

ML6
Built for Survival

Kanban Maturity Model

Second Edition

ML5
Market Leader

A Map to Organizational Agility,
Resilience, and Reinvention

ML4
Risk-Hedged

ML3
Fit-for-Purpose

ML2
Customer-Driven

ML1
Team-Focused

MLO
Oblivious

David J Anderson
Teodora Bozheva

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Extract from:

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Part I Outcomes and Benefits

1 Understanding Maturity Levels 0 through 2

The Kanban Maturity Model (KMM) is a roadmap for improving an organization through managed evolution. We begin with the three pillars.

The Three Pillars of the KMM: Culture, Practices, and Outcomes

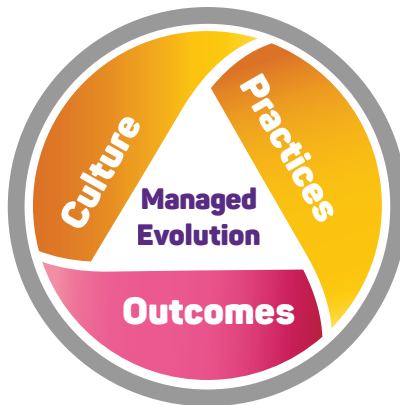


Figure 1.1 The three pillars of the KMM

The roundel shown in Figure 1.1 presents the three pillars of the Kanban Maturity Model: Culture, Practices, and Outcomes. They are developed in organizations following a Managed Evolution approach. We present pragmatic, actionable, and evidence-based guidance

for each pillar in detail later. We start by explaining the three pillars and the seven levels of organizational maturity, illustrated using roundels (Figure 1.2).

Culture describes “how we live” as well as “who we are” and “what we stand for.” Culture defines what people value—also referred to as principles, or norms, whether explicitly defined and written down or not. The accepted cultural norms are used to justify behaviors and actions, or to enable a system of justice to evaluate the virtue of specific behaviors or actions.

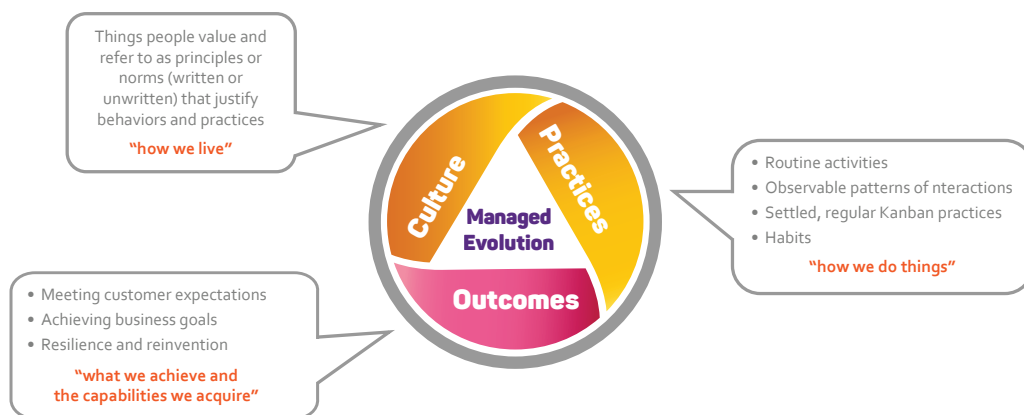


Figure 1.2 The KMM roundel explained

Practices are regular activities, observable patterns of interactions, measures and metrics, decision frameworks, and routines, habits, or rituals. Practices are “how we do things around here.”

Outcomes are observable results and describe “what our business looks like” to customers, users, and stakeholders. Outcomes demonstrate whether our business is fit-for-purpose and, if it is, in which contexts. Outcomes also indicate whether our business is sustainable, robust, and likely to survive over the long term. Outcomes illustrate our resilience and demonstrate our ability to recover from setbacks and unexpected events.

Culture and outcomes are changed through the adoption of practices guided by the Evolutionary Change Model, an approach designed and intended to create “pull” from the participants—the employees and managers of the organization—such that the changes institutionalize and stick. Evolutionary change drives sustainable, robust improvement.

The following pages describe each of the first three levels of organizational maturity as they relate to these pillars.

Maturity Level 0 – Oblivious

The characteristics of Maturity Level 0 are shown in Figure 1.3.

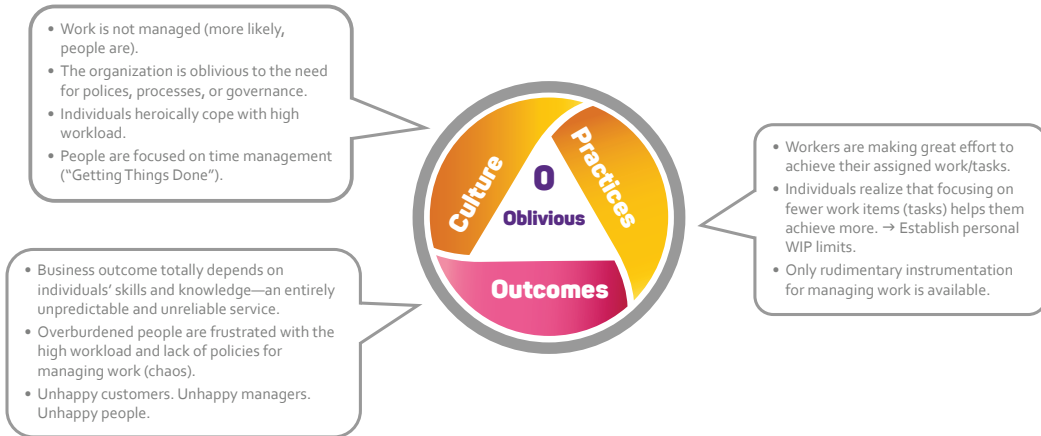


Figure 1.3 The KMM Maturity Level 0 roundel

Overview

At Maturity Level 0, individuals are responsible for handling their own tasks. Frequently, the person who performs the work is the user of its outcome as well; that is, the work consists of self-generated tasks rather than customer-requested work orders. The organization is oblivious to the need to follow a process. Workers are ambivalent about the value of management of organizational processes or policies.

Culture

This is a loosely affiliated group of individuals. There is no collaborative working. Every customer has their “pet” worker, their go-to person. We have observed two forms of Maturity Level 0: the stoic, with serfs and victims; and the anarchistic, comprised of neo-communists and liberals.

In the first type, we find stoicism and coping with a heavy workload. A sense of inevitability. Despondency. We have observed this type in large public-sector organizations—civil servants working in specialist areas in inherently low-trust organizations. We also see it in private companies with very traditional management styles dating to the 19th or early 20th Centuries. Organized into functional units through similar skillsets and similarity of work, each person works individually with no need to collaborate.

In the second type, we find a disregard for the need for any social organization, formal processes, or governance rules. Potentially a true and honest belief in anarchy in its primal

form: a belief that humans will always self-organize to produce the desired outcome and that no governance structure or management is required. While idealistic, we have observed this pattern when a particularly liberal group of individuals organize themselves into a business: no one wants to assume a position of power, authority over others, or be perceived to have status that exceeds that of anyone else—communism in its purest form. We have seen this form only in idealistic, small-scale startup companies, and for only a short period of time, as the evidence suggests that it isn't sustainable.

Practices

Individuals are focused on completing their own tasks—“getting things done”—a time- and resources-focused approach to managing the workload and completing tasks. If there has been any Kanban intervention, we see the use of individual kanban boards. The fidelity of the individual kanban board depends on the individual, and they range from a simple visualization of tasks to a sophisticated system with WIP limits, *Next* columns, identifying separate types of work, and risk categories for allocating capacity to different types of risks to create a balance in life and outcomes for the specific individual. There is no instrumentation, as there is no defined process to instrument. Metrics and measures are not used. Decision making tends to be reactive, emotional, spontaneous, and sometimes difficult to explain.

Kanban Patterns

The focus is completely on handling personal tasks. Therefore, the observed kanban patterns include three basic types of individual kanban boards, used primarily to visualize tasks (see Figure 1.4). The designs observed reflect a growing level of individual maturity and capability at self-management. There is an intention to achieve a level of self-improvement through reflection, and often a cadence emerges as the use of the individual kanban system becomes habitual.

A *trivial* individual kanban visualizes invisible work, relieving the user of the burden of carrying the list of open tasks in their head. A *simple* individual kanban introduces work-in-progress (WIP) limits and recognizes a limit to human capacity, a desire for relief from overburdening, and a belief that multitasking causes individual tasks to take longer and their completion to be unpredictable. This second level could be described as a result of the epiphany that it is better to “stop starting and start finishing.” The consequence is a feeling of personal achievement. The *true* individual kanban emerges when individuals realize that there is an existential overhead to a large backlog of unstarted tasks. This third, more mature design includes the act of personal commitment to items to do next, while there is recognition that backlog items are actually uncommitted, remain optional, and may be discarded. There is often a cadence to the personal reflection needed to select what will come next. A individual triage capability develops to decide what will be done: now; later, and if later, roughly when, based on a sense of urgency of the task; or not at all.

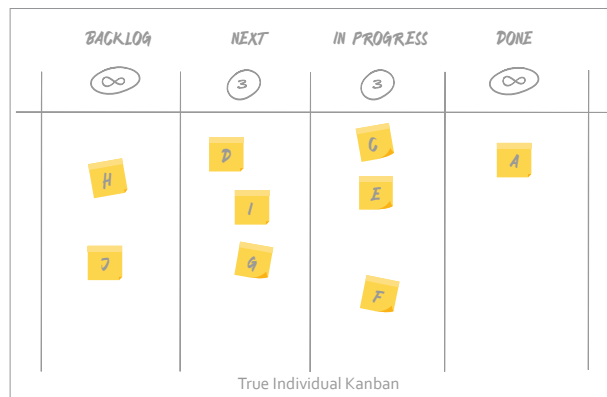
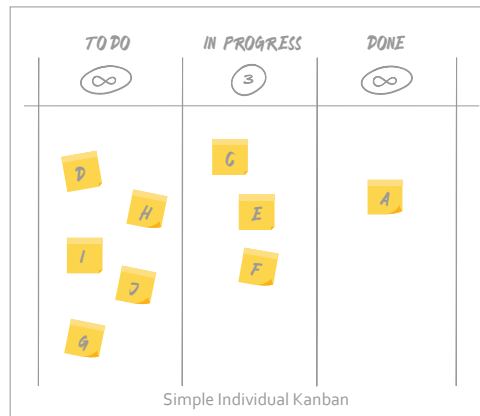
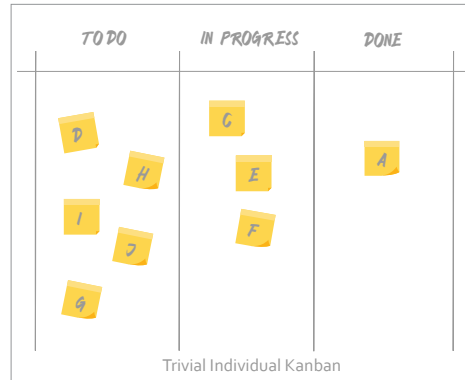


Figure 1.4 Maturity Level 0 kanban patterns

From an organizational maturity perspective, this third style of board is still a Maturity Level 0 (ML0) pattern; however, it reflects the thinking and actions of a more mature individual likely to want to participate in a more mature organization.

Outcomes

The quality and consistency of work done or services performed is entirely associated with individuals and their capabilities, skills, experience, and judgment. The customer experience depends entirely on which staff member performs the work. The organization, and its performance, is extremely fragile to changes in personnel.

Example

We are operating a takeout pizza restaurant, and we have a staff of individuals who know how to make pizza. Staff members compete to take a customer's order, then compete for resources such as countertop space, ingredients, and access to the ovens so they can fulfill the order. The customer experience depends entirely on who is serving them, and customers often develop a preference for a specific team member, effectively choosing them as their pet pizza producer. Customers wait to place their order with their pet chef, as they have no trust in the restaurant's systems.



Maturity Level 1 – Team-Focused

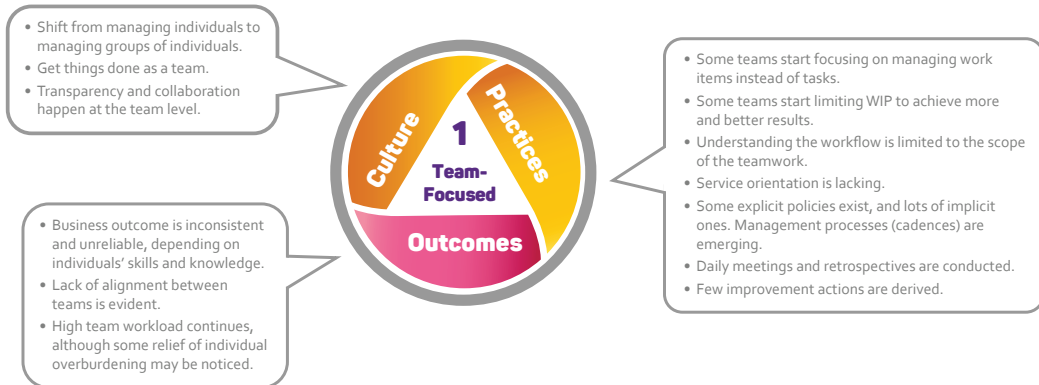


Figure 1.5 The KMM Maturity Level 1 roundel

Overview

Maturity Level 1, illustrated in Figure 1.5, may be characterized as “never the same way twice.” Processes and ways of doing things are poorly understood and emergent, or undefined, with poor repeatability. Teams of workers may be oblivious to a wider context. There is an understanding of what the work is, but perhaps not how it should be done, what the finished product should look like, or what the customers expect of service delivery. There is little understanding of who the customer is or why they have requested the work. There is constant pressure to find new customers because former customers, reacting to the unreliable service, fail to return.

The organization remains oblivious to the need for processes, policies, and governance beyond the team level. Consequently, there is an observable lack of alignment among teams. This affects the consistency of product design and implementation as well as service delivery. Work is pushed into the process. Priority is set based on superstition, or political leverage, or is purely ad hoc and random. The process, system, or value stream is overloaded. Individuals are often overburdened, and heroics are routinely required. There is no concept of the system's capability or capacity. Hence, it is impossible to try to balance demand against capability. There is an expectation that everything that is requested will be done. There is no triage capability nor opportunity to refuse work.

The workplace is stressful because of the inconsistency and poor quality, and there is a significant amount of rework. It is highly likely that loss of discipline occurs when workers are under stress and handling exceptional circumstances. When stressed, the organizational maturity is likely to slip back to Level 0, and then the organization relies entirely on individual heroics to pull out of a crisis.

Culture

Groups of individuals now identify as teams. Two forms exist: (1) a group of individuals who sit together, feel an affinity and a shared identity, but work separately on similar tasks; and (2) a true team of individuals who work collaboratively on a single task toward a shared goal—they share an identity and a purpose. The culture is tribal and focused on the identity of the team and status within the team. Trust exists within the team, but there is little comprehension of the world beyond the team and little cooperation with other teams. There may be a general sense of inevitability and a victim mentality. The team might feel that they are overburdened and abused, that their work is irrefutable, and they are overwhelmed. A sense of shared victimhood may strengthen team cohesion. Many team rituals might reinforce their self-image as victims while offering therapy and security in support of fellow team members. There is a focus on recruiting heroes, and heroics are an expected, rewarded, and celebrated part of the culture.

Practices

There is no consistency of process, policy usage, or decision frameworks. Teams may work in isolation without appreciating their contribution within the context of a customer request. There is little or no cooperation across teams nor any broader collaboration.

Teams use kanban boards, so there is transparency within the team. The teams hold daily Kanban Meetings and regular Team Retrospectives. They use vanity, or “feel good,” metrics. Metrics tend to focus on individuals rather than on instrumenting still emerging and inconsistently followed processes. They tend to collect data and report on that which is easy to measure, with little thought as to whether the measure is useful or actionable. Some local activity measurements may serve as general health indicators, though many may be of little actionable value and are essentially vanity metrics—they make a team or its individual

members feel good, feel as though they are making progress, but they serve no meaningful purpose in improving business outcomes. Decision making is emotionally driven and superstitious in nature.

Kanban Patterns

At the transition to Maturity Level 1, several individuals work on a common function, but assignments are separated. There may be specialization of tasks to individuals with specific skills. Everyone is responsible for organizing and performing their own tasks, or tasks are assigned and dispatched by a supervisor.

An aggregated individual kanban board (Figure 1.6) is used to visualize all the tasks and their status for a department or a function, typically using one lane per person. Hence, each lane is essentially a individual kanban board, and displayed together they are aggregated. This design often facilitates the supervisor as a dispatcher who assigns tasks to individuals. However, having awareness of what the other people do, and with which work they may require assistance, fosters collaboration. It is the first step to creating a real team and developing the understanding that working jointly produces better results more efficiently than working in isolation with limited comprehension of how one's work affects others'.

When consolidating to Maturity Level 1, collaboration happens habitually in a small team performing work with a shared goal or shared responsibility and accountability. Pools of people with different specializations may exist. Each team member is still responsible for handling their own tasks; however, the team has an emerging comprehension of the overall development process, in particular, how it begins and ends. This lays the foundation for Maturity Level 2, at which teams start seeing their jobs as a service conducted in response to a customer request or as part of a larger workflow. Therefore, Maturity Level 1 is fundamental for making Kanban Service Delivery principles one and two work:

1. Understand and focus on your customer's needs and expectations.
2. Manage the work, let people organize around it.

The team visualizes its work and meets daily to check its status. However, the process is not consistent yet, and under stress it is likely to lose discipline and consistency. Performance depends almost totally on the availability and individual efforts of certain team members and varies as widely as the spread in individual capabilities across the team.

Outcomes

Maturity Level 1 is described as “never the same way twice” because there is little to no cooperation amongst teams, and service delivery workflows are at best emergent. There is no consistency in a desired outcome. Work is not seen as a combination of services, and customers perceive service delivery as unreliable. There is considerable luck attached to whether a product or service is “fit-for-purpose.” Customers with sufficient transparency show a preference for or demand the involvement of specific individuals on their work

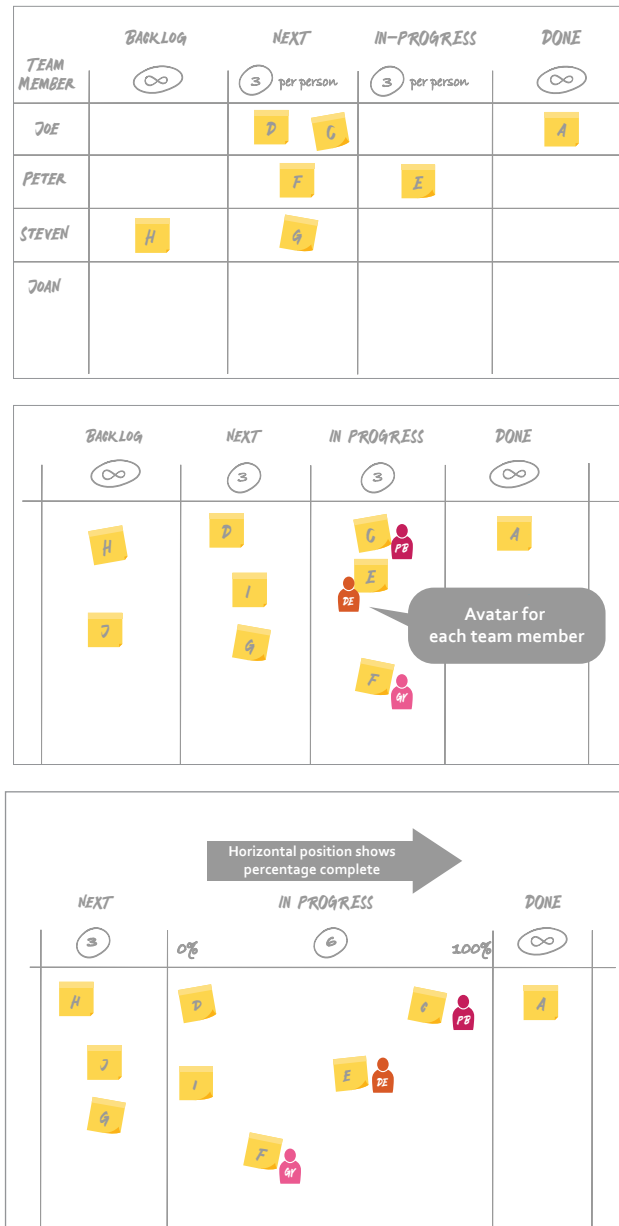


Figure 1.6 Maturity Level 1 kanban patterns

requests as a means to mitigate risks of inconsistent, poor performance and resulting disappointment. Customers have their favorite superhero. Like Maturity Level 0, customer trust is held with individuals, not in the organization or its systems and processes.

Observable outcomes depend on who is working on this shift, project, or product increment. The customer experience is incredibly variable. If the customer is satisfied, it is usually the result of individual heroics. You know you are dealing with a Maturity Level 1 organization when you see a recruitment advertisement with the headline, “Ninja developer required for dynamic environment,” which we translate as, “We need a hero for our emergent workflow that produces extremely unpredictable outcomes.”

Example

We are in the pizza delivery business. The method of preparing, baking, and delivering pizza, the accuracy of order fulfillment, and the quality and taste of the pizza depends highly on the individual making it. The process is emerging but is still inconsistent. Often, the pizza is the wrong type, is missing ingredients, or is of poor quality upon delivery, or the delivery time depends dramatically on the person who delivers it. The customers’ experience leads them to conclude that the vendor is extremely unreliable.



Maturity Level 2 – Customer-Driven

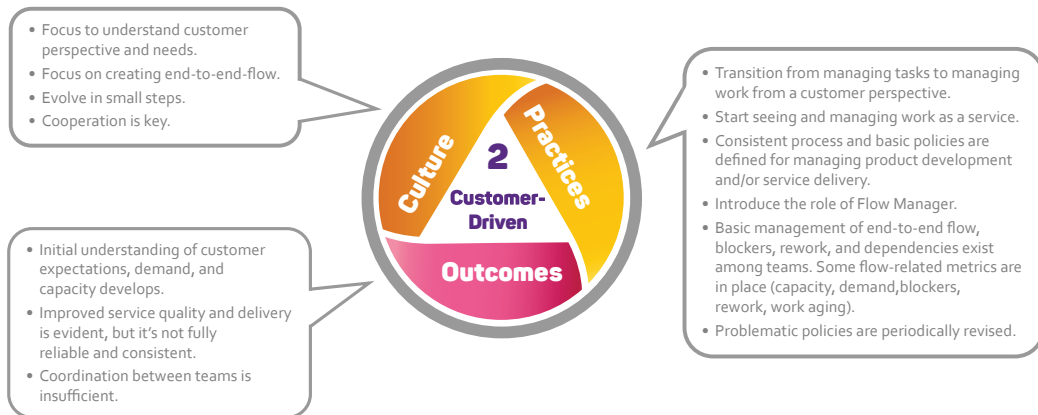


Figure 1.7 The KMM Maturity Level 2 roundel

Overview

Characterized as “never the same result twice,” Maturity Level 2 organizations exhibit consistency of process (see Figure 1.7), but not necessarily consistency of outcomes. Processes, workflows, policies, and decision frameworks are understood, defined, and are

repeatable. New staff members are trained in “how we do things around here.” Work is done consistently regardless of who is doing it. There is an understanding of what the work is, and both how it should be done and what the finished product should look like, including the service delivery expectations. However, there may not be a full understanding of who the customer is or why they have requested the work.

This is most often true for shared and internal services that lack visibility to the end customer as well as the motivation or purpose behind a work request or the risks associated with that work or its delivery. Consequently, there may be an observable lack of alignment among teams and interdependent service workflows. This affects how the customer views the consistency of service delivery. The workplace is notably less stressful because of both the consistency of process and that there are defined roles and responsibilities. Workers know what is expected of them and what they can expect of their colleagues. Poor quality is still an issue, though less so than at Level 1, and there is still some rework. Some pressure to find new customers remains because some existing customers fail to return as a reaction to the unreliable service. Additionally, there is some tendency to lose discipline when under stress and handling exceptional circumstances. When stressed, the organizational maturity tends to slip back to Level 1.

At ML2, there is less reliance on individual heroics than at previous levels; however, because the processes do not produce consistent outcomes, the organization relies on heroic managers to expedite important customer requests. Customers come to learn that they can trust certain managers and may insist that they manage their projects or ensure expedient, effective delivery. Customers do not yet trust the organization or its systems.

Culture

Trust and cooperation amongst teams and across the wider organization begins to emerge. Recognition of a shared purpose drives cooperation in the service of customers. Transparency broadens to the service delivery workflow. At the team level, the focus switches to the flow of work rather than merely completing tasks. It is no longer about getting things done; rather, the goal becomes making things flow. Maturity Level 2 is a world of managerial heroes cajoling work through the value chain, a world where customers have their own pet manager. If customers request certain project or delivery managers because they trust them, it shows that they don't trust the processes. The belief that successful outcomes are tied to the involvement of specific managers is a sure-fire indicator of a Maturity Level 2 organization.

Practices

The main shift at Maturity Level 2 is a transition from managing tasks to managing customer-valued and customer-requested deliverables. The organization starts to view its work as a service. Practices and the workflow process are now consistent, and it is possible to visualize a step-by-step workflow. The kanban board now supports multiple teams that cooperate across a shared workflow with the shared purpose of delivering

customer-requested work. Nevertheless, work tends to be pushed into the process because policies are neither strong enough nor sufficiently internalized to prevent it. There is little observable capability to prioritize work. Priority, if it exists, may be superstitious (based on historical patterns or old habits: “we’ve always done it this way,” or “in this sequence” or “it is bad luck not to do it in this order”), political, or simplistic—such as first-in-first-out (FIFO). The process, system, or value stream is often overburdened because of a tendency to say yes to everything (or to too many things) and an inability to balance demand against capability. Metrics appear to report the customer-valued work flowing through the service delivery workflow. Metrics have matured from vanity, or “feel good,” team-level metrics to health indicators and improvement drivers for the entire workflow. A Flow Review develops as the main reflection mechanism driving improvement. We see improvement suggestions from this meeting implemented, resulting in improvements in flow.

Kanban Patterns

The main characteristic of the transition from the Team-Focused to the Customer-Driven Maturity Level is that the kanban board now has per-person WIP limits (the bottom board in Figure 1.8). Here, instead of a generic *In Progress* column, a sequence of the main workflow phases is visualized on the team kanban board. The types of work are identified and visualized by different colors (in this example) or by different lanes across the board. The team begins to understand that their performance depends on the amount of work-in-progress (WIP); that is, the more WIP, the longer work takes and the less predictable its completion is. They recognize that work left unfinished in a waiting state is not helpful and can lead to much higher defect rates and increased rework. Nevertheless, teams using delivery kanban boards with per-person WIP limits deliver better quality results and feel relief from overburdening.

Although the workflow is still basic and the overall process is not consistent at the transition stage, customer focus emerges—an understanding that work flows through a series of steps toward completion of something a customer values. Workers realize that a smooth flow of work is a desirable state for relief from unevenness. Uneven arrival of work creates temporary periods of overburdening. Uneven flow makes predictable delivery challenging and directly affects customer satisfaction. Properly coordinating the team’s work (mainly among different specializations) appears to avoid peaks and troughs in workload. There is growing appreciation and awareness of more of the Kanban Method’s values, but values such as Customer Focus and Balance are not yet fully embraced, and the cultural focus remains inward—“who we are” and “what’s in it for us.” Improvements are justified on selfish grounds at the team level. There isn’t yet an outward-looking altruism or a focus on contributing for the benefit of customers and other stakeholders.

At the core stage of Maturity Level 2, organizations are better able to coordinate activities with different audiences and decouple the cadences of planning, committing, or selecting work from the cadence of delivery. This reduces the effect of losing rhythm due to concentrating team effort on packaging and handing over completed work and then restarting

development. In addition, developing a tolerance for work to be in progress while a delivery is being made requires strengthening other technical capabilities, such as configuration management. Hence, decoupling the rhythm of planning, committing, doing, and delivering creates positive stress for improving specific enabling practices such as configuration management.

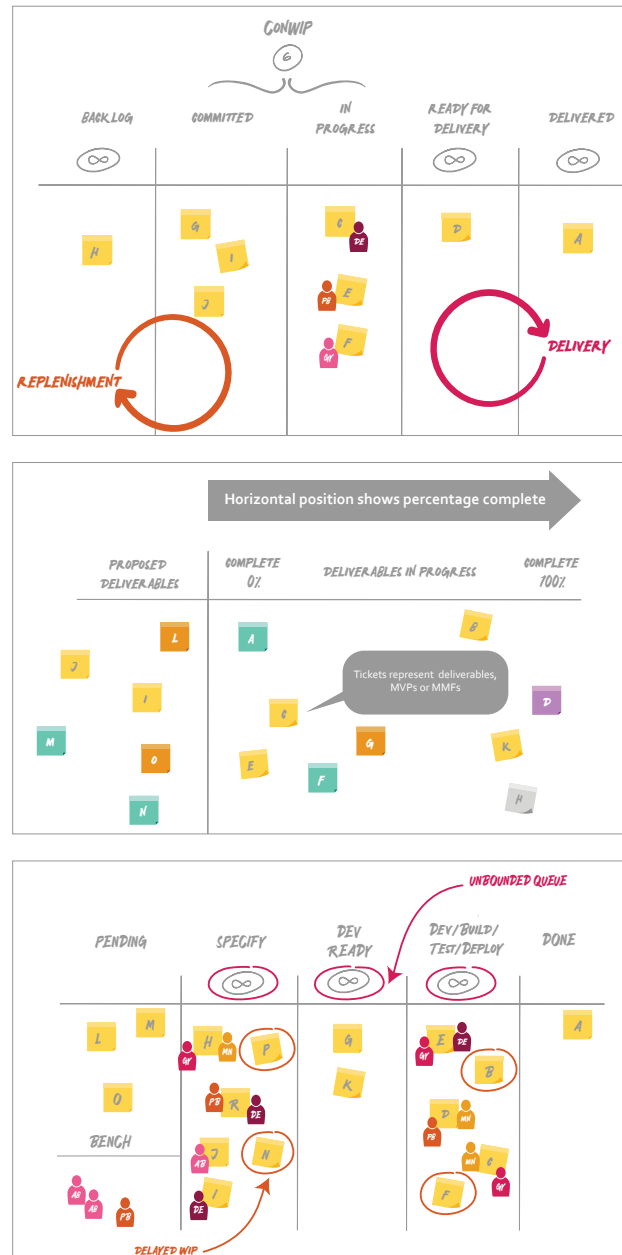


Figure 1.8 Maturity Level 2 kanban patterns

At this level, some teams recognize the need to control the workflow and do it by using a delivery kanban board with a defined commitment point and constant WIP (CONWIP), which is a true pull system, but without a defined workflow (the top board in Figure 1.8). Basic policies for prioritizing and committing work and visualizing work status are established. Parameters like *% Complete* are introduced and are used to provide additional information about project status and track its conformance to plan. Portfolio kanban boards are used for visualizing the status of multiple projects to enable making relevant decisions.

Nevertheless, the workflow management responsibility is not explicitly defined. Even in organizations with established project management processes, project managers' duties include planning, monitoring, and controlling project activities against plan, but not managing the workflow. There is no one playing the Service Delivery Manager (SDM) role. In some organizations, we've observed the emergence of a Flow Manager role at Maturity Level 2. This role tends to have an internal focus, actively managing flow for its benefit of relieving temporary overburdening due to unevenness.

At this level, established policies and workflow controls do not enable managing unforeseen events because the feedback from the system is insufficient. Behavior is entirely reactionary. Consequently, unforeseen events caused by the occurrence of specific risks, or more complex situations for which there is no specific guidance on how to handle them, can render a project or a service out of control. The result is failure to meet expectations and, often, a regression in observed maturity level to a more individualistic, heroic culture.

Outcome

Maturity Level 2 is characterized as “never the same result twice.” We now have stable, defined practices and workflow, but the results fail to meet customer expectations consistently.

Example

We are in the pizza delivery business. The method of preparing, baking, and delivering pizza is consistent, and the defined procedures are now followed consistently. However, the pizza delivered depends highly on either the main cook or the manager being involved in the process. If she or he is not there, the pizza delivered might be the wrong type, might be missing some ingredients, or be slightly burnt. Therefore, the customer's perception is that vendor's reliability depends on the supervisor on duty.



2 Understanding Maturity Levels 3 through 6

Operating at Maturity Levels 0 through 2 of the Kanban Maturity Model can bring an organization only so far. Here, we describe the next four levels of the model: Fit-for-Purpose, Risk-Hedged, Market Leader, and Built for Survival.

Maturity Level 3 – Fit-for-Purpose

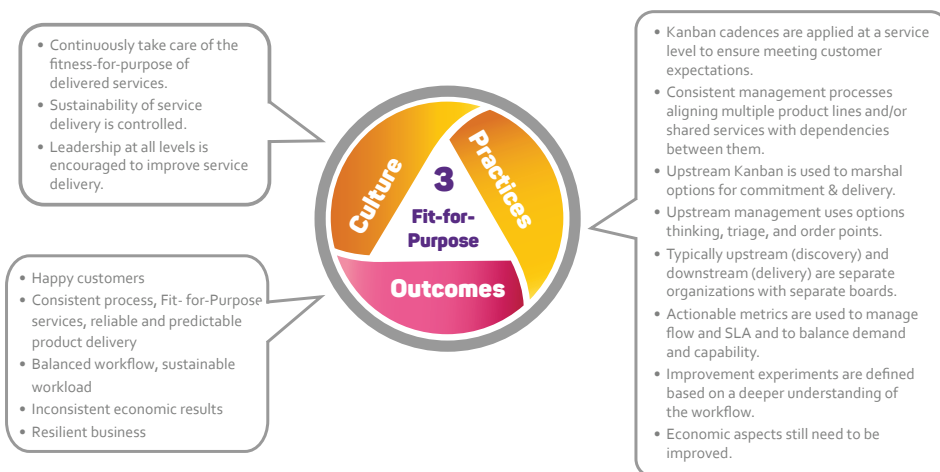


Figure 2.1 The KMM Maturity Level 3 roundel

Overview

Maturity Level 3 (Figure 2.1) can be characterized by a line from a famous Stranglers song: “No more heroes anymore.” The organization now has consistent processes, policy usage, and decision frameworks as well as desired outcomes. Product design, quality, and service delivery are all within customer expectations and tolerance levels. The organization is considered trustworthy. Its customers are satisfied.

At Level 3, the organization understands what the work is—both how it should be done and what the finished product should look like—as well as what the service delivery expectations are. There is a strong sense of unity and purpose along the value stream or across the workflow, a sense of a larger team collaborating to deliver a piece of work. The teams fully understand who the customer is and why they have requested the work, so there is a strong sense of fulfilment amongst the workers when delivering finished work.

The workplace runs very smoothly under both normal and exceptional circumstances, with little tendency to panic under stress. There is a strong sense of process, roles, and responsibilities, and workers know how to react to unusual or exceptional circumstances. There is little urgency to find new customers because existing customers provide steady demand.

The product or service is now completely “fit-for-purpose,” which is achieved without heroics. Instead, people rely on defined methods, processes, and decision frameworks.

Organizational capability and performance are now resilient. Customers now trust that work is done consistently, and they no longer request specific individuals or managers to handle their work.

People are now thinking explicitly about services from an external, customer-facing perspective. The notion that the organization consists of a network of interdependent services is starting to emerge, along with some recognition of the power and efficiency of effective shared services.

There is a clear metrics and reporting strategy with fitness criteria, improvement drivers, and general health indicators being used appropriately. The process is instrumented to collect and report customer fitness criteria metrics. Improvement-driver metrics may also be actively used. Metrics and measures tend to be end to end, with only specific improvement drivers focused on local activities or value-adding steps. The presence of vanity metrics is unusual but may exist for cultural reasons or may be explained as evolutionary relics to which there is an emotional attachment, and the conditions needed to successfully remove them have not yet materialized.

Despite the considerable instrumentation and availability of metrics, decision making remains mostly qualitative or emotionally driven.

Culture

At ML3, the culture of heroes and individualism is gone, and there is now appreciation for defined practices and workflows, explicit policies, and feedback mechanisms to review practices, workflows, and policies regularly. The culture values the system in

operation, and this way of working, in part, defines who they are. When things don't go as planned, the organization takes action to revise methods and procedures rather than blame individuals.

There is now extensive transparency, trust, and collaboration along the entire customer service workflow. The teams performing functions along that workflow are now collaborating as one much larger team—with a shared purpose and a shared goal. There has been a shift from mere customer awareness to a shared belief in customer service, an awareness that customer satisfaction is rooted in fitness-for-purpose, and understanding why a customer requested something becomes important.

Practices

At ML3, kanban boards not only map the workflow but have end-to-end WIP limits. Metrics now track customer fitness criteria against threshold levels such as an SLA on lead time. Metrics reflect fitness criteria, improvement drivers, and health indicators. There is a Service Delivery Review to reflect on how effectively the organization is meeting customer expectations. There has been a shift to symmetrical and synchronous commitment through fully functioning Replenishment Meetings; there is a clearly defined commitment point, and risk is now better shared by the upstream business organization and the downstream delivery organization. An effective triage process is in place to prioritize work into three categories: (1) do it now; (2) leave it until later, comprehending when is ideal; or (3) discard, reject, do not do it. Demand can be refuted or scheduled later. There is now balance between demand and capability, relieving the system of over-burdening. Only expedite requests are “pushed.”

Replenishment Meetings, Service Delivery Reviews, and Delivery Planning Meetings all include the customer.

Kanban Patterns

A key characteristic of a Maturity Level 3 transition organization is that the kanban systems visualize a service-oriented, customer-focused workflow. An aggregated team kanban board visualizes workflow across different teams, which is shown on the top board in Figure 2.2.

Pull criteria, work item dependencies, defects/rework, and blocked work items are consistently visualized. This facilitates a deeper understanding of the system that performs the work. Initial actions for stabilizing the workflow are in place, in particular, establishing WIP limits for different states and for the entire system, as well as through plotting and interpreting the cumulative flow diagram.

Replenishment Meetings are held to move work items over the commitment point to control the workload and avoid destabilizing the entire system, although a customer might still tend to push starting a work item despite the pull criteria defined by the team.

The processes are repeatable, and the teams follow their routines, although they might still abandon them in crisis.

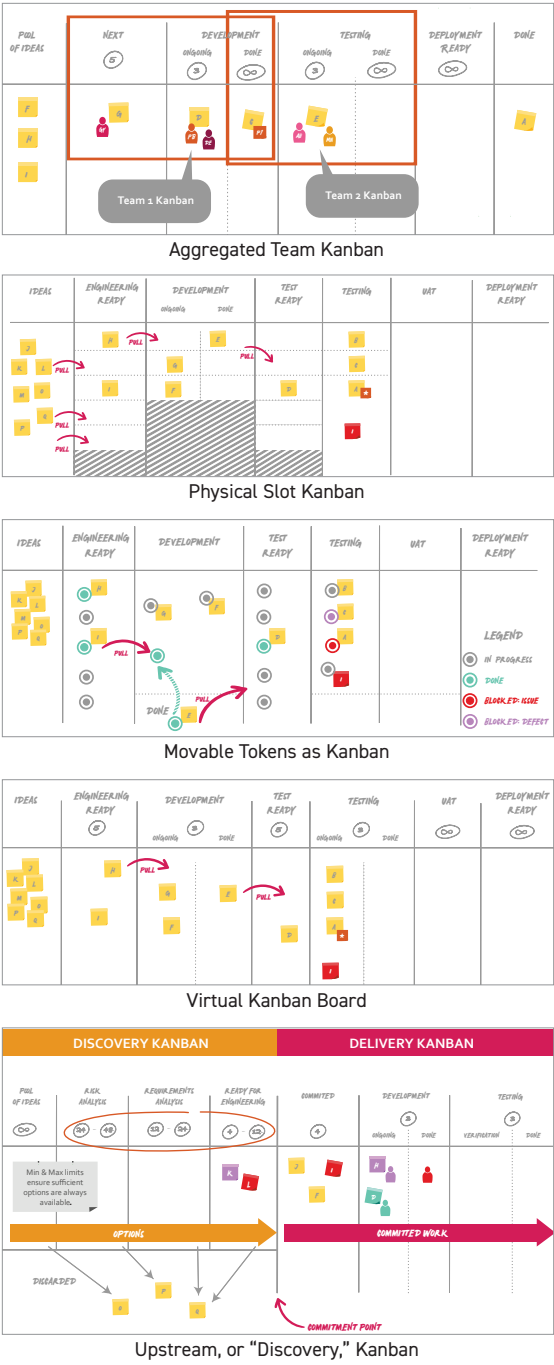


Figure 2.2 ML3 Kanban patterns

At the consolidation stage of ML3, managers and teams have developed a good understanding of the workflow based on experience, collected historical data, and established feedback mechanisms (Delivery Planning, Service Delivery, and Risk Reviews). They make decisions using recent information about what is actually happening. In addition, they are able to flexibly manage work to effectively deliver expected results. Policies and processes are respected by managers and teams and are followed even in crisis.

The deeper understanding of the workflow allows managing larger and riskier product developments and services with a greater degree of success. Multiple product and service managers are in place, and dependencies between products and services are taken into account. Initial Operations Reviews are conducted to understand and address service dependencies.

Higher-level management is convinced of the benefits reaped by properly managing work. The roles of Service Request Manager and Service Delivery Manager are introduced to ensure sound management both up- and downstream.

Workflow data is collected and plotted on charts. Although data quality is not very good yet, and the entire process is not stable enough to produce meaningful measurements, the available data provide information that enables comparing the actual and desired service states and defining relevant actions.

Analyzing data facilitates an understanding of the processes and starts developing a culture of making decisions based on quantitative information.

Delivery Planning Meetings are held to schedule deliveries to customers and to make specific delivery date commitments. The act of committing to do something is separated from the act of committing to a specific date for delivery. In doing so, customer expectations are better managed and service delivery effectiveness improves. Service Delivery Reviews are conducted to monitor and improve service effectiveness. Risk Reviews are conducted to understand and respond to the risks that impede effective delivery of services.

Outcomes

The customers' expectations are met regularly and sufficiently well that customers are satisfied with the level of service. There is consistency of process and consistency of outcome. The organization has developed the capability to respond quickly to changing customer expectation. However, Level 3 might not be sustainable in the long run. Although customers' needs are met, other stakeholders' needs may yet be lacking. The organization follows the changes in their customers' needs, but does not anticipate them. Level 3 could be martyrdom—the organization may satisfy the customers but lose money on every transaction.

Example

We are in the pizza delivery business. The method of preparing, baking, and delivering pizza is consistent, and defined procedures are followed consistently, regardless of which night of the week it is, who is working that evening, or whether the manager is there. Consistently, the pizza delivered matches the order, is of high quality, and is within service delivery expectations. The customer's perception is that the vendor is reliable and trustworthy. Because the process and the outcomes are consistent, we have time to think about growing our business—open restaurants in other locations, or offer pizzas for people with dietary restrictions, or develop special menus that differentiate us from our competitors.

However, although our Maturity Level 3 organization can fulfill orders within expectations, we aren't yet good at understanding why customers choose us or what additional expectations they might have. We sell a lot of basic Margherita pizzas for delivery to business premises after 5 p.m. on Thursday evenings, but no one has bothered to think about it, or to ask why. We haven't yet achieved customer intimacy, and our ability to anticipate demand and expectations hasn't yet evolved.



Maturity Level 4 – Risk-Hedged

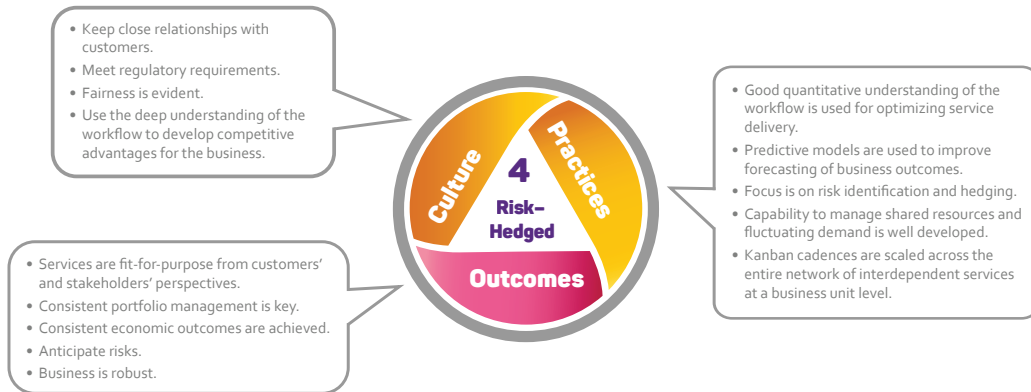


Figure 2.3 The KMM Maturity Level 4 roundel

Overview

At Maturity Level 4 (Figure 2.3), design, implementation, and service delivery are routinely fit-for-purpose. Consistency of both process and outcome relieves a lot of stress, and the organization shifts its focus to economic outcomes as well as to developing robustness against unforeseen events and exceptional circumstances. The organization now pays attention to quantitative risk management and economics. The question is now whether it can achieve consistency of delivery within economic expectations of cost or margin, and whether performance can be robust to unforeseen circumstances through appropriate risk hedging. Quantitative analysis of metrics and measures becomes more important. The goal is to be ever fitter-for-purpose from the perspectives of a variety of stakeholders.

In addition to all of the Maturity Level 3 behaviors, a Maturity Level 4 organization has a consistent economic performance, such as steadily meeting particular cost targets and margins. The concept of everything in balance now applies across customers, types of demand, risk categories, and a variety of stakeholders. While Maturity Level 3 introduced balance between demand and capability to supply, Level 4 extends that to ensure fairness and appropriate risk hedging. At Level 4, an organization seeks a risk-balanced, predictable economic performance.

Work is now classified by customer risks, and a variety of classes of service is offered. Demand shaping or capacity limitations by work type and class of risk are present. Triage is now driven by risk assessment, and class of service is directly linked to risk. Scheduling is influenced by cost of delay and a quantitative understanding of service delivery risks such as the probability distribution of lead time.

Under stress, the organization follows emergency or exception procedures and takes mitigation and remedial action to reduce the likelihood and/or impact of such an occurrence, or to completely prevent a recurrence.

Organizational capability and performance are now robust. Risk hedging is effective against the occurrence of unforeseen, though not unforeseeable, events. Customers now trust that work is done consistently, and there are no customer requests for specific workers or managers. Managers, shareholders, and other stakeholders, such as regulatory authorities, now trust that work is conducted within defined constraints and that economic outcomes are within a defined range of expectations.

The organization now extensively uses holistic thinking and has a service orientation. Organizational units are now forming around defined services with known and understood dependencies. Shared services are recognized as a highly effective and efficient approach and therefore are desirable economically. It is understood that they provide an advantage to organizational agility—the ability to reconfigure quickly to changing market, regulatory, or political conditions.

There is a notable shift to quantitative decision making, and a cultural norm is established that decisions must be underpinned with solid data, with risks assessed and adequately hedged prior to action.

Culture

At ML4, there is a deeper appreciation that everything must be kept in balance—that sustainability comes from meeting the expectations of all stakeholders. There is a drive for fairness—fair treatment of all stakeholders' concerns.

There is now a focus on customer intimacy. It isn't enough to know who the customers are, what they ask for, and what their expectations are. In addition, it's important to know why they have these expectations and why they ask for what they do when they do. From this, an organization learns how to best serve its customers and to anticipate their needs.

The culture has become much more anticipatory and less reactionary. Maturity Level 4 can be characterized as “no more surprises.” A marked shift has taken place such that the expense of risk management—reduction, mitigation, and contingency—is seen as insurance against unforeseen events. When unexpected events do occur and require a nimble response, the organization reacts by learning, in an effort to anticipate such events in the future. At this level, the organization values competition and the way it drives improvement. It aspires to be fitter-for-purpose, to be better than the competition. Quantitative data and data-driven decision making emerge. The use of frameworks for decision making and risk assessment enable a move toward institutional knowledge and capabilities rather than relying on individuals' skills and capabilities. There is a repeatable system for recruitment and a commitment to employee and leadership development. Rather than recruiting for what it needs in the open market, the organization develops what it needs internally.

Transparency, trust, and collaboration now exist at a large scale, such as a business unit of 450 to 600 people.

Practices

At Maturity Level 4, risk is managed by using a risk-assessment framework and risk-hedging techniques such as capacity allocation to create balance, fairness, robustness, and sustainable outcomes. The Fit-for-Purpose Framework helps an organization achieve customer intimacy. Classes of service are aligned with customer fitness criteria. Dependencies are managed using dynamic reservation systems, classes of booking, and classes of dependency management based on the work item’s class of service and related customer expectations. The dominant feedback loop for driving improvement becomes the Operations Review. The Risk Review becomes more sophisticated and quantitative in nature.

Kanban Patterns

Maturity Level 4 is realized more through using metrics and feedback loops than through specific practices. It is characterized more by adopting the Kanban Cadences and the Fit-For-Purpose Framework than by specific kanban board designs. However, an organization that is solidly at ML4 visualizes and successfully manages different services and classes of services using shared resources. Capacity is allocated to each service so as to respond to a particular organization’s goal or strategy (Figures 2.4a and b). In addition, capacity allocation is used flexibly as a risk-hedging mechanism against a fluctuating or unpredictable arrival of unplanned work.

Outcomes

Maturity Level 4, as previously noted, is characterized as having no more surprises and everything in balance. ML4 is a long-term, sustainable version of Level 3. All stakeholders’ needs are now met in a sustainable fashion.

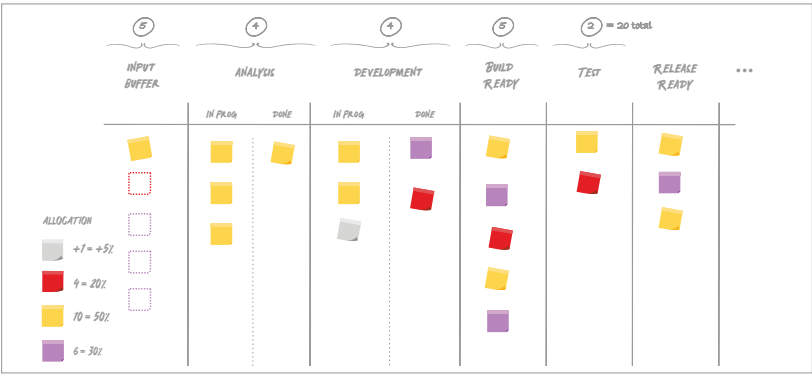


Figure 2.4a Maturity Level 4 kanban patterns: Capacity allocation across classes of service



Figure 2.4b Maturity Level 4 kanban patterns: Capacity allocation across several services

Example

We are in the pizza delivery business. We are running an economically successful business offering several different classes of service, such as an express delivery menu. We successfully cope with ebb and flow in demand and understand the cyclical nature of our business. We are optimally staffed most of the time and our costs are tightly controlled without affecting our delivery capability or impacting customer satisfaction. We have a well-respected brand, and solidly predictable profitability.

We sell a lot of basic Margherita pizzas for delivery to business premises after 5 p.m. on Thursday evenings, and we know why. Thursday is the night that colleagues hang out together after work. On Fridays, people have plans for the weekend, but on Thursday nights they can afford to stay late for an hour or two. A Margherita pizza is the perfect accompaniment for a glass of beer or soda, just enough to take the edge off hunger at the end of a day's work. Because we know why our customers order,



we can anticipate this demand—it's not luck! We also can anticipate when the demand will ease off, drop completely, or shift to a different evening of the week. If we have to introduce a new type of cheese because the one used so far is no longer produced, we study our customers' preferences, offering them pizzas with several alternative types of cheese to find out which they like best.

At Maturity Level 4, customer satisfaction is invisible—it is always there. Customers learn simply to take it for granted.

Maturity Level 5 – Market Leader

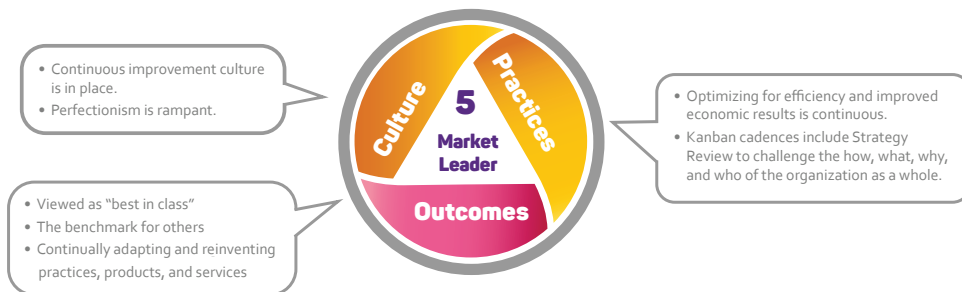


Figure 2.5 The KMM Maturity Level 5 roundel

Overview

At Maturity Level 5 (Figure 2.5), not only have design, implementation, and service delivery become routinely fit-for-purpose, the business is now entirely fit-for-purpose from a shareholder’s perspective. The focus is now on optimizing for efficiency and improved economic outcomes, increasing productivity without sacrificing quality, increasing margins, extracting premium prices for premium classes of service or quality, minimizing costs, and optimizing the value of work done through a superior prioritization and triage capability. The goal at ML5 is to be fittest-for-purpose. A strong culture of continuous improvement has emerged, and acts of leadership at all levels contribute to improved performance. The workforce feels empowered to suggest and implement changes. Workers have a sense of ownership over their own processes and a sense of pride in their capabilities and outcomes. There is a culture of seeking forgiveness rather than asking permission, and consequently the organization is able to act and move quickly. Individual units can act with autonomy while remaining aligned with strategy, goals, and objectives. The organization has agility through a service-oriented organizational design. It is readily reconfigured to offer new services and/or classes of service by orchestrating and tailoring existing services using a customer-facing service delivery kanban system. The business is now solidly robust to changing customer expectations and other externalities.

There is extensive process instrumentation. Improvement opportunities are aligned with customer fitness criteria metrics. Improvement driver metrics are formally established. Improvement drivers have achievable targets. Improvement initiatives are predictive, model-driven, and there is a known causation between improvement action and forecast outcome. Significant job satisfaction is now derived from delivering improvements, as delivering customer-requested work within expectations and to the customer’s satisfaction is now routine and is taken for granted.

Economic performance is improving consistently. Process improvement is used as a competitive weapon and an enabler of new services, new classes of service, new markets, and new market segments. Competitors are being outmaneuvered by superior organizational agility, enabling new and better products and services faster than ever.

Culture

Maturity Level 5 is characterized by a “relentless pursuit of perfection.” This is the world of marginal gains, where the organization tries to squeeze the last ounce of efficiency out of its working practices to be the fittest-for-purpose. It aspires to be the best and to maintain that market-leading position. Only unforeseeable events rock the ship. Under stress, everyone maintains their discipline. Stressful circumstances always result in improvement. There is no complacency or arrogance. It is inherently understood that success comes from humility and respect.

Practices

At ML5, all of the Kanban Cadences, including Strategy Review, are fully used. Quantitative data is analyzed extensively. Kanban boards are full-featured and include mechanisms to maximize the liquidity in the system and maintain optimal flow. Improvement suggestions are model driven, backed by quantitative data, and changes are deployed as experiments with instrumentation in place to determine whether a change produces the anticipated improvement. At this level, the organization uses the Fit-for-Purpose Framework and Enterprise Services Planning practices extensively.

Kanban Patterns

Maturity Level 5 is largely characterized by behavior: the organization uses models and quantitative analysis, and it uses feedback mechanisms extensively—with most or all of the Kanban Cadences—perhaps augmented by additional feedback mechanisms for product management and integration of other evolutionary change methods such as Lean Startup, A3 Thinking, Toyota Kata, or Theory of Constraints. Innovative visualization at ML5 tends to focus on advanced risk-management techniques, using simple kanban boards to visualize and manage improvement initiatives, or using additional work item types and capacity allocation for improvement opportunities (sometimes called *kaizen* events).

Across a set of aggregated services, it is possible to visualize fixed or permanently allocated personnel or teams versus floating personnel who can be quickly assigned to assist on any service.

As shown in Figure 2.6, names of permanently assigned, fixed team members are displayed on rows of the board allocated for specific services. At the same time, more generalist, cross-trained personnel are visualized using avatars with their initials. The avatars can be moved from row to row to help where their skills are most needed at any given time.

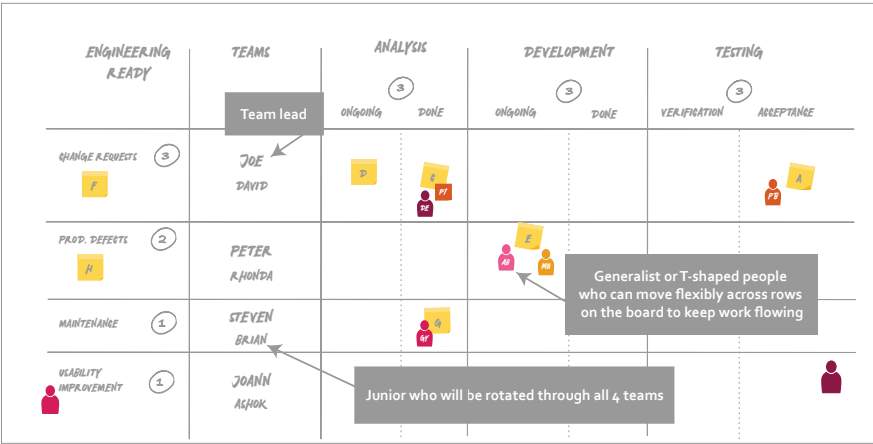


Figure 2.6 Staff liquidity visualization

Outcomes

At ML5, the organization challenges what it does and how it does it and is willing to replace old methods with new ones in a controlled and experimental fashion. Customers and other stakeholders are continually satisfied. The business shakes off unexpected events; only a completely unforeseeable event can rock it from its market-leading position.

Example

Our pizza delivery business is widely viewed as the best in the city, like Zak’s, the fictitious gourmet pizza restaurant in downtown Toronto described in David’s book, with Alexei Zheglov, *Fit for Purpose*. Residents boast about us to visitors, for whom experiencing our dine-in or home-delivered gourmet pizza is a necessary rite of passage. Our pizzas excel in design—we have the best menu; implementation—our dough and crust are legendary and always baked to perfection; and our delivery service is second to none—effective, with polite, well-trained, uniformed riders who ensure our pizza arrives in perfect condition every time.



Maturity Level 6 – Built for Survival



Figure 2.7 The KMM Maturity Level 6 roundel

Overview

- At Maturity Level 6 (described in Figure 2.7), a business can claim that it is truly built for survival. At Level 6, it practices several double-loop learning exercises. The business is capable of asking the following questions: Is the way we do things still competitive? Are new technologies, processes, methods, or means becoming available that we should be investigating or adopting?
- Do we offer the right products and services? And if not, how should we change?
- Are we serving the right markets? And are we capable of serving our chosen markets adequately?
- Who are we as an organization? Is our current identity relevant and appropriate, or do we need to reinvent ourselves?

These are correctly characterized as strategic concerns, and answering these questions is a key part of strategic planning. Although the ability to challenge some of these four areas (using double-loop learning) may occur at shallower maturity levels, a Level 6 organization can challenge all four—how, what, why, and who. A Level 6 organization not only is capable of doing this strategic planning work, but it also exhibits alignment of capability and service provision with that strategy. When the strategy needs to change, the organization quickly reconfigures to align with the changes. This concept of strategy being continually aligned to operational capabilities is referred to as congruent action. Congruent action is leadership that everyone can believe in. A congruent organization is set up for success. Such an organization is extremely robust and adaptable to changing externalities, including disruptive, discontinuous innovation, and hence not only exhibits

longevity but absorbs dramatic changes to its strategy relatively easily without significant impact to economic performance.

A Maturity Level 6 organization exhibits all the behaviors associated with Level 5. In addition, it has a strong strategic planning capability and uses Strategy Reviews to question current market segmentation and its product and service mix, to compare observed capability with strategy, and to define a strategy against which the organization is capable of successfully delivering.

At this level, extensive market instrumentation provides feedback on whether the firm's products and services are viewed as fit-for-purpose. Market segments are oriented around customer purpose. The entire business is service oriented and driven by service delivery. It assesses design, implementation, and service delivery capabilities against expectations in each market segment. The organization is capable of transparently reporting its fitness-for-purpose in each segment. Improvement actions are driven by a desire to amplify a segment or switch it off.

There is a strong sense of identity and an institutionalized understanding of who we are as an organization and how that affects decision making. However, although identity is well understood, the organization is not dogmatically, blindly attached to it. There is a recognized willingness to evolve and move with the times. Senior leaders understand their role as social engineers in defining and managing the identity of the business and its workforce as a social group. Defining and actively managing the culture of the firm is recognized as the main task of senior leaders. Identity management is an organizational capability. Tangible actions to manage the identity of the business and the sociology of the workforce are observable.

Culture

At ML6, there is an almost paranoid awareness that the organization and its business can be disrupted by discontinuous innovation, new technology, new business models, or political or regulatory changes. There is an understanding that the organization must not cling too tightly to a single purpose or to a narrowly defined sense of identity. Leaders move to expand the sense of identity to promote a culture of "strong convictions, loosely held." Survival is the most valued attribute, and it guides decision making.

Practices

The practices at Maturity Level 6 are defined in the Enterprise Services Planning Framework for Digital Transformation and in the Fit-for-Purpose Framework. Most notably, strategy and leadership focus on purpose and identity, and senior leaders focus their attention specifically on culture hacking and defining and communicating the enterprise's purpose.

Outcomes

At this level, lines of business are dropped, and new ones begun. There is innovation and experimentation with new lines of business, and often, a transition from one dominant line of business to another. The history of IBM is particularly illustrative, moving from time-recording machines to mainframe computers, and then later reinventing itself as a professional services company. Today we see IBM feeling its way toward becoming an artificial-intelligence platform company with its Watson technology. The name Watson, a hat tip to its founder, is a clear indication that its leaders see AI as not only the future of the company but as its next core business.

Example

Zak's Gourmet Pie & Crust restaurants have been closed due to the Covid-19 pandemic. Consequently, facing an extinction-level event, owner Zak thinks deeply about the identity and purpose of the business and the core motivation for starting it. He concludes that Zak's exists to deliver exotic gourmet pizzas with the highest quality fresh, local, organic ingredients atop the finest pie with crust thrown from fresh, live fermenting dough. However, he realizes that the delivery model can change.

As many other restaurants around the greater Toronto metropolitan area reinvent themselves as gourmet markets and delicatessens, Zak decides that he simply cannot follow

their lead. However, perhaps they provide him with a new distribution channel. Perhaps he can partner with them to distribute pizza? Zak's reinvents itself, making gourmet pizza kits. Each kit contains the fresh dough and ingredients for a lovely, tasty, home-baked gourmet pizza experience. It isn't "Zak's to go!" rather, it is "Zak's at home!" Zak's switches to supplying his take-home pizza kits to these new markets. They shoot video of the sous chef demonstrating how to throw the dough to make the crust, how to spread the ingredients, and how to set the oven to bake the pizza to perfection. Zak's highly perishable, totally fresh-ingredient pizza kits aren't to be stored; they're to be used within two days of purchase.

With a solid understanding of who they are, why they exist, and what makes them happy and delivers satisfaction from doing business, Zak's Gourmet Pie & Crust successfully pivots and reinvents itself as Canada's favorite premium brand of gourmet, bake-at-home pizza.

