrics are specific to the Kanban method and focus on improving the flow of work within the system. They help teams visualize, manage, and optimize their Workflow by focusing on process improvement and cycle efficiency. Important Kanban Metrics are described in Section 4.2.

KPIs are broader, more strategic metrics that reflect the team's or organization's overall success in meeting business goals. While Kanban Metrics focus on operational flow, KPIs focus on business outcomes.

Key KPIs for Kanban Teams:

Customer Satisfaction

- Definition: A measure of how happy the customer is with the product, service, or feature delivered.

- Purpose: Directly correlates to the value delivered. Happy customers are a key indicator of success.
- Usage: Often measured through surveys (e.g., Net Promoter Score) or feedback loops.

Delivery Predictability

- Definition: How accurately the team can predict delivery timelines.
- Purpose: Predictability builds stakeholder trust and helps plan future work more effectively.
- Usage: This is measured by comparing the predicted delivery dates against actual delivery dates over time.

Time to Market

- Definition: The time it takes from idea conception to the release of a product or feature.
- Purpose: Measures the speed of delivery for new features or products.
- Usage: A shorter time to market provides a competitive advantage, allowing teams to respond faster to customer needs.

Quality Metrics

- Definition: Metrics related to the quality of the delivered work, such as defect rates, rework, or bug counts.
- Purpose: Ensures that the speed of delivery does not sacrifice quality.
- Usage: Can be tracked through defect density, number of critical bugs, or post-release defects.

Cost of Delay (CoD)

- Definition: The financial or business cost incurred from delaying a work item or feature.
- Purpose: Highlights the business impact of delays, helping prioritize work that brings the highest value.
- Usage: Helps decision-makers understand the urgency of specific work items.

Team Engagement or Happiness

- Definition: A measure of how motivated, engaged, or satisfied the team members are.
- Purpose: A happy, engaged team is more productive and collaborative.
- Usage: Can be measured through surveys, pulse checks, or feedback loops within retrospectives.

Key Differences Between Kanban Metrics and KPIs:

Aspect	Kanban Metrics	Key Performance Indicators (KPIs)
Focus	Process optimization and flow efficiency	Business outcomes and strategic goals
Scope	Operational level, tracking flow within the system	Broader, organizational, or team-level strategic measures
Examples	Cycle Time, Lead Time, Throughput, WIP, CFD	Customer Satisfaction, Delivery Predictability, Time to Market

Aspect	Kanban Metrics	Key Performance Indicators (KPIs)
Purpose	Optimize Workflow, identify bottlenecks, improve delivery speed	Measure business performance, track goal alignment
Usage	Focus on day-to-day operations and process improvement	Focus on long-term outcomes, business value, and success
Measurement Frequency	Real-time or short-term tracking	Periodic tracking (monthly, quarterly, etc.)
Audience	Team members, Kanban coaches	Stakeholders, leadership, business managers

Table 7-4: Differences Between Kanban Metrics and KPIs

How Kanban Metrics Feed into KPIs:

While Kanban Metrics are operational tools used for real-time process improvement, they ultimately feed into KPIs, helping teams and organizations align their daily performance with their strategic goals. For example:

- Lead Time and Cycle Time help improve Delivery Predictability.
- Throughput and Flow Efficiency contribute to the Time to Market by improving how quickly the team can complete work.
- WIP control can reduce bottlenecks, directly affecting the Cost of Delay and Customer Satisfaction.

By improving Kanban Metrics, a team can enhance its ability to meet the broader KPIs, ensuring that the business delivers value efficiently and predictably.

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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