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Kanban for Design and Innovation: Establishing and Improving Upstream

Part II of the KMP Credential, Request Manager Specialization course

Day 2

Version 0.3

Silke Noll

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Kanban for Design and Innovation

Successful Evolutionary Change for your 21 Century Organization

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Power in Simplicity!

Pragmatic, actionable, evidence-based guidance!

Something you can take away and implement next Monday

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Introduction

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Purpose of this course

After attending this course,
you will be able to:

Explain the concept of options and how this thinking helps to maximize value.

Apply techniques and approaches to actively manage incoming work.

Engage stakeholders from different organizational levels and departments in idea generation and decision making through pragmatic approaches.

Establish an Upstream Kanban system that maps to your context of working.

Apply Kanban practices upstream in order to establish a balance between the preparation and execution of options.

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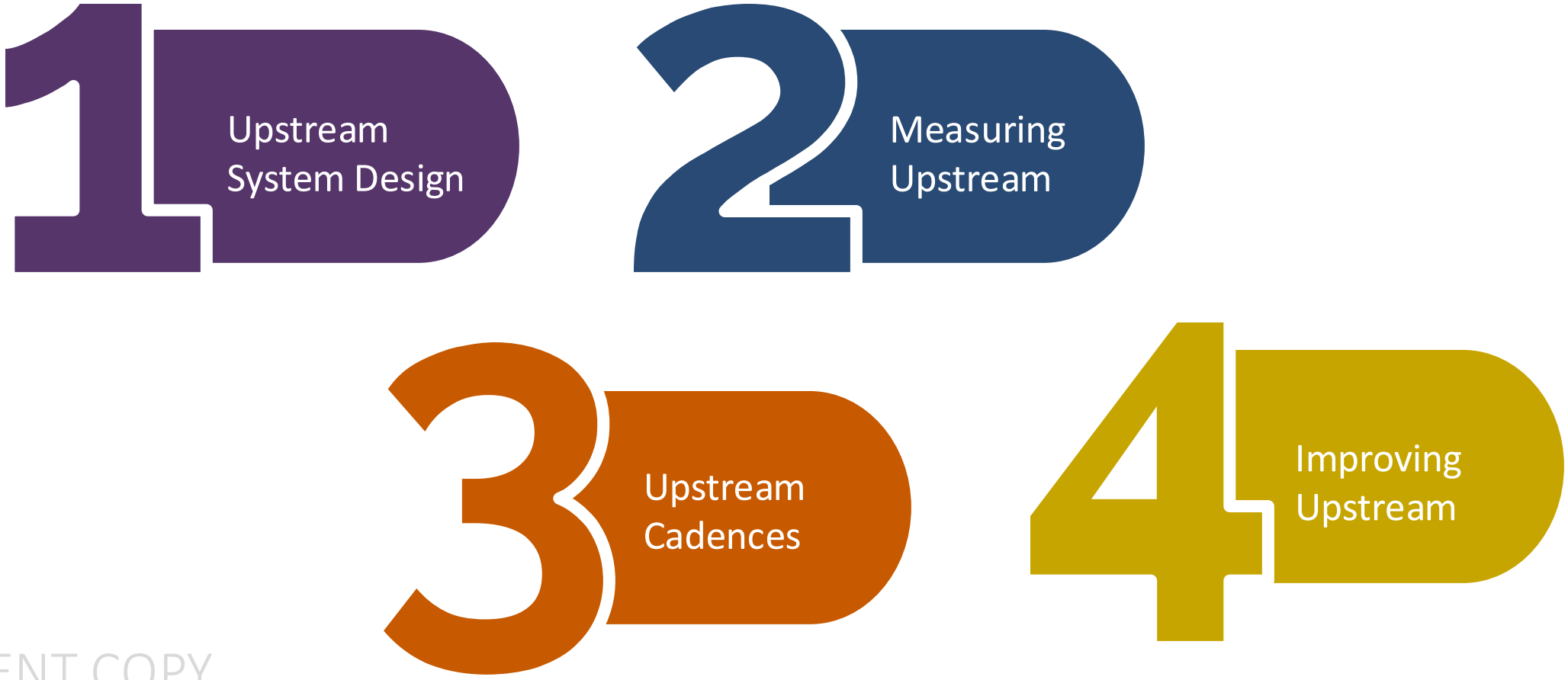
Overview of the Course Modules



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5 min

What is Upstream anyways?

- “Explain what Upstream is in 1 sentence to a 14-year-old”
- “How do you do Upstream?” – list some practices that you already know from KSD class or your professional experience.

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Module 1

Upstream System Design

Designing your initial Upstream Kanban System.

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A Quick Reminder

Upstream represents a flow of information discovery, and in that sense it´s not different from downstream.

> In upstream we are discovering an information and the act of doing that is still a service.

The main difference between upstream and downstream is that upstream allows for discarding your ideas, based on information discovered at each stage.

> The end product of upstream is final “go” or “no go” decision which results in an eventual commitment.

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Modeling the Upstream Workflow

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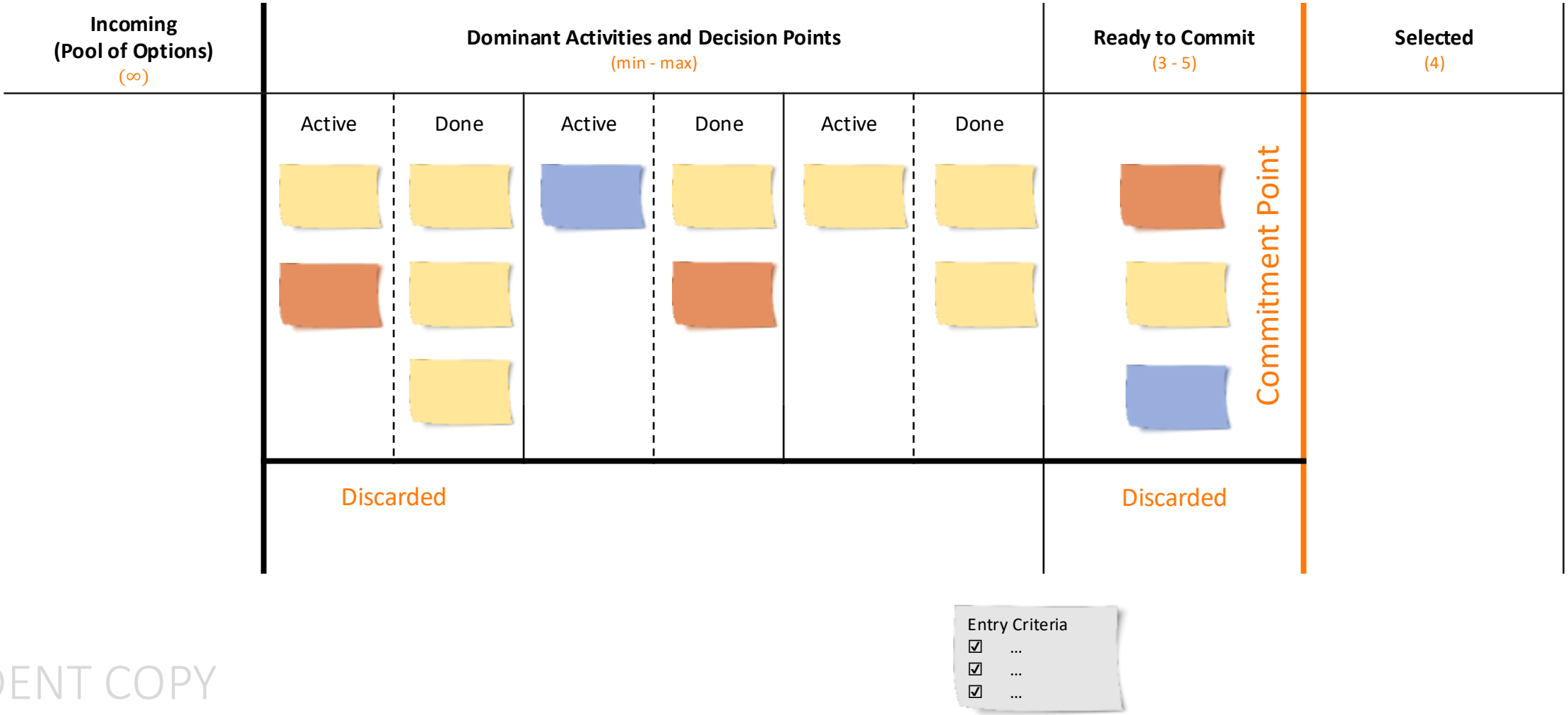
Basic Upstream Modelling Practices



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Model the Upstream Workflow

- The upstream workflow includes the steps through which a request or an idea moves on its way of elaboration, analysis and definition until the point of committing or discarding it.
- Visualize the steps through which a request or idea evolves – dominant activities!
  - Elaboration and clarifications activities (synthesis, analysis)
  - Decision points (approvals)
- Define and visualize system boundaries and commitment point
- Set clear and transparent policies.

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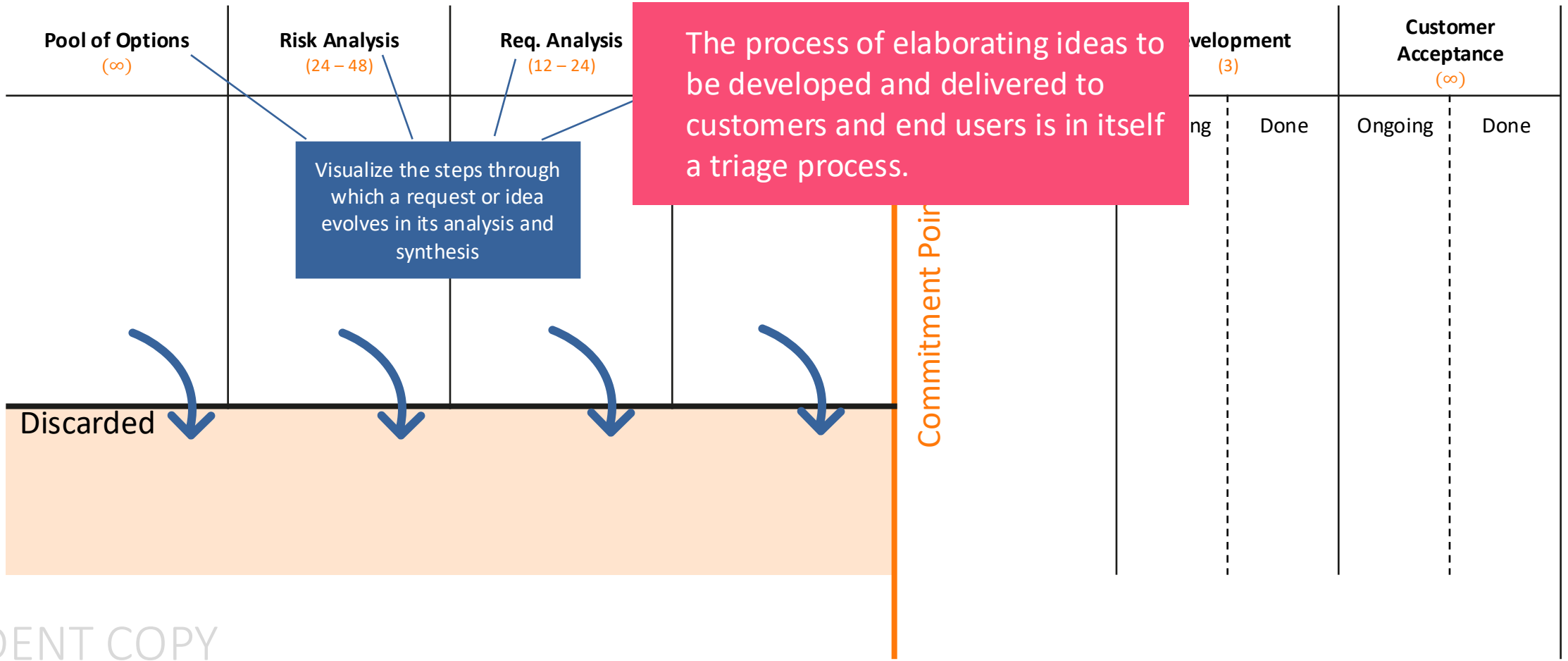

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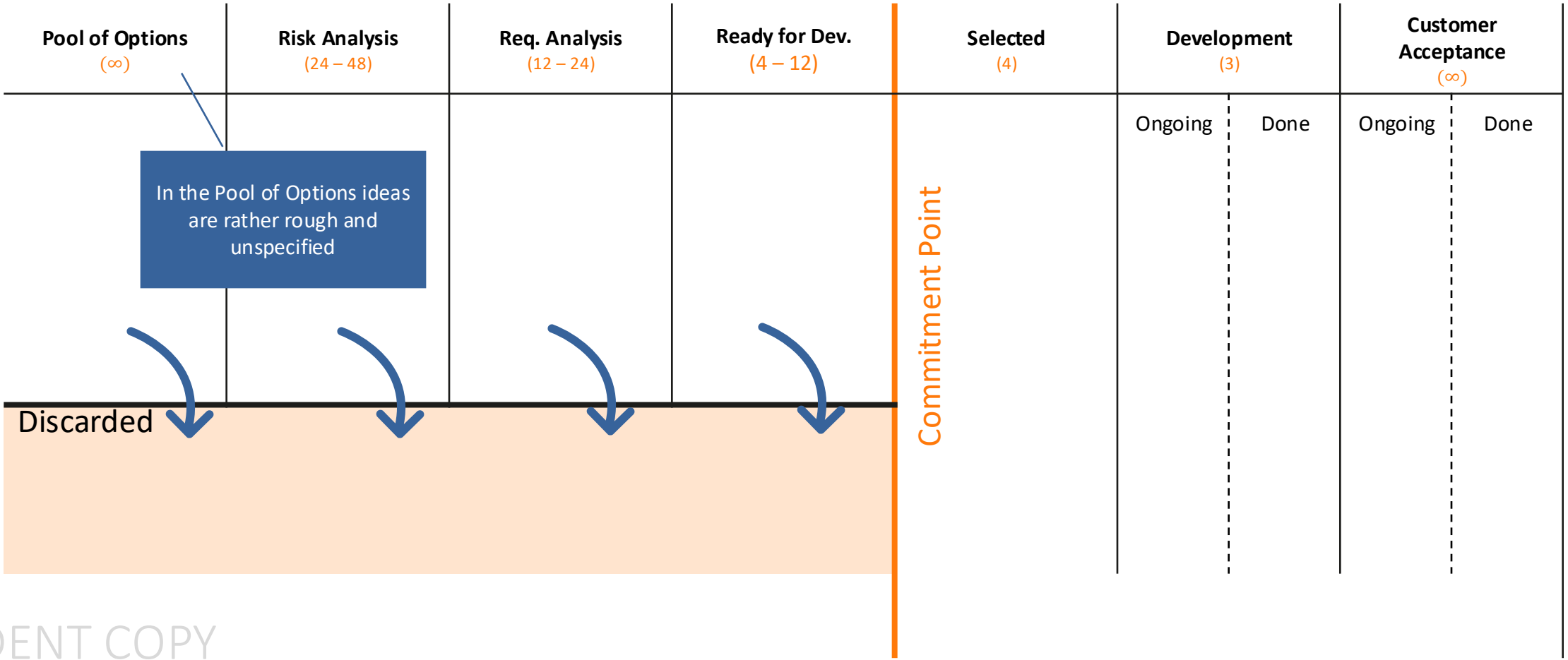

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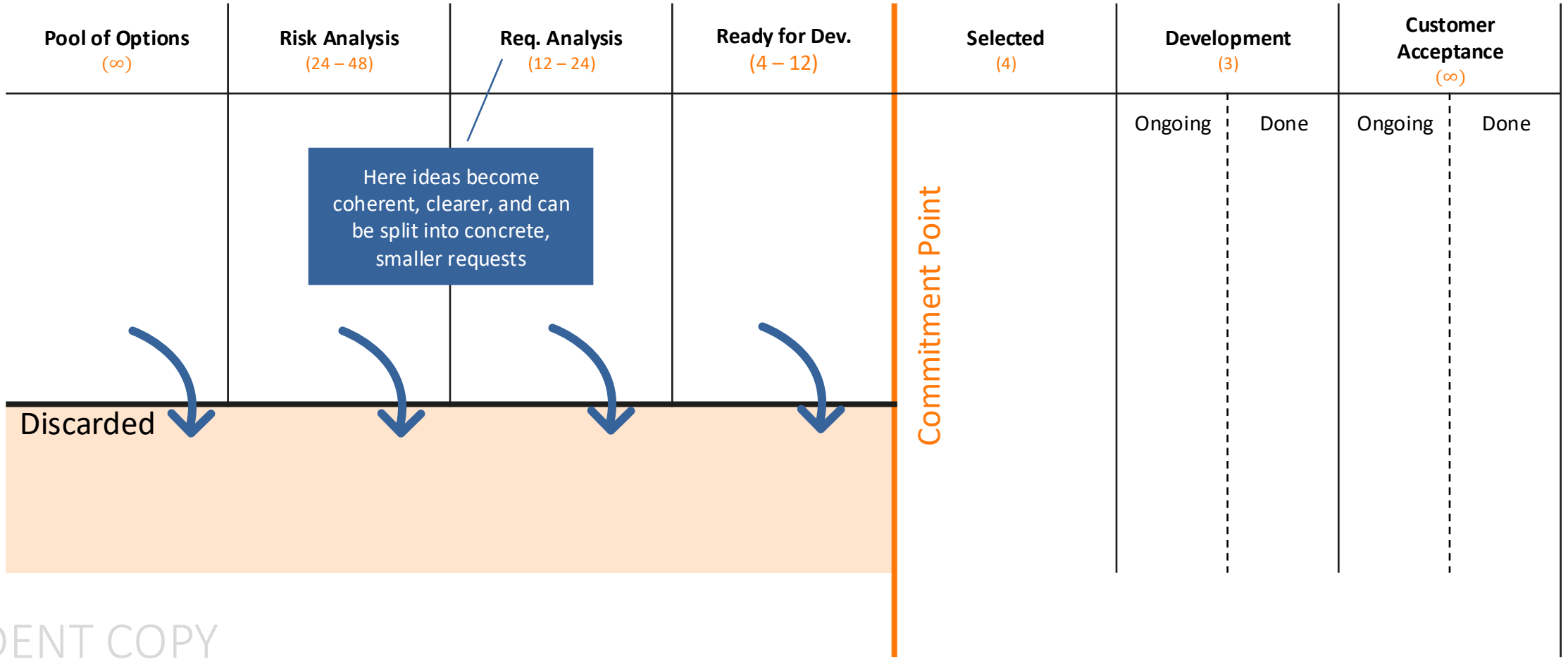

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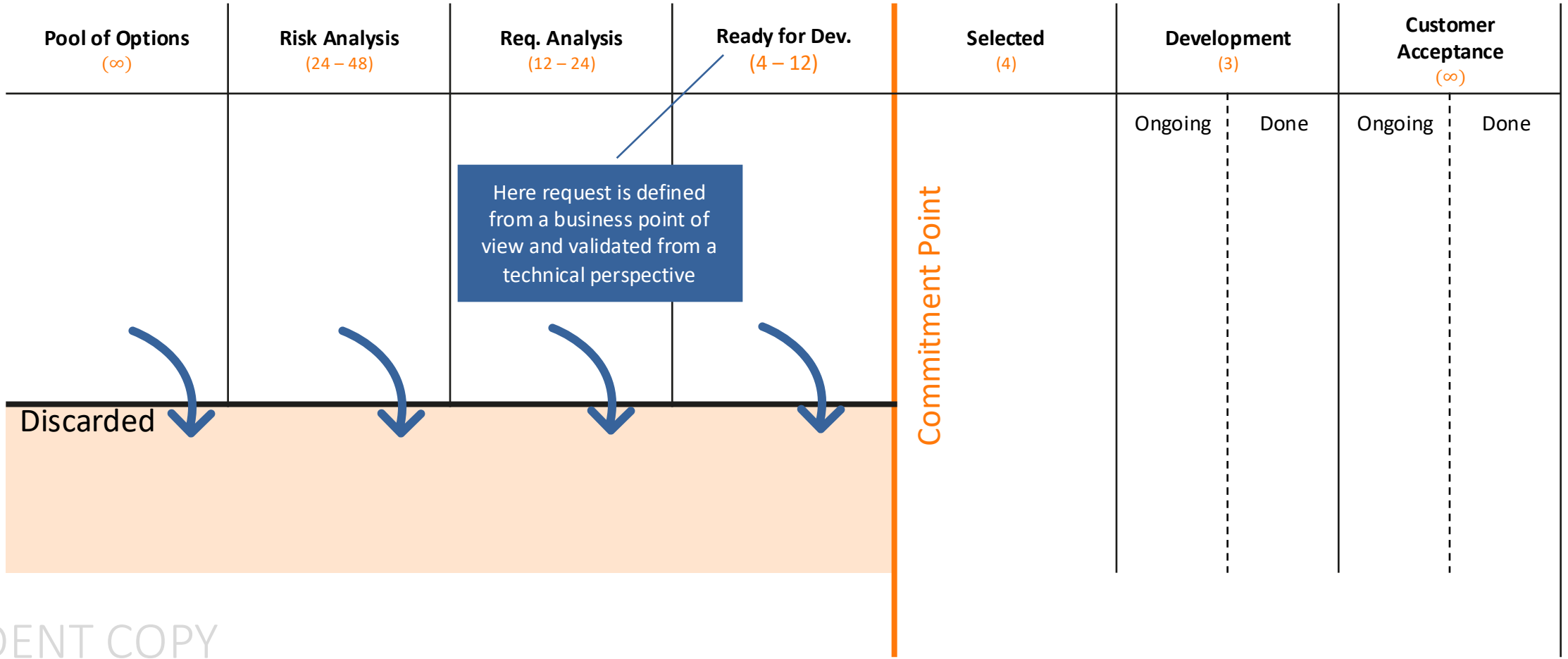

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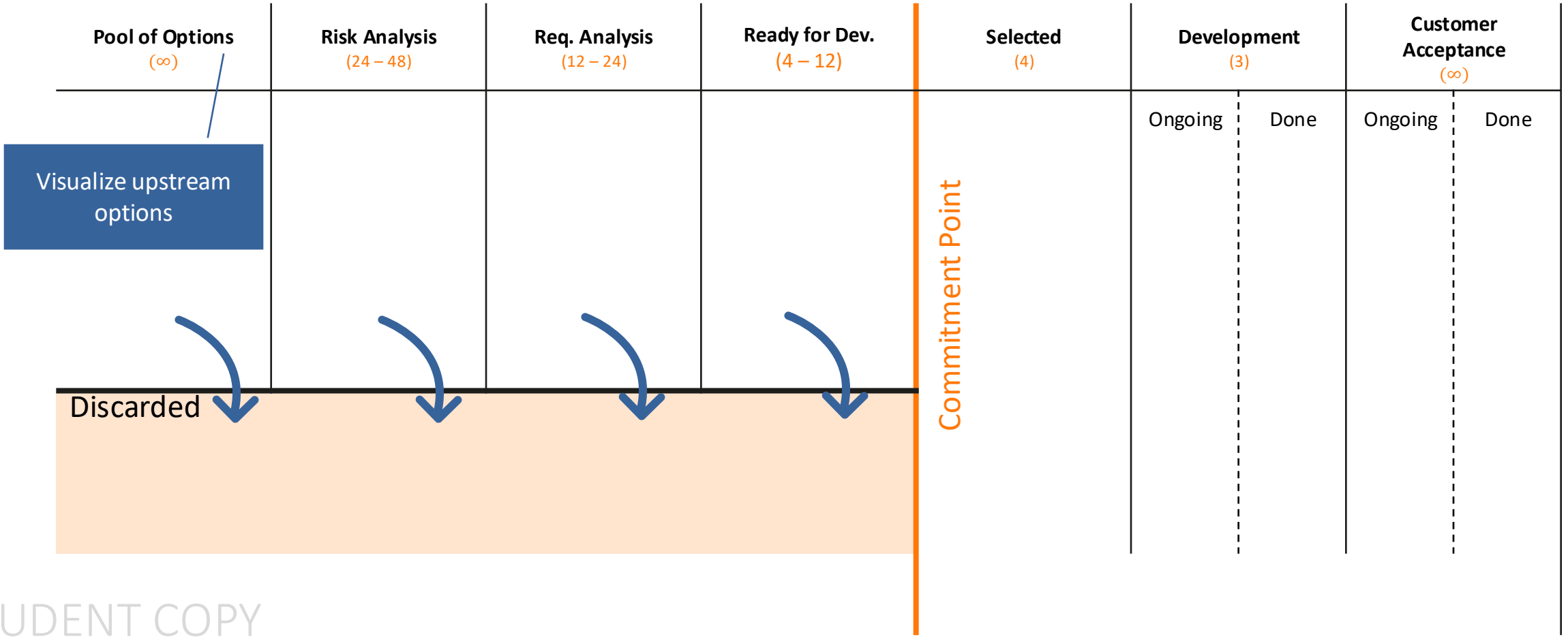

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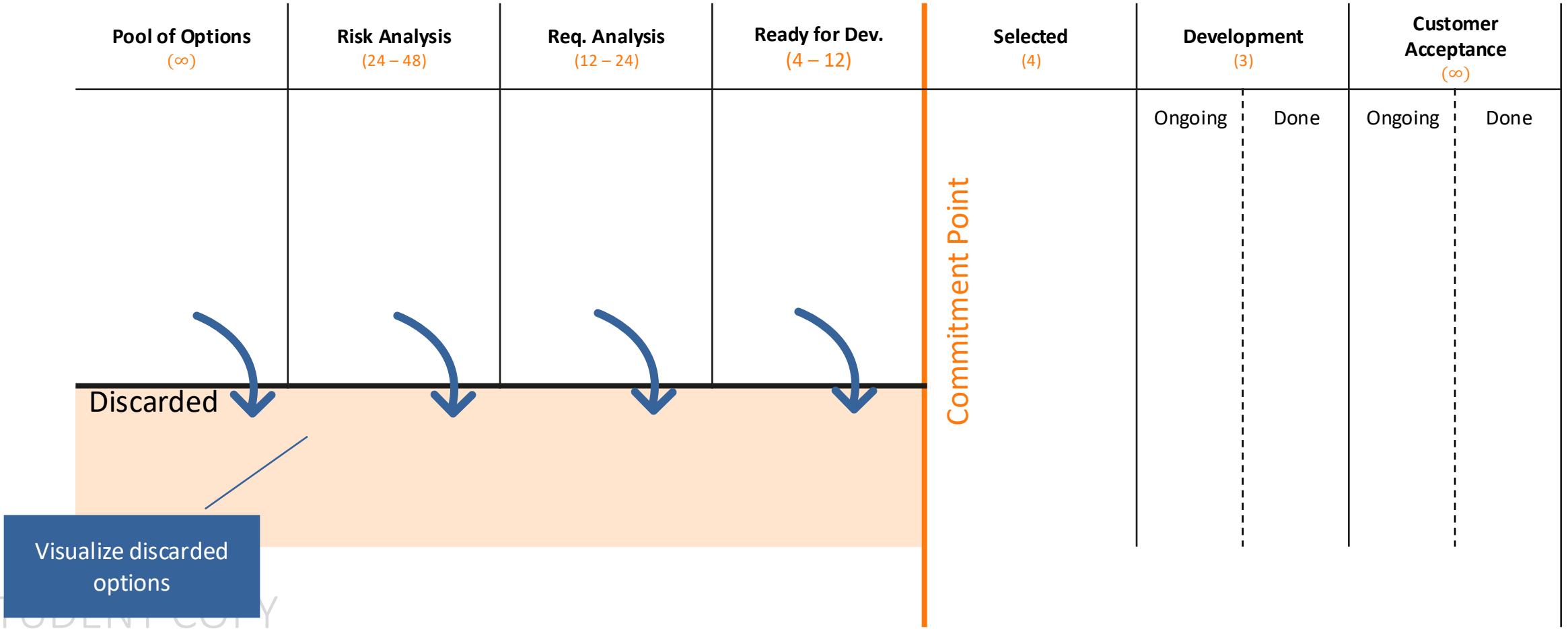

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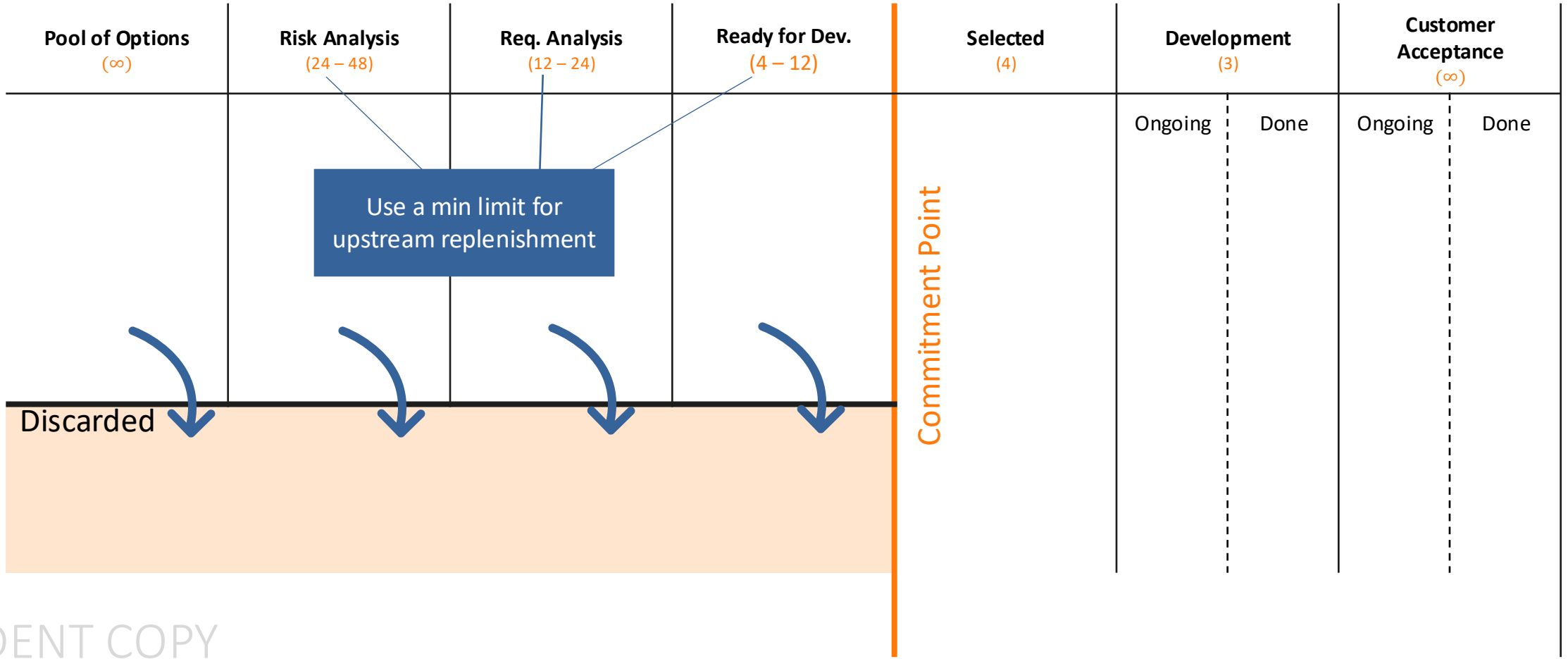

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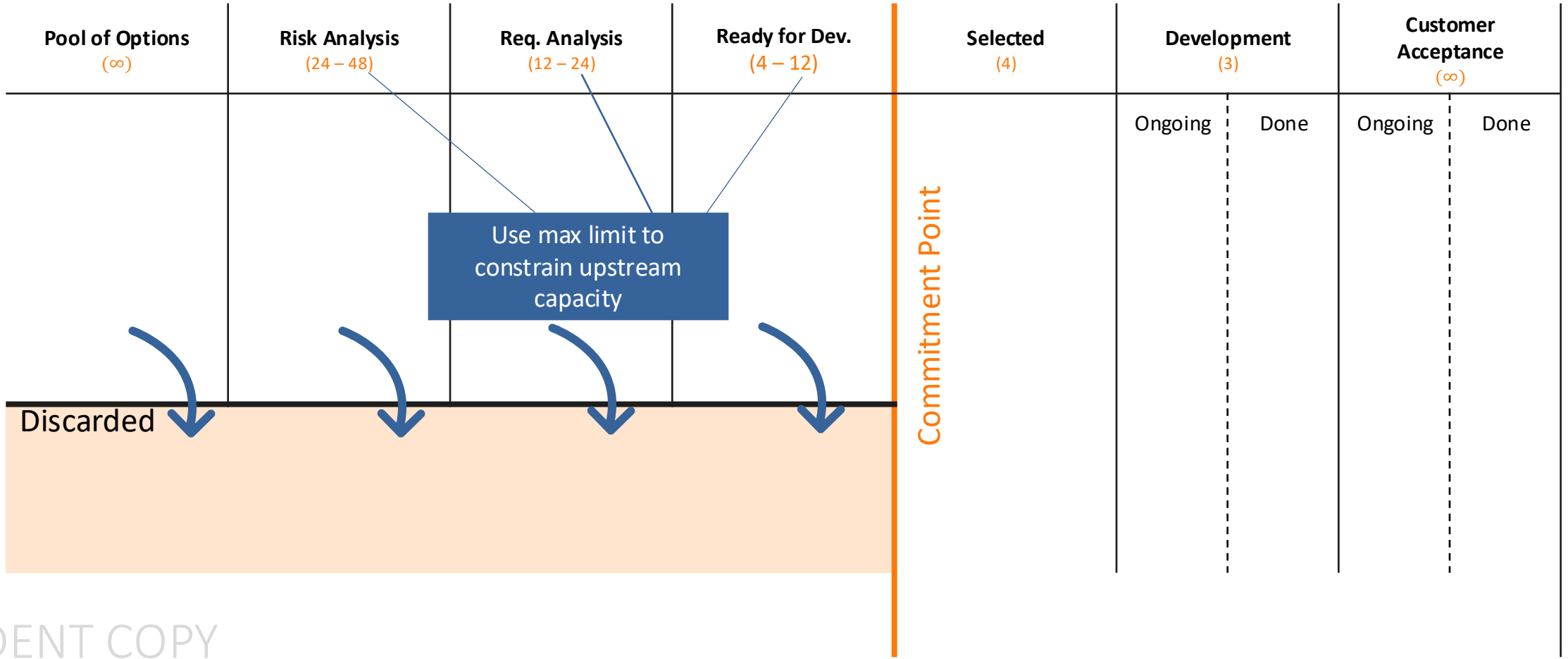

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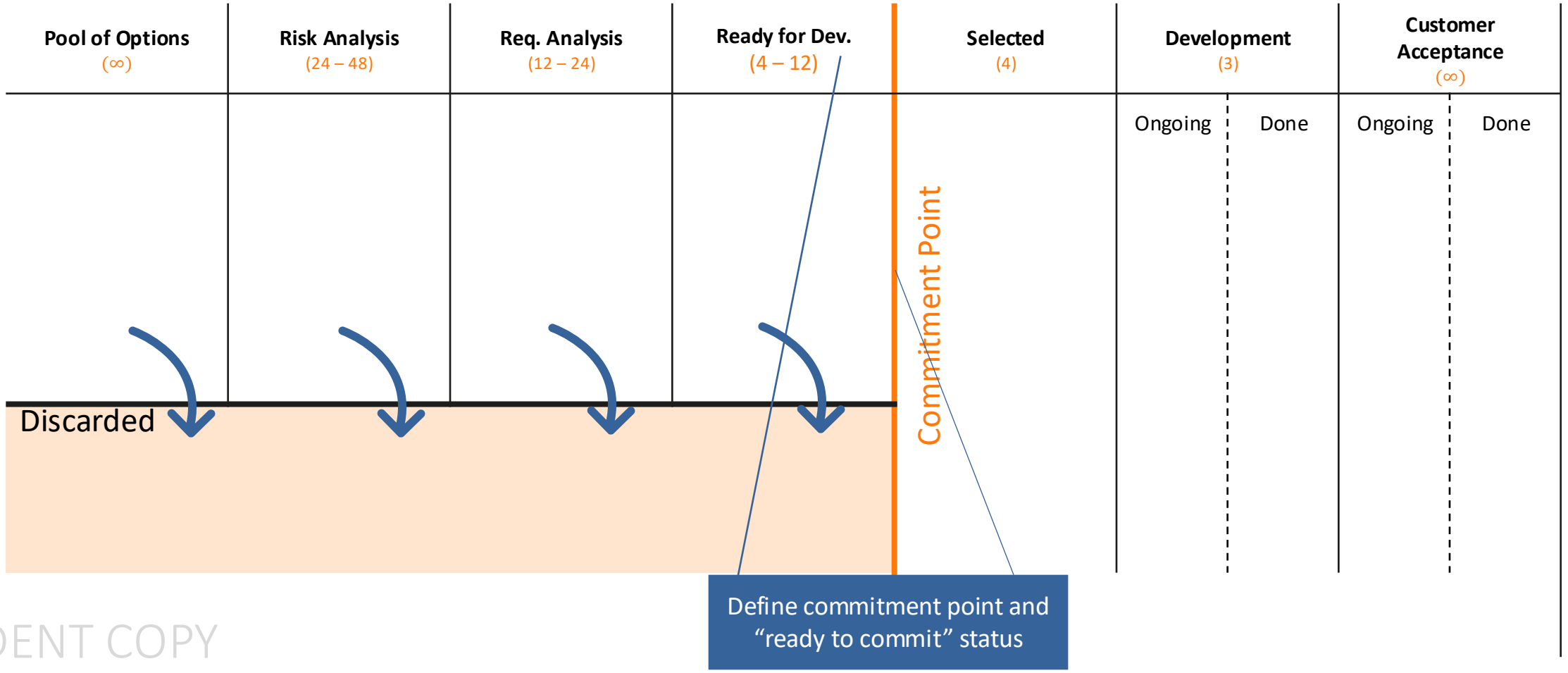

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Other design considerations

- Use a ticket to visualize an idea (option).
- Use avatars to visualize the workload of individuals working upstream.
- If the individuals working upstream also work downstream, extend the per-person WIP limits to include the work items from the upstream kanban board as well as the downstream one.
- Often, discovery and delivery are performed by separate organizations, and in many larger enterprises these functions do not sit together. It may be more natural to have two boards rather than just one.

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First know (see) and understand what's happening prior to your commitment point. Then apply strategies to improve.

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SCIA Case Study

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> “The Discovery Kanban is a sort of triage. It needs to be, because demand will always be much higher than what can be accomplished.”

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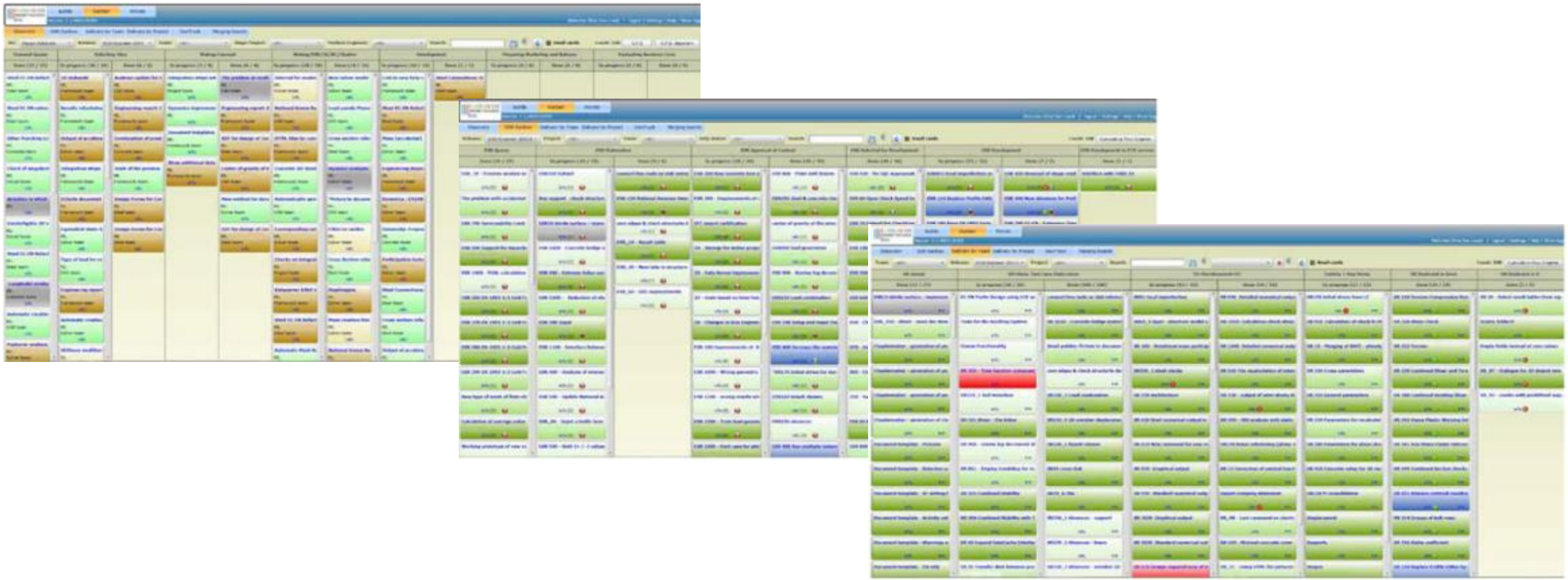
SCIA design



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Optimizely's End-to-End Board

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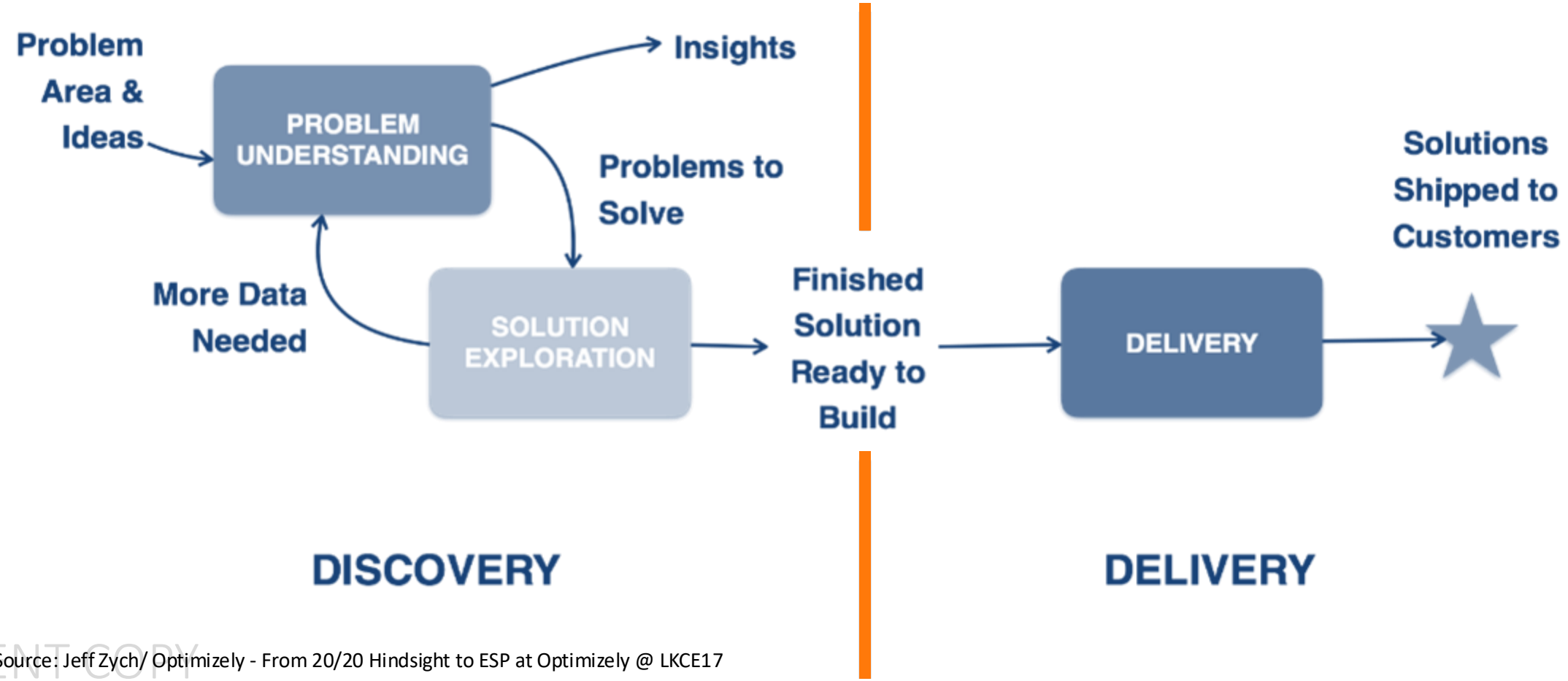
Optimizely's Product Development Process



Source: Jeff Zych/ Optimizely - From 20/20 Hindsight to ESP at Optimizely @ LKCE17

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15 minutes

Exercise 1

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Discussion - Systems' design

- Where would you put dotted blue line on the Optimizely diagram?

SCIA describes their upstream as 3-board solution, whilst Optimizely refers to 2-boards solution.

- Describe how both solutions are either the same or different?
- Relate what you've learned from these examples to your situation? What have you seen or learned that you could use in your implementations?

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DESIGN EXERCISE – PART 1

20 minutes

- Using the knowledge from this module, draft your 1st upstream system design.
- Consider:
  - General design (1-,2-,3-boards solution?)
  - Visualization practices
  - Policies (e.g., definition of ready, re-order policies)
  - Minimum and maximum limits and re-order point
  - Commitment point
  - Discarded items bin
- If your upstream system already exists, use it and think about improvements you could introduce.

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Module 2

Measuring Upstream

Applying appropriate metrics to understand and improve your upstream processes.

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Upstream Metrics

What should you measure?

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Turbulent Flow

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Causes of a Turbulent Flow

Failure Demand

- Delivering an item results in re-work or change request.
- Defects.
- UAT rework.

Disruptive Demand

- Non-value adding estimation requests.
- Expediting items just to speed them up (with no regards to policies).

Speculative Demand

- Everything is urgent and important.
- Poorly defined requirements.

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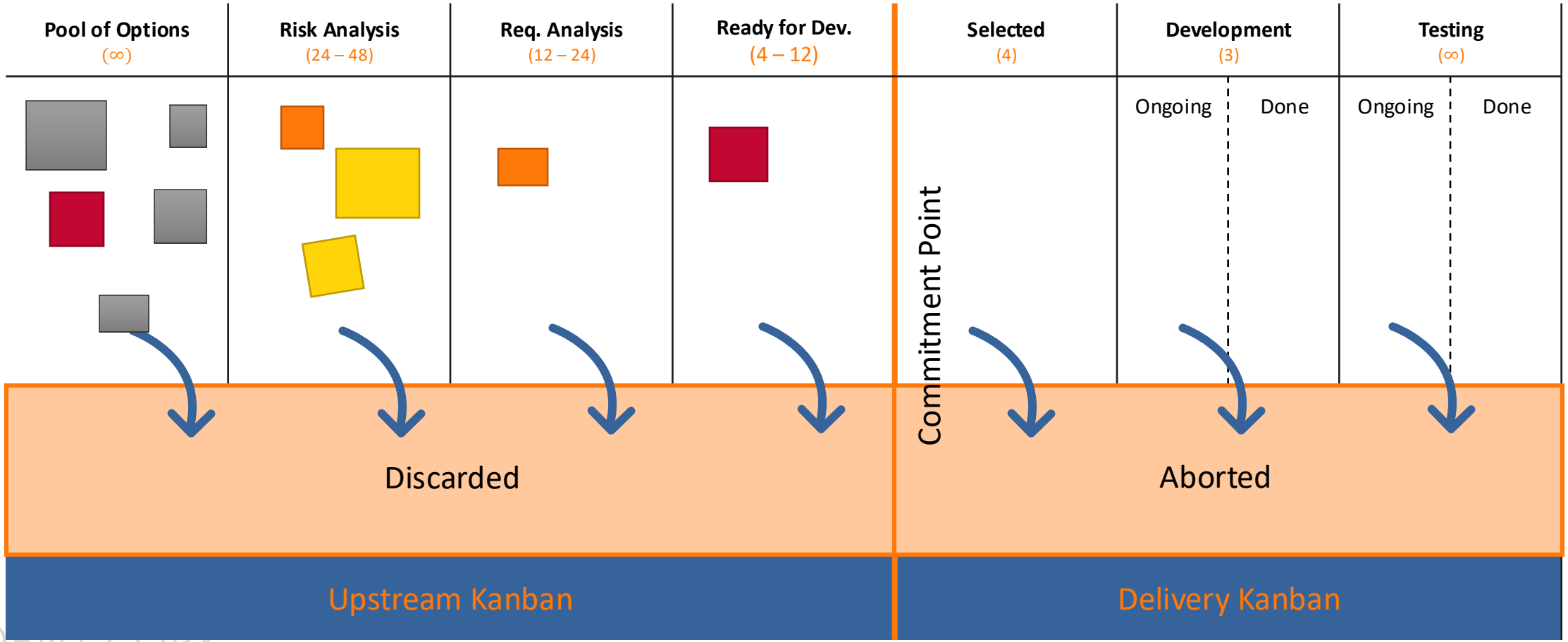
Visualize Turbulent Flow



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Analyze Root Causes

Collect information, which will enable understanding of the causes of turbulent flow so that they can be appropriately addressed:

- Which of the items resulted from failure, disruptive or speculative demand?
- Which failure demand resulted from earlier speculative demand?
- Did you have to expedite them in consequence?
- Report the results of analysis to Service Request Review.
- Discuss improvements to avoid turbulent flow.

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What can you measure to support analysis?

Rate of:

- Change requests as a result of turbulent flow
- Defects
- UAT rework
- Expedite items
- Estimation work

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15 min

Exercise 2 - Turbulent Flow

- Do you observe at your work any causes of turbulent flow? Which of the items resulted from failure, disruptive or speculative demand?
- Did you have to expedite them in consequence?
- What improvements could you introduce to minimize or cancel this demand?

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Discarded and Aborted work

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Discarded Work

Collect information, which will allow for reflection on the discarded options:

- Create a space to the left of commitment point
- Actively display recently discarded tickets
- Before removing the cards, review and reflect on what you have learned from the experience (did any of them could be a better choice? Should it be discarded?, etc.)

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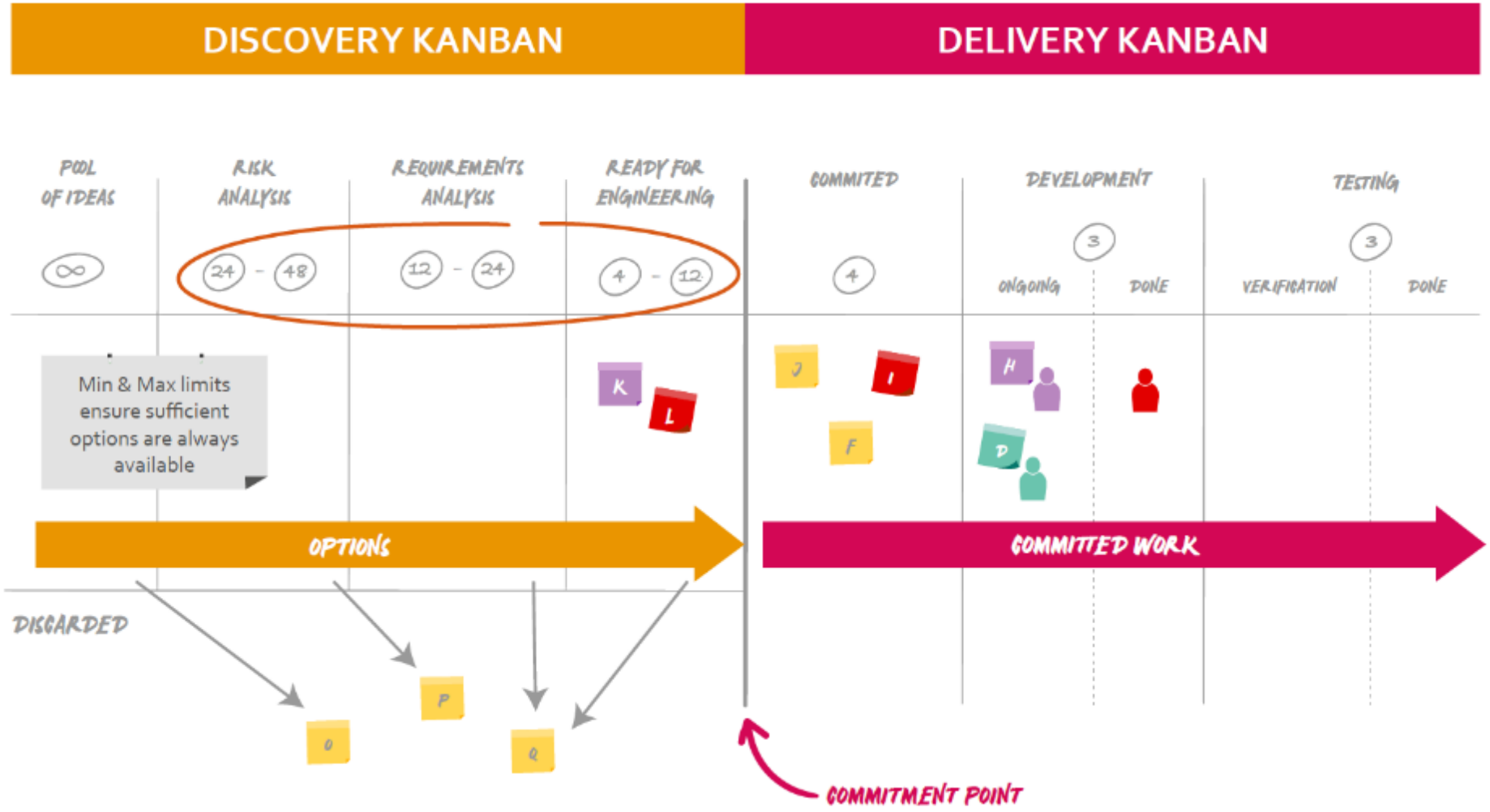
Visualize Discarded Work



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What is aborted work?

Aborted work is work for which all of the following are true:

- It was committed, and a customer indicated they wished to take delivery.
- The delivery organization indicated that they were ready and committed to carrying out the work and delivering the finished work product.
- The work was started.
- For some reason, the work was aborted before completion.

Such work wastes capacity within the system and diminishes delivery capability. It is desirable to avoid starting work that does not make it to completion.

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> Aborted work (which was previously committed) is a waste.
>
> Work, which was faulty but delivered is even greater waste.

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Visualize Aborted Work

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Analyze Aborted Work

Collect information, which will enable understanding of the causes for aborting or discarding work, so that they can be appropriately addressed:

- Use graphs (e.g., pie charts, bar charts, Pareto diagrams) or spreadsheets to visualize the amount of aborted demand and the reasons the work was aborted.
- What were the root causes for aborting work item?
- What portion of aborted work resulted from turbulent flow?
- Plot on graphs the quantitative summary of the analysis.
- Report the results of analysis at the Replenishment Meeting (optionally SDR, Risk Review and/or Operations Review).
- Discuss improvements to avoid turbulent flow.

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15 min

Exercise 3 – Discarded and aborted work

- Trace back to the Practice Map and mark down the practices talking about discarding and aborting items.
- What maturity level are they?

- What can you do at the maturity level you are now?
- What value would that bring to your organization? How could you use this knowledge?

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10 minutes

DESIGN EXERCISE – PART 2

- Using the knowledge from this module, add turbulent flow and discarded items elements to your upstream system design.
- Consider:
  - Type of turbulent flow you observe
  - How to visualize it
  - How to measure it
  - Policies for turbulent flow
  - Visualization and management of discarded items
  - Establishing a healthy range for discarded items

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Module 3

Upstream Cadences

Designing and implementing effective feedback loops to manage operations and drive improvements.

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Emerging Roles

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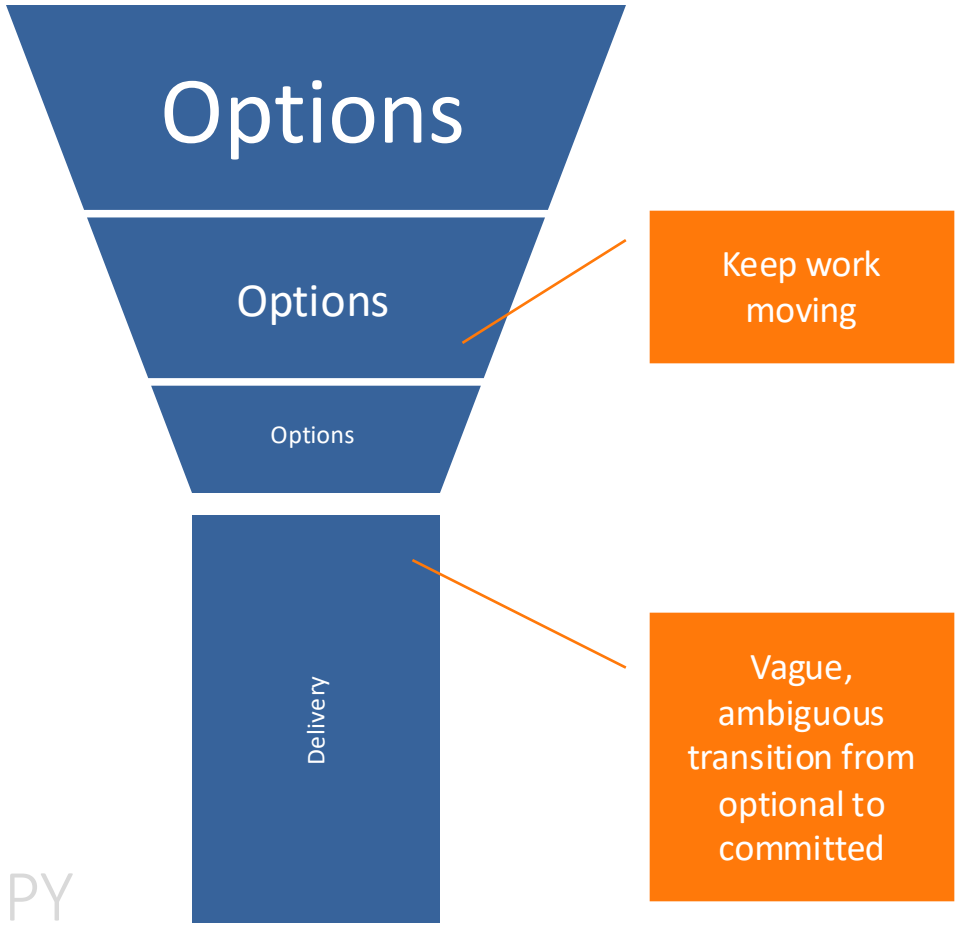
Maturity level 2: Flow Manager Role



- Flow Manager
  - Manages flow
  - Doesn´t distinguish upstream from downstream
  - Focuses on keeping things moving

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Typical functions of a Flow Manager

- Create the consciousness that the service team is delivering a service to identified customers.
- Ensure that flow metrics are collected.
- Facilitate the workflow Kanban Meeting.
- Facilitate the understanding of customer requests.
- Facilitate the resolution of blockers, rework, and aging WIP–related issues that are escalated from the service team.

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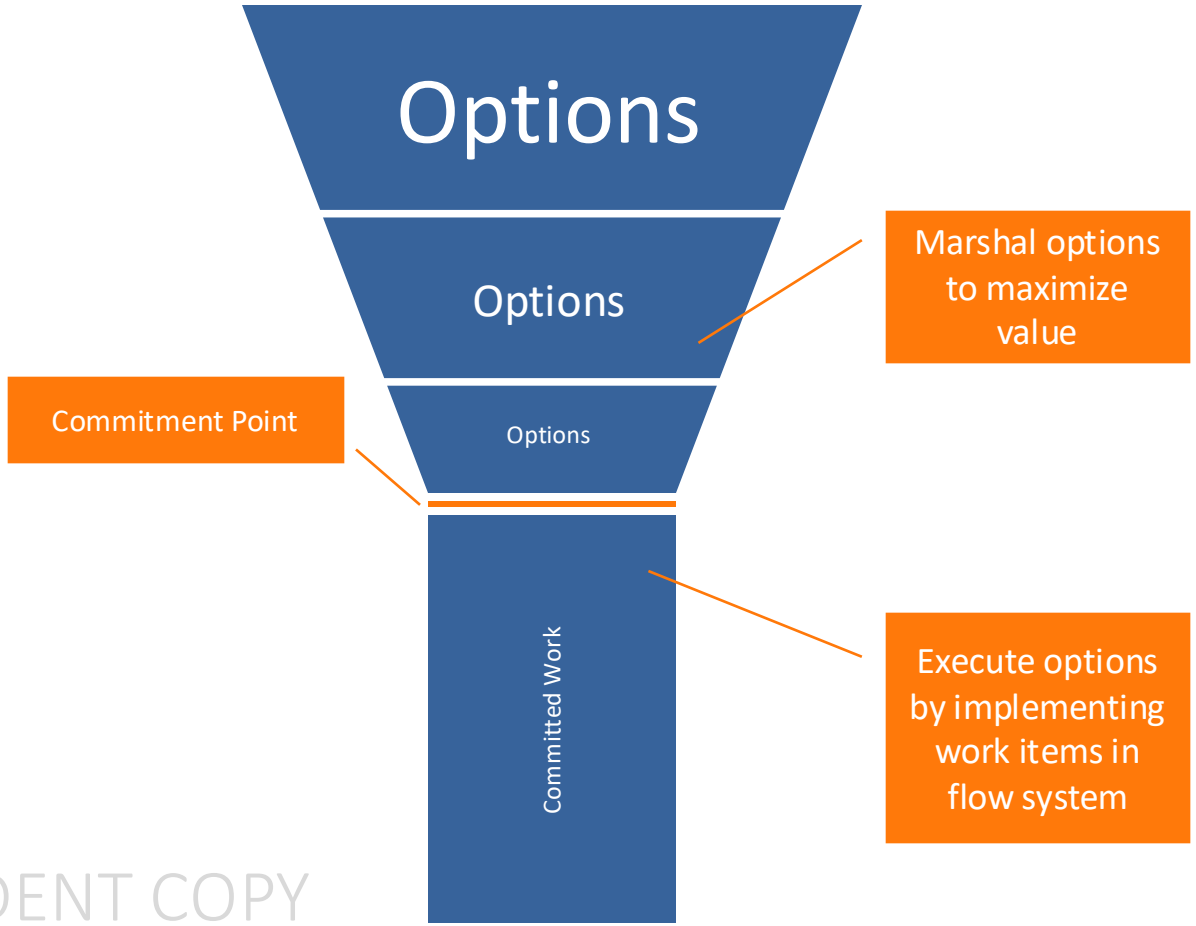
Maturity Level 3+ : SRM & SDM roles



- Service Request Manager (SRM)
  - Manages flow of options
  - upstream
- Service Delivery Manager (SDM)
  - Manages flow of committed work
  - downstream

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Typical functions of SRM

- Develop an understanding of customers' needs.
- Define policies behind work items sequencing.
- Manage upstream flow of work.
- Facilitate, select and order work item at the Replenishment Meeting.
- Ensure that decisions are aligned with strategic objectives.
- Own discard and abandonment policies.
- Own risk assessment framework.
- Play the role of flow and risk manager for upstream.

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Exercise 4 – Roles

15 min

- Does the role of Flow Manager or Service Request Manager (SRM) exist in your organization today?
- If not, would it be easier to introduce them or stick with current roles, responsibilities & job titles?
- Who would play the Flow Manager or SRM role?
- What is their current title? Which responsibilities and what policy ownership do you envisage for them?

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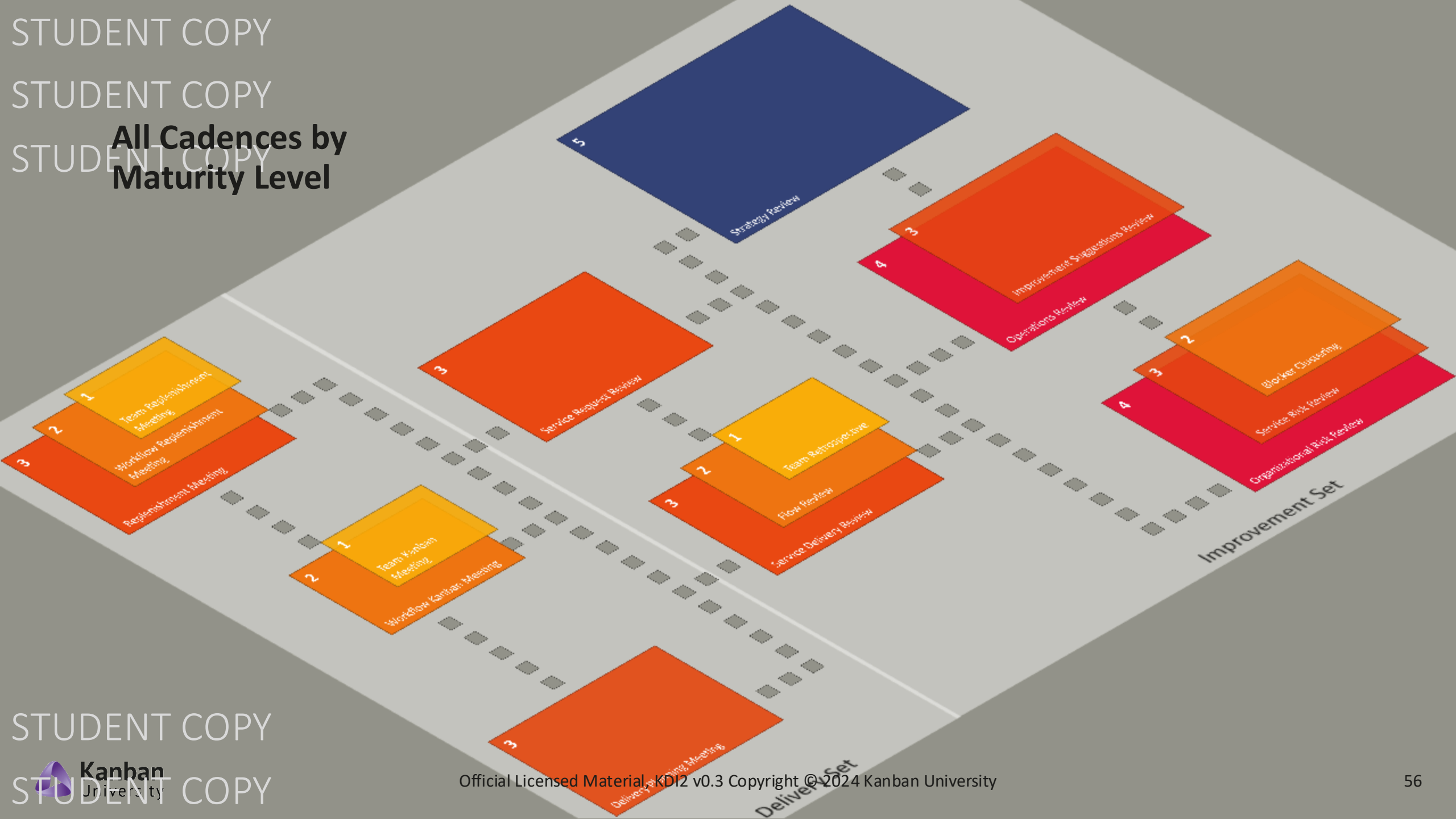
All Cadences by Maturity Level



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Upstream Feedback Mechanism

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Maturity Level 2 Cadences

Developing the skills to manage basic feedback information about the process of options marshalling. Visualize information on the Kanban boards and basic metrics related to fulfilling customer requests.

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Upstream Cadences at ML 2

Cadence	Purpose	Supersedes	
Workflow Replenishment Meeting	Allow the service team(s) to select work requests and refill the Next-to-Start column so that they do not run out of work for the next period.	ML 1	Internal Team Replenishment Meeting
Kanban Meeting	Involve the service teams in a collaborative conversation about the status of the work, queues between stages of the workflow and problems that affect the flow of work.	ML 1	Team Kanban Meeting

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Workflow Replenishment Meeting

2

Allow the service team(s) to select work requests and refill the Next-to-Start column so that they do not run out of work for the next period.

Now possibly considers the work of multiple teams involved in the workflow.

- Observations resulting in changes to behavior or policies at Replenishment Meetings
- Policy changes / portfolio changes

- Decisions regarding what to pull
- System changes (to Kanban Meeting)

Leads or representatives of the teams involved in the workflow

Make sure the requested work is clearly defined.

Consider technical aspects and dependencies between service teams

Weekly,
see arrival rate of info

20 - 30 mins

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Kanban Meeting

2

Involve the teams in a collaborative conversation about the status of the work, queues between stages of the options workflow and problems that affect the flow of work.

Supports cross-team collaboration.

- Commitments
- Decisions about new initiatives and capacity allocation
- Policy changes

- Shared understanding of how to best to flow current work
- Improvement suggestions

SRM, immediate group or team doing the work (4-50 people)

Scope: End-to-end workflow of options

The identified issues are resolved after the meeting by team members with relevant knowledge and skills.

Weekly, depending on coordination cost

10-20 mins

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Format of the Kanban Meeting

- The board shows the state of work and whether it is actively being worked on, is queuing or is blocked or waiting for some other reason.
- “Walk the board” iterating across the tickets from right (most close to completion) to left (most recently started).
- The facilitator may solicit a status update on a ticket or simply ask if there is any additional information that is not on the board and may not be known to the team.
- More mature organizations may only discuss blocked items, and not discuss every ticket on the board.
- There will be a discussion of pullable tickets in “done” queues. Which ticket should be pulled next and by whom?

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Maturity Level 3 Cadences

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Cadences at ML 3

Cadence	Purpose	Supersedes	
Replenishment Meeting	To decide together with the Delivery Team, which work requests will be selected for the next period.	ML 1	Team Replenishment Meeting
		ML 2	Workflow Replenishment Meeting
Service Request Review	To review options and decide which ones to implement now, later or not at all.	none	
Service Delivery Review	Examine and improve the effectiveness of the selected service.	ML 1	Team Retrospective
		ML 2	Flow Review
Service Risk Review	To understand and respond to risks to effective delivery of product and services.	ML 2	Blockers Clustering
Blocker Clustering	Study the main reasons for the blockers and their impact in terms of lead time. Forms the basis for understanding and mitigating risks.		

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Emerges at ML2, but is not required at ML2 to achieve it

Blocker Clustering

3T

Study the main reasons for the blockers and their impact in terms of lead time.
Forms the basis for understanding and mitigating risks.

- Collected blocker tickets with start and end dates as well as blocker reasons

- Reflections on the outcome of this analysis.
- Feedback and decisions to the service team and immediate manager

Team representatives and management

Categorize per blockage reason.
For each category of blockers, analyze the range of time it takes to resolve the issues.
Define actions to improve flow.

Monthly

1 hour

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Blocker Clustering

Do you gather data on blockers today?

- Collect all blockers (description and ideally blocked time) over a period of time.
- Cluster them by source / cause for the blockers.
- Then analyze:
  - Identify Risks
  - Identify Likelihood & Impact
  - Root Cause Analysis
  - Reduction & Mitigation actions

http://www.klausleopold.com/2013/09/blocker-clusters-problems-are-not.html

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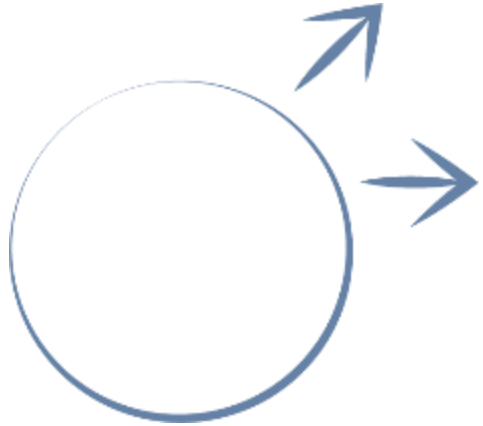
Types of blocked items

Blocked with an issue **internal to our system** (and within our political control)

Blocked due to an issue **outside our system but within our firm** (requires collaboration and possibly political capital to resolve)

Blocked due to an issue **external to our firm**, typically with a vendor, regulator, customer, or perhaps a political issue such as a forthcoming election



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Replenishment Meeting

3

To decide together with the customer and business stakeholders which work requests will be selected for the next period.

Involving commitments from both the customer and the delivery team(s) – synchronous and symmetric commitment

- Available requests meeting selection criteria
- Prepared data and information such as service-related data

- Customer commitment that they want the requested items, team commitment to deliver within expectations
- Observations to the SDR for further system analysis

SRM, SDM, customer and business stakeholders, service delivery representatives

Discuss what (combination of) requests can be selected for delivery

Pull selected items. Document used criteria / additional considerations.

Typically, once to 4 times a month

30min to 1 hr.

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Synchronous and asynchronous commitment

Synchronous commitment

- Both parties (upstream and downstream)
- One point in time (e.g., replenishment meeting)
- Common agreement (handshake)

Asynchronous commitment

- Both parties (upstream and downstream)
- Different points in time
- Common agreement but no handshake (agreement based on policies)

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5 minutes

Exercise 5: Commitment-discussion

- Do we prefer one over another?
- What are the benefits of having synchronous or asynchronous commitment?
- Is synchronous commitment always possible?

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Service Request Review

3

Review options (improvements, suggestions, ideas etc.) arriving to the Ideas pool and decide which ones to implement now, later or not at all. Replenish Discovery Kanban board.

Allows for options triage and effective decision making (invest to the next stage or discard).

- Newly submitted suggestion tickets
- Discovery Kanban Board and pool of ideas

- Decisions how to deal with suggested improvements
- Discovery board replenishment

SRM and Business representatives (Product Owner, Product Manager, Business Analysts – if different than SRM)

Examine new options tickets
Apply triage to the new options
Select ideas to replenish Discovery Kanban board

Depending on the system, at least once a month

1 hr

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Service Delivery Review

3

Examine and improve the effectiveness of the selected service.

Now also takes an external customer perspective on the service.

- Prepared progress and data from Kanban Meeting and tracking tool
- Decisions or actions from Risk Review / Operational Review or similar

- Defined improvement actions to be communicated and executed
- Findings will be reported at the Operations Review.

SDM, SRM, delivery team represent-tatives, optionally customers & other external stakeholder

Compare current capabilities against customer expectations
Analyze shortfalls of SLE's
Discuss options for better balancing demand and capabilities and hedging risks

Typically twice a month

30 min

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Service Risk Review

3

Understand and respond to risks to effective delivery of product and services.

Connects the risks found in options discovery to manage and improve process.

- The status of the issues and risks from previous Service Delivery Review, Service Request Review and Delivery Planning Meetings.
- The list of potential problems to be discussed.
- Triage and risk assessment policies, risk taxonomies models

- Categorize the identified risks.
- Enable changes in options selection.
- Analyze the likelihood and impact of the risks for meeting customer expectations.
- Define appropriate actions to mitigate the identified risks.

SRM, Business representatives, SDM or service delivery representatives

Analyze risk assessment policies and dimensions
Analyze triage policies
Analyze and categorize identified risks.
Define actions possibly affecting policies

Monthly

1-2 hours

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DESIGN EXERCISE – PART 3

15 minutes

- Using the knowledge from this module, add roles and feedback mechanism to your upstream design.
- Consider:
  - The roles you would need to introduce
  - The purpose of your current cadences
  - Which feedback mechanisms operate effectively already
  - The cadences which could be improved
  - The cadences which are missing and would bring the value to the organization

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Module 4

Improving Upstream

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Understanding Optionality

Real Options

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What are Real Options?

- Real Options are **alternatives** or **choices** that may be available for the business when appraising work items.
- They embody flexibility in the development of work and represent a form of **insurance** or a means to take **advantage** of a favorable situation.
- Real options are "**actual options**" – actual choices a business can make in relation to investment opportunities.

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Origins – finance management

- Real Options support making investment decisions, when NPV for current projects is unfavorable.

- Real Options for investment projects:
  - Abandon
  - Delay
  - Expand
  - Re-deploy

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> There is explicit recognition of choices and a decision either to discard a choice or to pursue it by investing further.

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Real Options in Upstream Kanban

INVEST

SHELVE

DISCARD

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Real Options - comparison

INVEST

- Analysis of the work item indicates favourable outcomes.
- Low level of uncertainty – we know this item should be considered for investment above all.
- Can also transform into the option to expand, if the conditions turn out to be more favourable than expected.

SHELVE

- Delays taking the work item until a later date.
- Applies to the high uncertainty in returns or missing information about the product.
- Can be turned into “invest” option, when economic conditions are favourable.
- Can be discarded, when economic conditions remain unfavourable.

DISCARD

- Analysis of the work item indicates unfavourable outcomes.
- Low level of uncertainty – we know this item should not be considered for investment.
- Cost incurred needs to be considered a sunk cost.
- Although this particular item is discarded, the results of analysis may be re-used (re-deployed) in another project.

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> In the presence of real options, greater variety of possibilities and ideas is beneficial.

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> Time spent on managing options (even if they are discarded) is an insurance cost.

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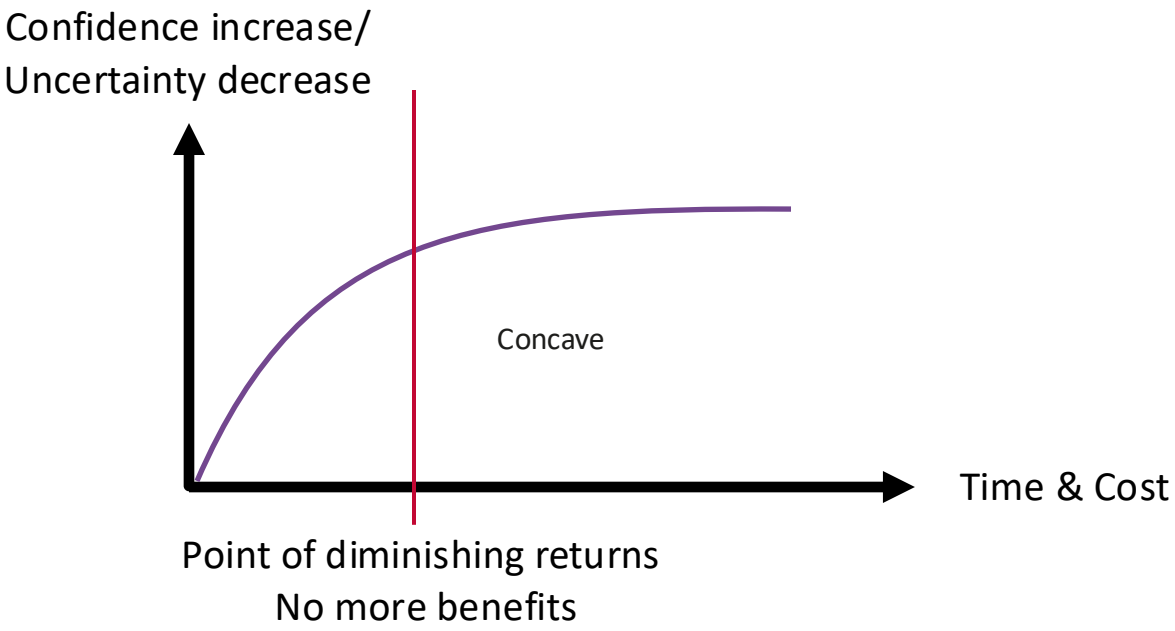
Managing options “in progress”



- What shape is your line?
- How many days have passed since you collected new information?
- Did you collect any new information in the previous cycle?

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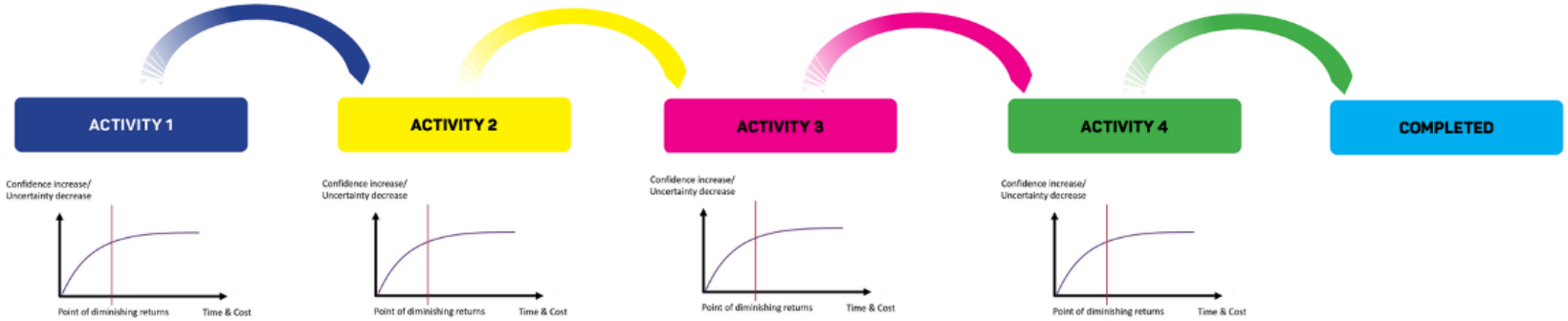
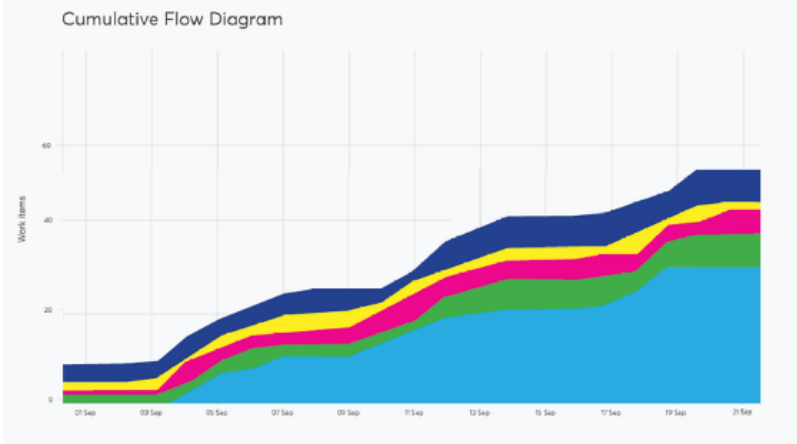
Managing options “in progress”





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> Recognize that you would need to invest more (time, money, or resources) when the uncertainty is high, and much less when the uncertainty is low.

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Triage

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Triage – Borrowed from Medical Profession

- A practice of assessing and classifying patients into categories for priorities of attention
  - Beyond help and unlikely to survive even given immediate treatment
  - Likely to live only if given immediate treatment
  - Survive without immediate treatment

- Initially adopted into software development for classifying defects during the stabilization phase of a traditional software project.

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> Triage helps to manage the queuing work for any scarce resource or service with limited capacity.

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Develop triage discipline

The intent of triage is to **avoid overburdening a system** and providing some prioritization or selection and **sequencing criteria**.

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Traditional approach to triage

How quickly is our “soldier” bleeding to death? When do we need to take care for our work item?

- Now! (Likely to survive only when given immediate treatment)
- Later (It’s not urgent, can wait)
- Not at all:
  - Not like to survive, no matter what we do
  - It will be fine, no matter what we do

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Triage is not one but two decisions

Decision 1: should we do it or not?

- We need a mechanism to understand whether, what we plan to do, is valuable enough.
- Decision made in upstream.

Decision 2: when should we do it?

- If we decide that something needs to be done, when should we do it?
- We need to understand when is “now” versus desired delivery date?
- May require both upstream and downstream.

These two decisions are not made at the same time, and they require two different skillsets of different roles in the organization.

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Triage is a stressor

> Triage is likely to meet with resistance.

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DESIGN EXERCISE – PART 4

10 minutes

- Using the knowledge from this module, add real options and triage to your system design.
- Consider:
  - How difficult that would be for your organization to introduce triage and real options
  - What resistance you can face and from whom
  - What policies you should add to ask options and triage questions
  - Which feedback mechanism would support real options and triage

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Defer Commitment

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Upstream acquires options. Downstream (delivery) converts options.

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Value of options and uncertainty

- Understand goals
- Create options
- Define “last responsible moment”

  (decision point where the converting the option is of little or no value)
- Find ways to push back decision point as late as possible
- Maximize information gathering before decision

Ref: Chris Matts & Olav Maassen, "Real Options" Underlie Agile Practices, InfoQ Articles, June 08, 2007
https://www.infoq.com/articles/real-options-enhance-agility

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Understanding Options

Options have value

Options expire

Never decide early unless you know why!

Chris Matts / Olav Maassen

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10 minutes

Deferred commitment - discussion

- Situation: in 18 months you have to deliver a regulatory report which will take you 4 months to deploy; you know that **requirements are not going to change**, and LT is **4 months** (no uncertainty about LT)
- Should you commit now? Or should you rather wait until the LRM and start working on it before the fixed date?

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Value of deferred commitment

Holding options has value. Defer commitment to maintain optionality.

> Never commit early unless you know why!

Commitments improve motivation and happiness.

> Clearly defined expectations and commitment point give people confidence.

Uncertainty with certainty about when it will be resolved reduces anxiety

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What is more…

…deferring commitment brings some other benefits:

- keeps options open until the last responsible moment, thus imposes fewer restrictions on the solution being developed
- reduces the chances for change requests
- reduces the probability of aborting requested work items
- reduces the overheads (re-prioritization, re-planning)
- reduces the coordination cost of holding meetings

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Manage Shelved Options

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Balance Costs and Benefits

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Shelve option – “wait and see”?

- The higher uncertainty, the greater the option value, the more value in deferring commitment.
- But, on the other hand, the item value must be at significant premium above required investment cost.
- The option, which was sacrificed to wait, already had an initial investment embedded (remember value discounting over time).

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Clock is ticking…

… but no new information arrives.

- Introduce time guillotine: ticket can stay in a particular column for a period of time (day/week/month)
- After that time, it reaches invest/ shelve/ discard point

- If you cannot invest, you should shelve (wait for longer) or discard – real options.
- If you run out of time – the ticket is not an option anymore and you need to discard it.

Define clear policies around decision points and time guillotine!

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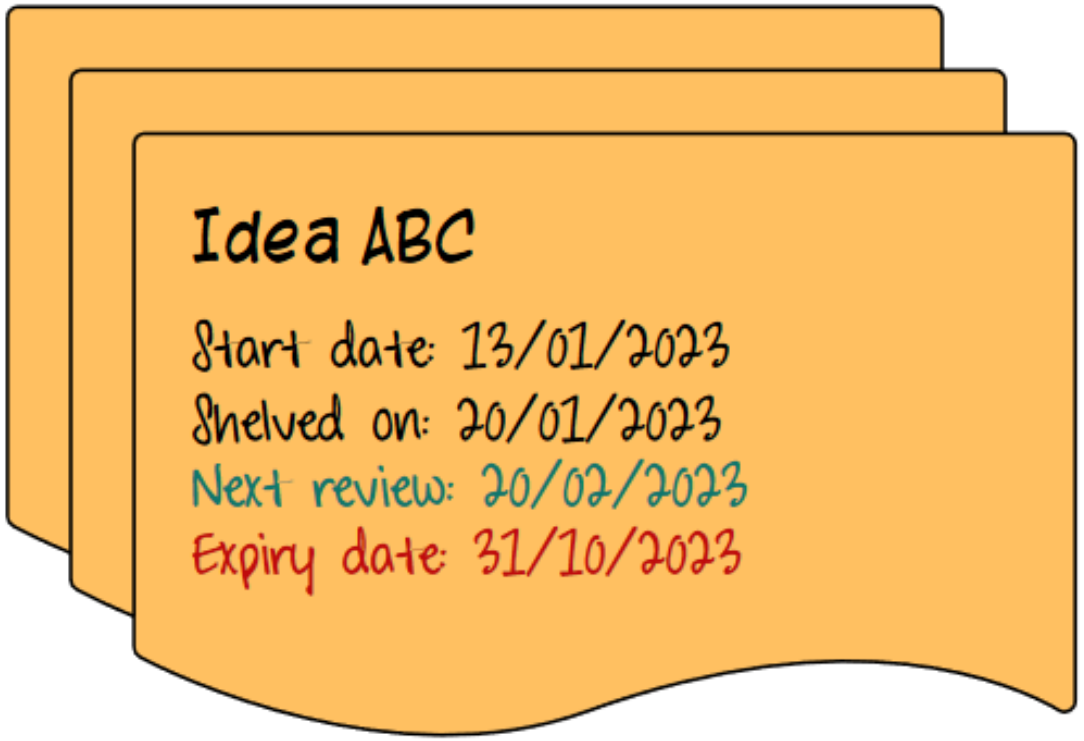
Visualize the time guillotine on the ticket



- The same as food in your fridge, the shelved ideas have an expiry date, and you should keep an eye on it.
- Visualize it as an “Expiry date” time stamp on your card.
- Create a “Next Review” time stamp on your ticket to clearly indicate when you need to make a follow-up decision about your option.

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> If something is blocked upstream, we do not acquire information.
>
> Blocked option undermines the value of an option.

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Real options | Triage | Deferred commitment

Implementation guidelines – qualitative understanding

Develop a qualitative understanding of Real Options Theory.

- Ask questions such as:
- When should we decide?

  This question suggests defining the last responsible moment or understanding the expiry date of an option (or choice).
- How much should we invest before we reach a decision point?

  This question suggests emergence of a skill in options pricing.

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Real options | Triage | Deferred commitment

Implementation guidelines – how much should we invest?

- Recognize that you would need to invest more (time, money, or resources) when the uncertainty is high, and much less when the uncertainty is low.
- Ask yourself, *"How much would I pay to know [this piece of information] or [the answer to this question]?"*

  This helps you gauge the price you are willing to pay for an option.

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DESIGN EXERCISE – PART 5

- Using the knowledge from this module, improve your upstream system design.
- Consider:
  - Which feedback mechanism(s) would support managing shelved options
  - Which feedback mechanism(s) would support making an investment/discard decision
  - Do you need to add or improve any feedback mechanism(s) to support gathering and refining requirements?
  - How would you identify the point of diminishing returns?
- Think about any additional policies for your upstream system. Revisit the questions from 2 summary slides:
  - When should we decide?
  - How much should we invest before we reach a decision point?
  - “How much would I pay to know [this piece of information] or [the answer to this question]?”

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20 min

DESIGN EXERCISE – PART 6

Complete the following activities and prepare to report your results.

- Review your design
  - Does it cover the typical “dominant” activities in upstream workflows from your chosen domain(s)?
  - Do all ideas or customer requests need to move through the same workflow steps? If not, why?
- Did you detect the point of diminishing returns?
  - Recognize that at the point of diminishing returns from an activity it is time to make a decision
- Collect potential decision points and their characteristics
  - What decisions are being made and how would you model them?
  - On what foundation?
- Design upstream policies
- Describe the role(s) which would help you in managing upstream system.
  - how would you introduce them? You can use the „Introducing roles” slide to support your decision.

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Closure of the class

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Curious about improving delivery?

- This is what the Delivery Course covers:
  - Establish an effective set of feedback loops to improve Service Delivery
  - Use proven tools and methods to increase capability, remove delays, reduce variability and manage bottlenecks.
  - Increase skills and implementation of the 6 general practices of Kanban
- Note, that you can take this course any time!

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F4P Card ☺

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15 min

Closing Discussion: Let's do something about it!

- What will you do differently in your organization when you get back to your office next week?
- Do you have steps identified to establish or strengthen the feedback mechanism (see the 6 cadences)?
- What options do you have to implement practices, gather data and insights, share and reflect, and take further improvement actions?
- Is your organization ready for The Kanban Method? Or do you need the insights from the Change Leadership Masterclass or an experienced AKC to help gain acceptance for the necessary changes?

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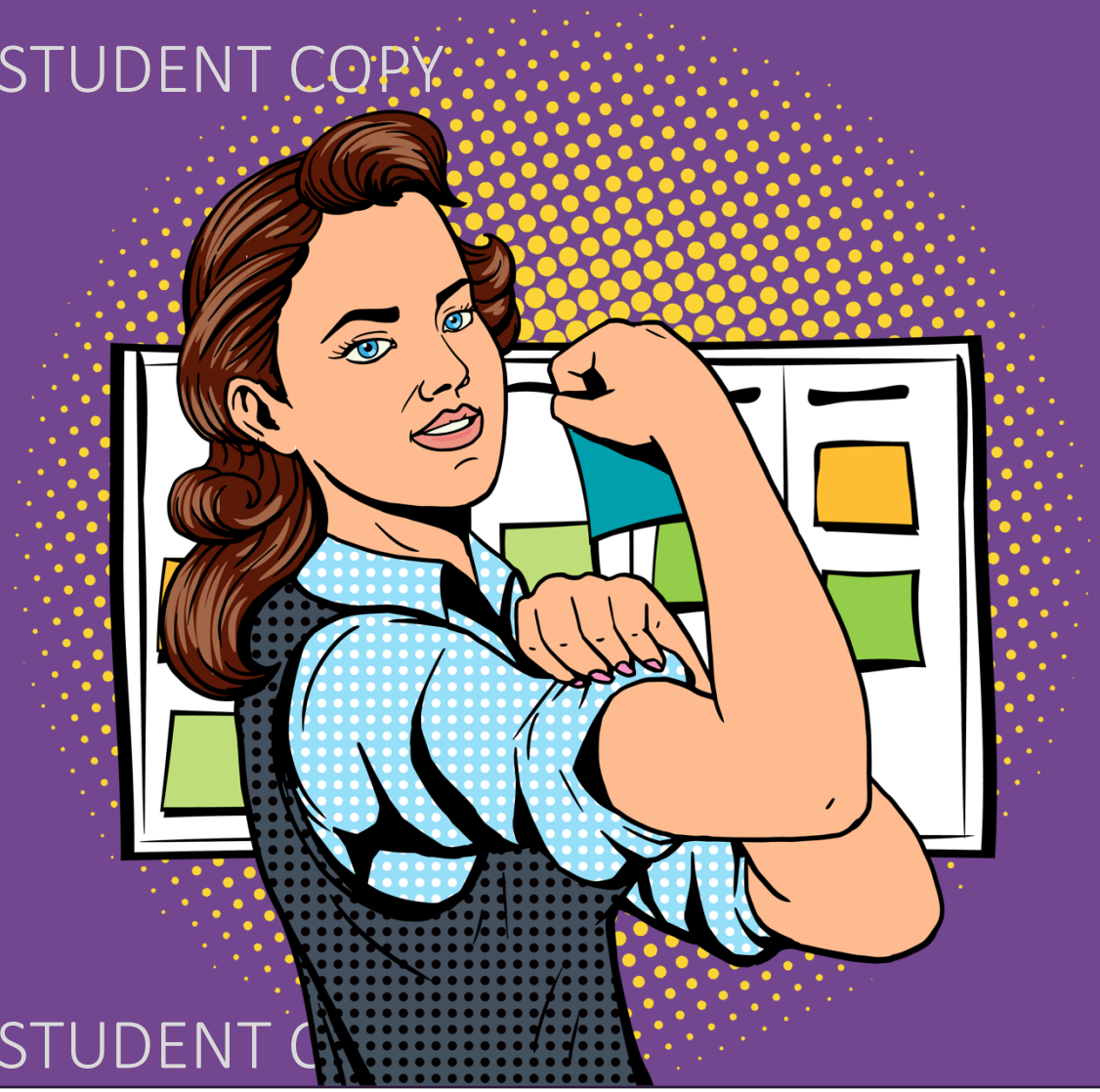

Kanban University Resources & Tool Partners

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The Official Guide to the Kanban Method

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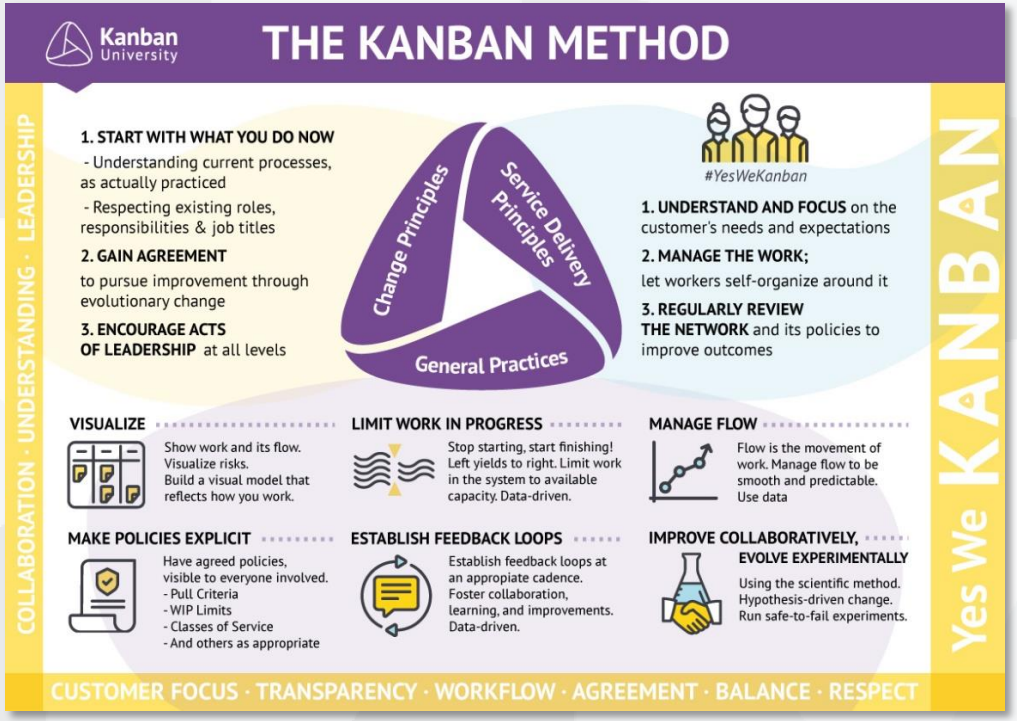

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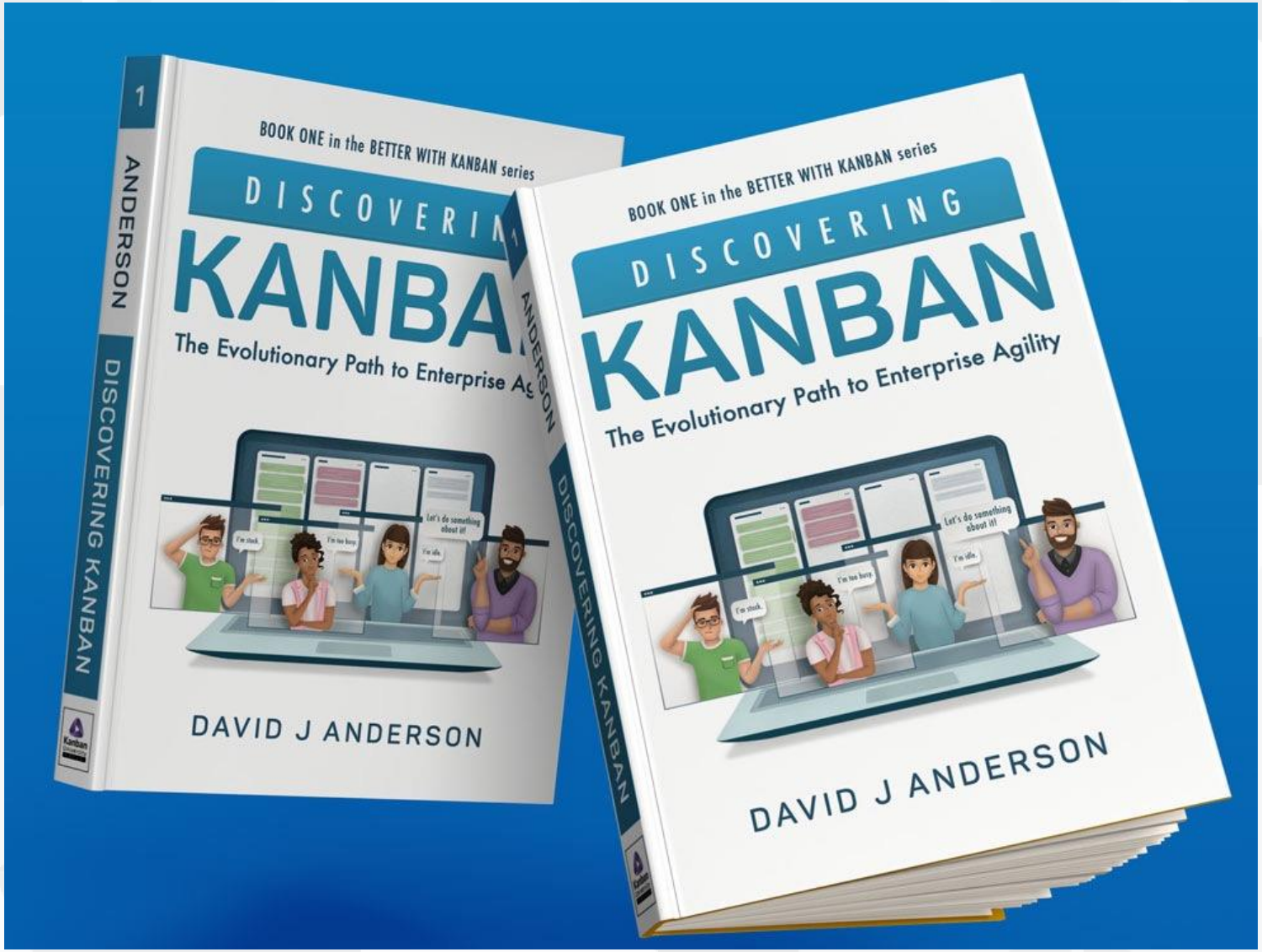
Discovering Kanban
The Evolutionary Path
To Enterprise Agility

By: David J Anderson



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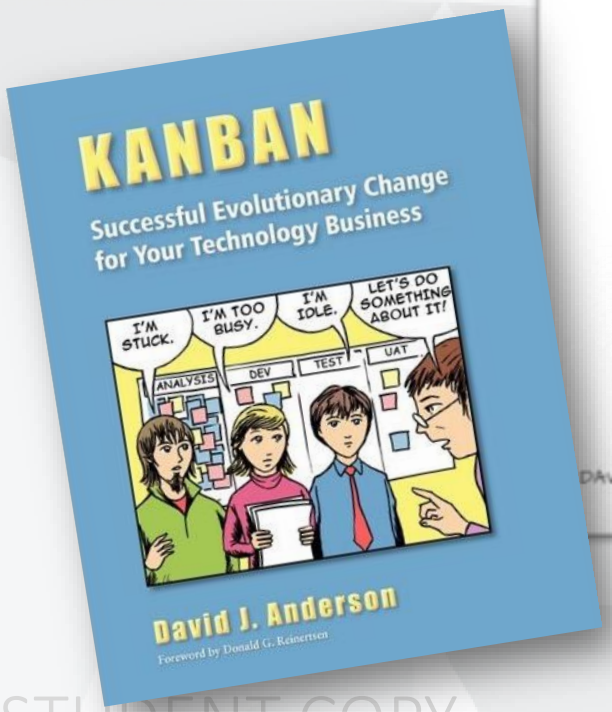
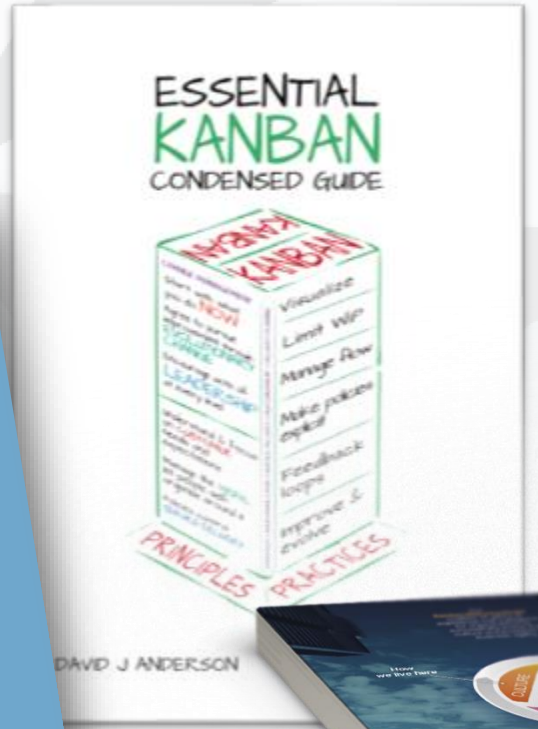
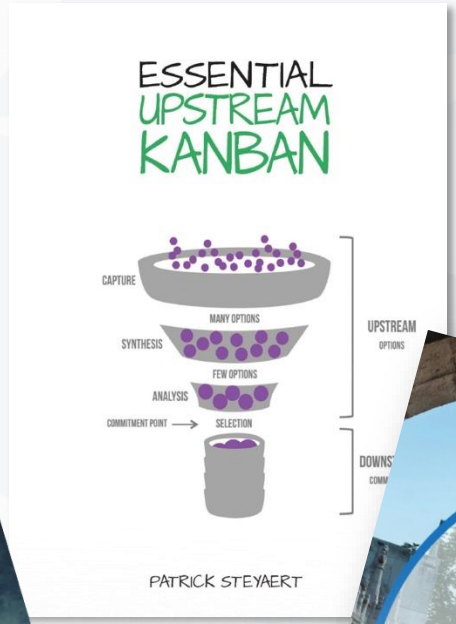
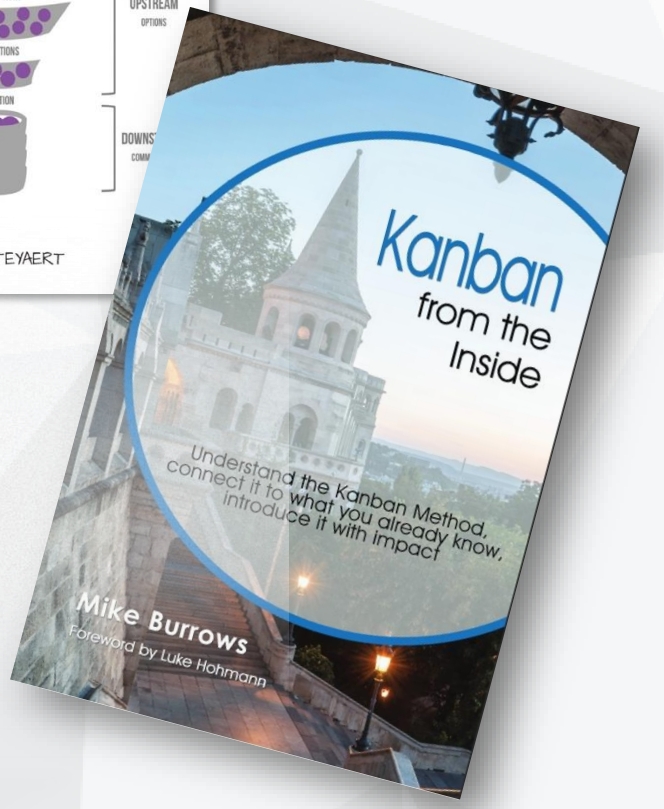
Your One-Stop-Shop for all Kanban Books









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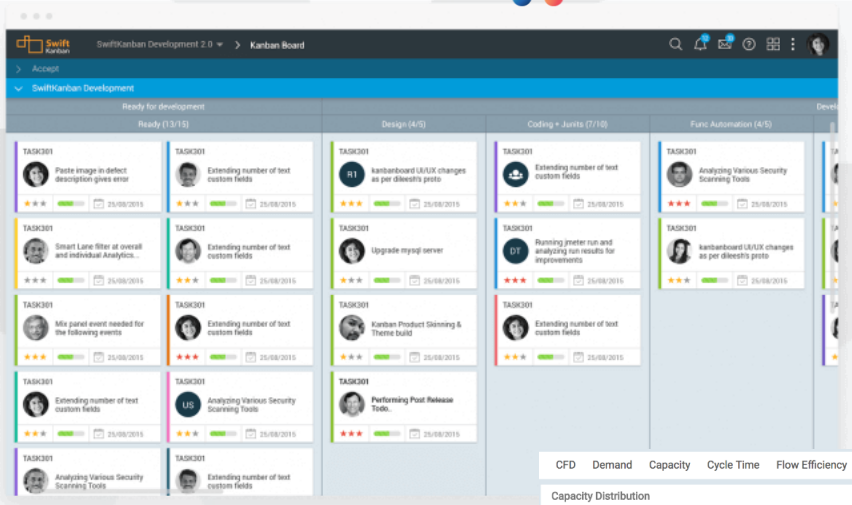
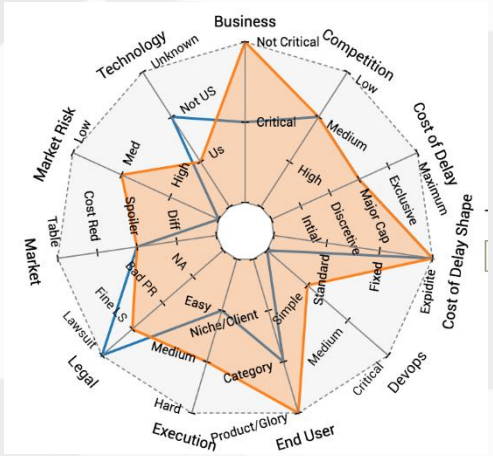
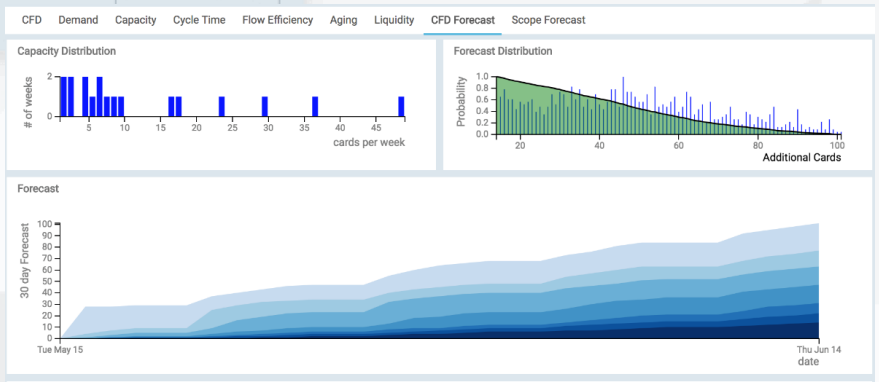
Swift Kanban from nimble







Visualize your workflow and increase your team's productivity with SwiftKanban visual management and collaboration tool.

Nimble's SwiftKanban helps remote/distributed teams across business functions with their collaboration and work management needs. It enables you to do Kanban the right way - YOUR way - with robust analytics and support for Team, Portfolio and Upstream Kanban, Scrum/Scrumban and Enterprise Services Planning

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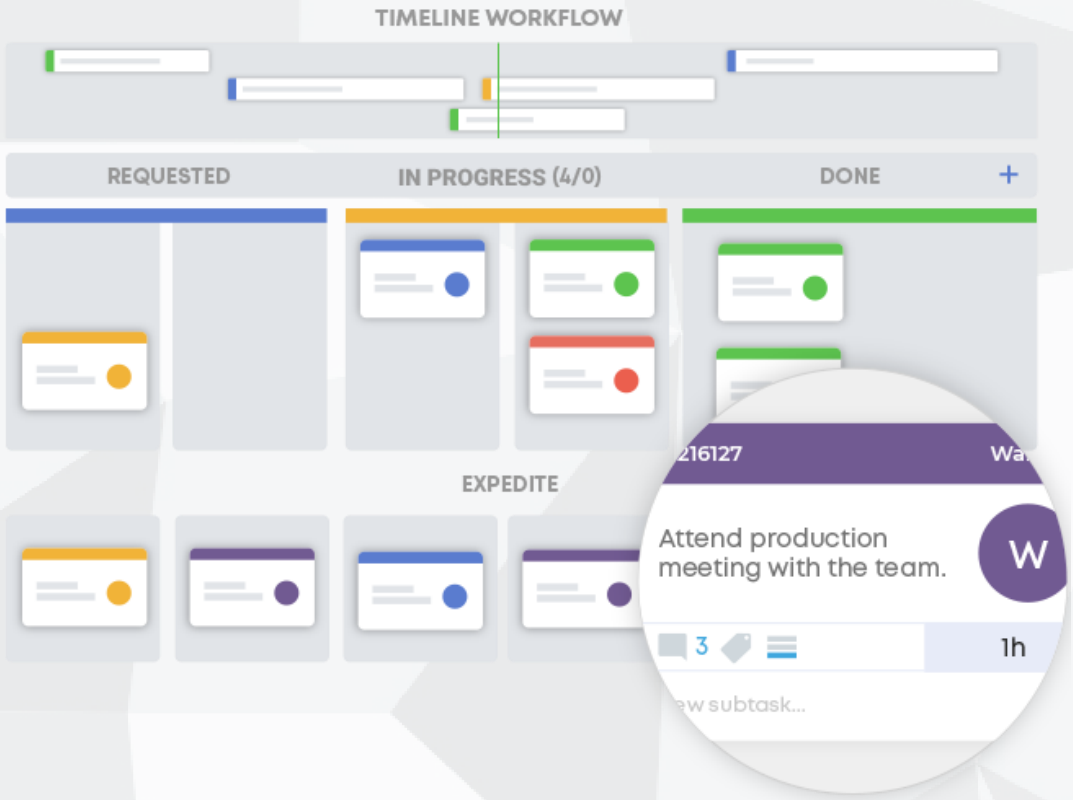
businessmap

Gain visibility across all projects, connect planning with execution and deliver 3x faster with Kanbanize.

Managing dependencies and tracking the overall status has become the major time-eater for most of the managers and their teams. Having flexible Kanban Boards and built-in Business Rules, you automate all existing processes, dependencies, and interactions. This makes status always accurate, and nothing falls through the cracks.



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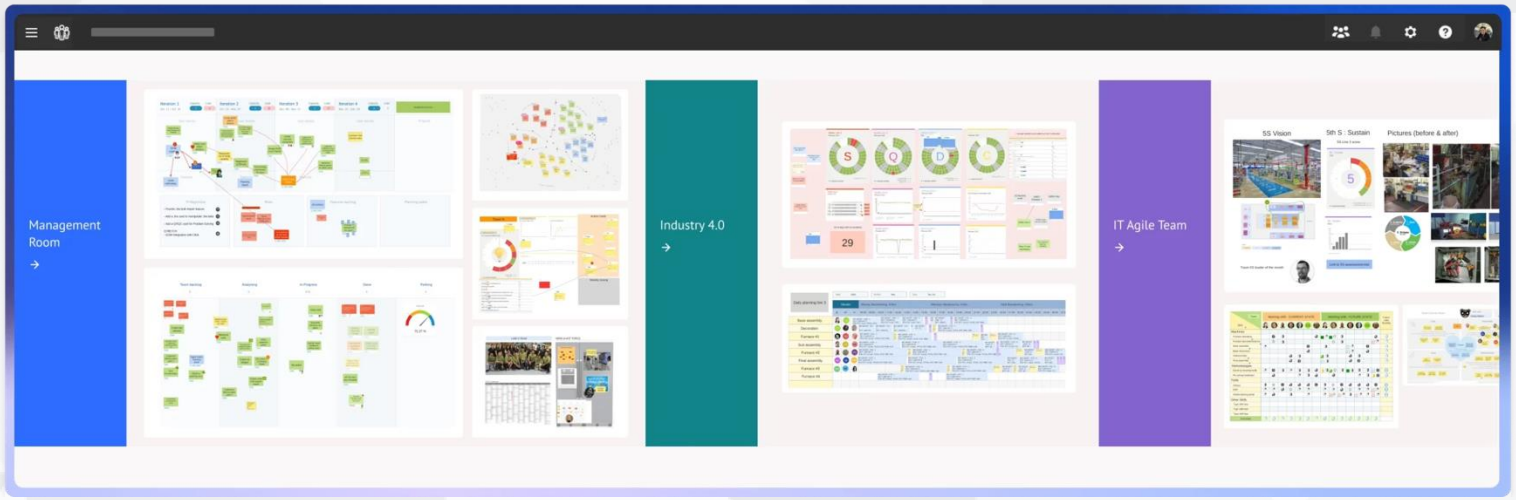
iObeya

Discover the power of Visual Management with **iObeya**. Developed in collaboration with several multi-national lean manufacturing focused enterprises, iObeya created the first digital obeya to increase and optimize visibility, security and collaboration across multiple locations, time zones and countries. iObeya continued to work with its customers over the following decade to expand its support for lean manufacturing, and lean product and project management with additional support for those implementing agile practices at scale. Today over 600,000 users per day from over 500 companies rely on iObeya to better align their strategy to execution and drive a culture of continuous improvement and innovation.



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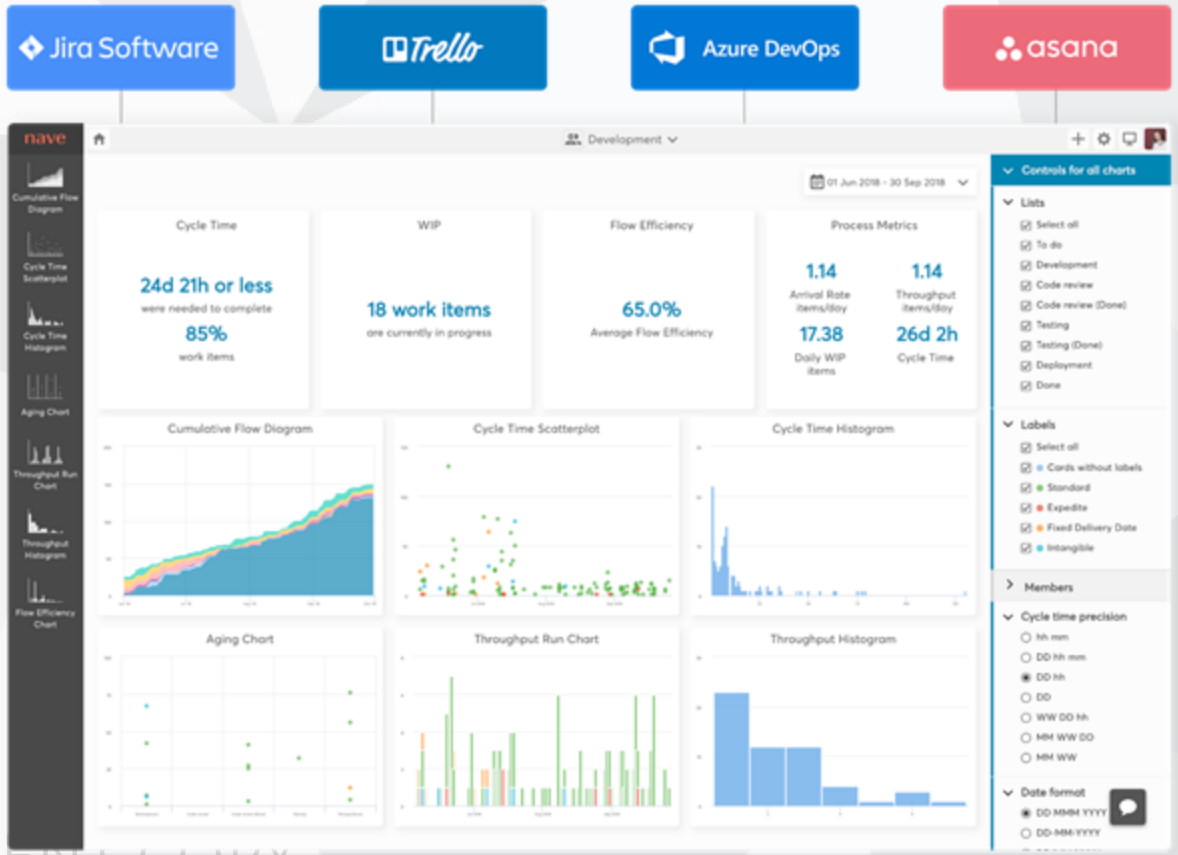
Nave (getnave.com)



nave

Kanban Analytics on Your Preferred Tool

- Evaluate your workflow performance
- Analyze lead times and cycle times
- Monitor how long work stays in progress
- Identify bottlenecks as they occur
- Calculate your work delivery rate
- Make probability-based forecasts

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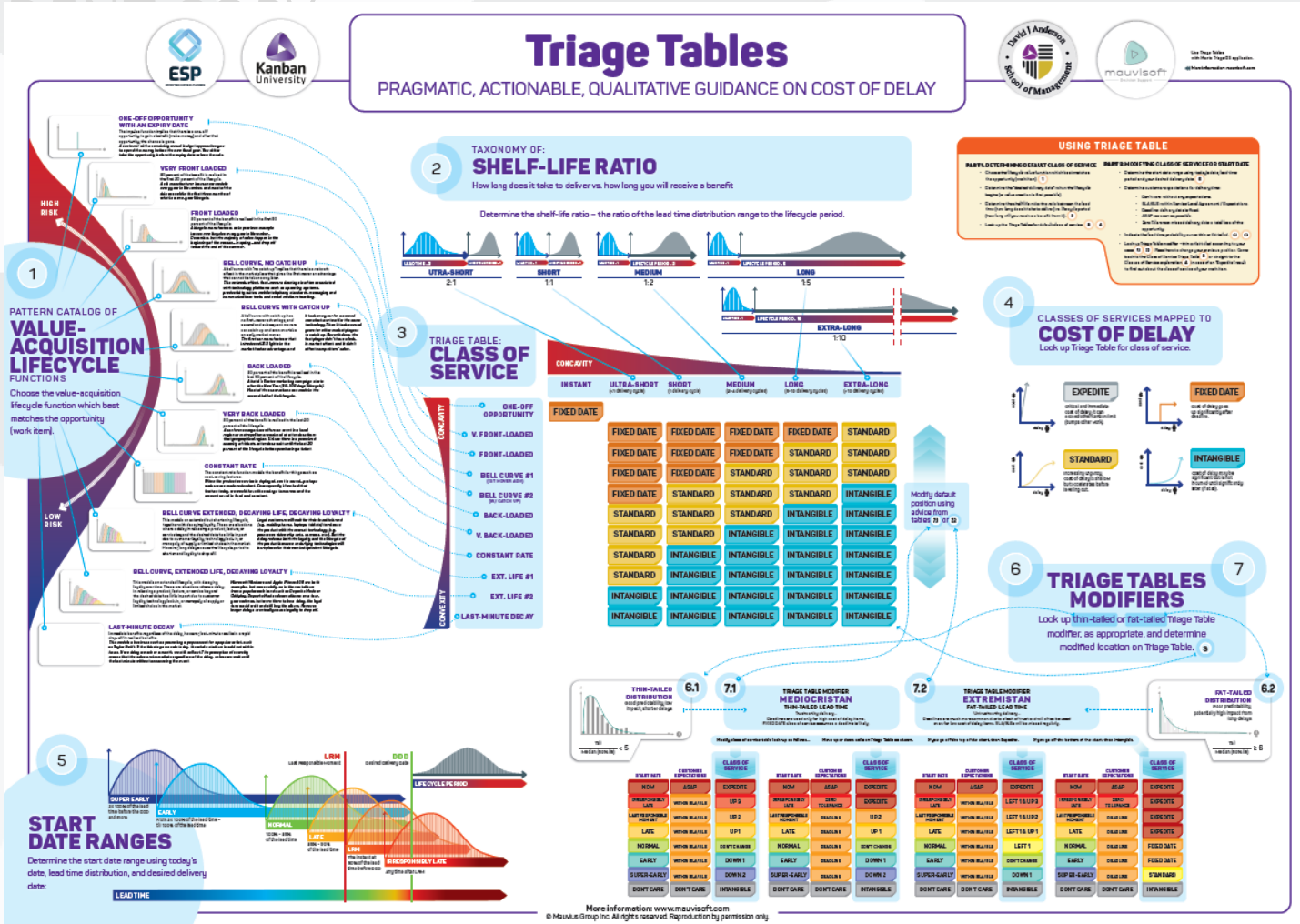
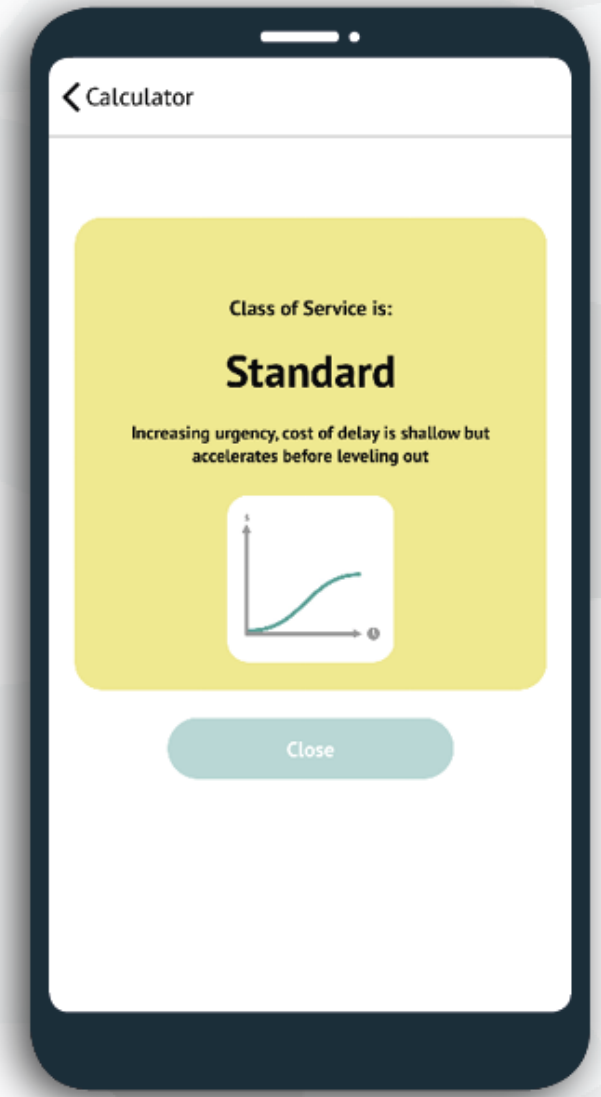
Menta Triage





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objective

Objective is an IT multinational service provider founded by friends, who were also developers, with the cooperation of more than 600 restless and creative experts. What we do is to break technological and business barriers through digital products, consulting services, training and software development focused on quality besides delivery, generating value for companies in many market sectors.

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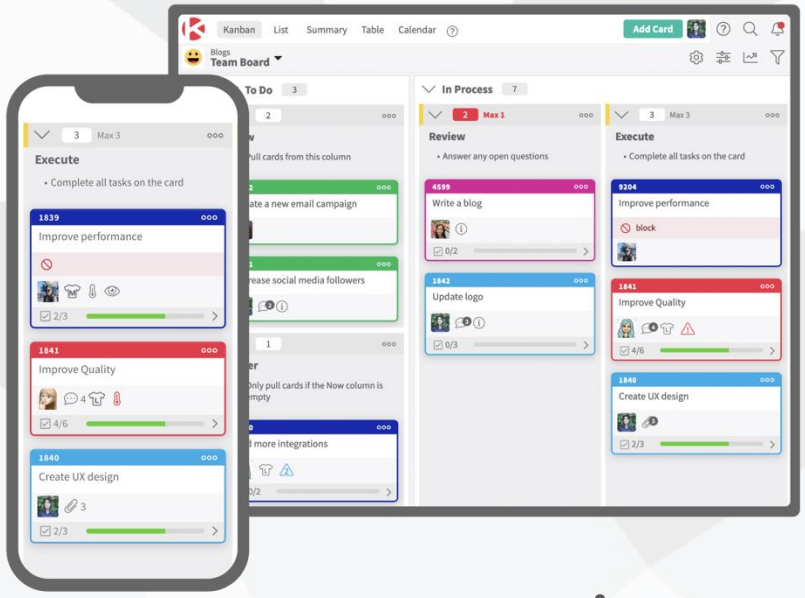
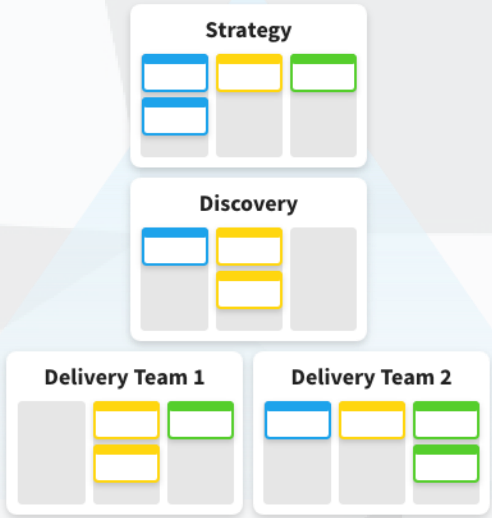
KANBAN ZONE

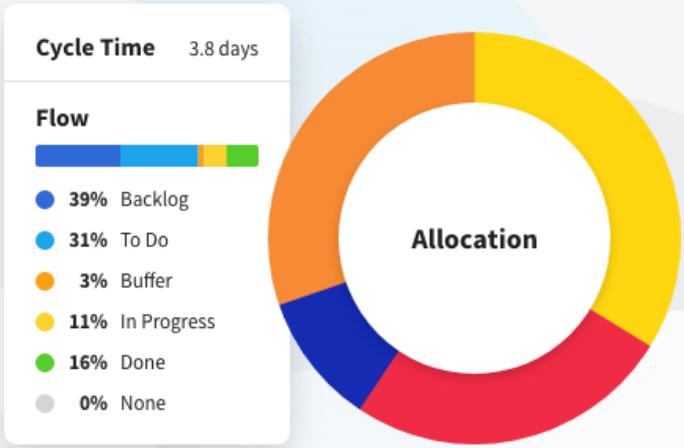
Kanban Zone enables organizations to visualize, measure, and efficiently deliver goals using the Kanban method.



Responsive Design



Portfolio Kanban



Kanban Metrics

The most **Flexible** way to **Visualize** and **Connect** every aspect of your organization for an effective **Kanban system**.

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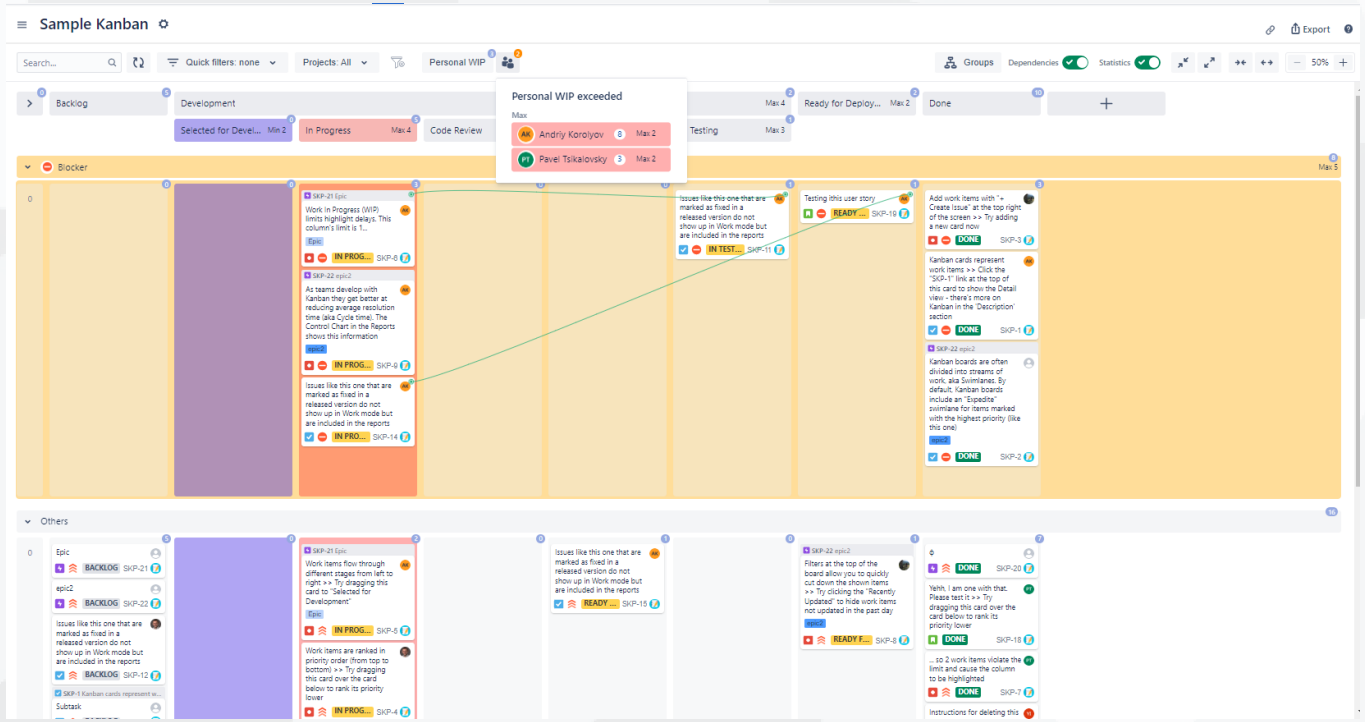
Advanced Agile & Kanban Boards

Atlassian Marketplace Partner App for Jira by Release Management

- **Kanban** boards with column grouping and advanced WIP configuration (personal, column, column group, swimlane, intersection of column and swimlane).

- Great variety of **visualization techniques** by building a canvas with any Jira issue field to column or swimlane.



Learn more

RM / RMCloud

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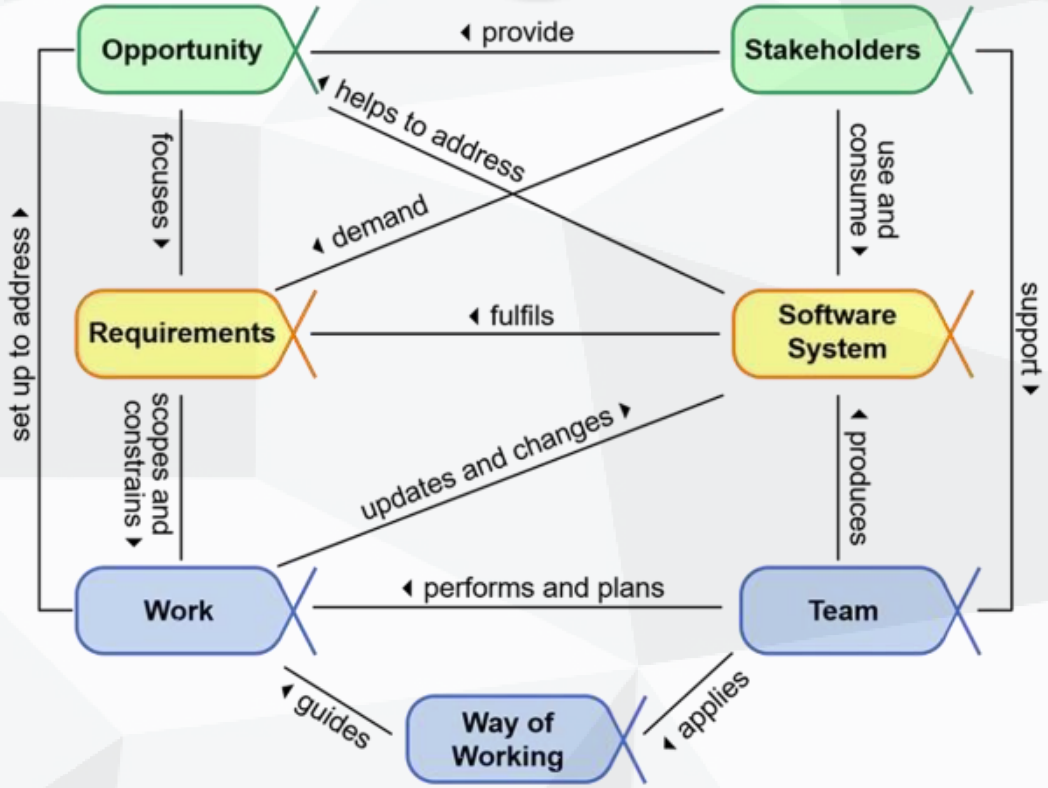

Essence is a method-agnostic description of software development. It is an international OMG standard developed, reviewed, improved and tested by experts from all over the world. Although developed as a software standard it is far more universal and can be applied to almost any type of solution development.

It has distilled the important elements of software engineering into a universal common ground. That means that any software endeavor can be described in Essence terms, no matter how it is being developed. It also means that any development method or practice can itself be described in Essence terms, using the Essence Language – a simple, intuitive, visual language.
There are a growing number of practices that have been described using the Essence Language and games that can help teams learn and apply them.

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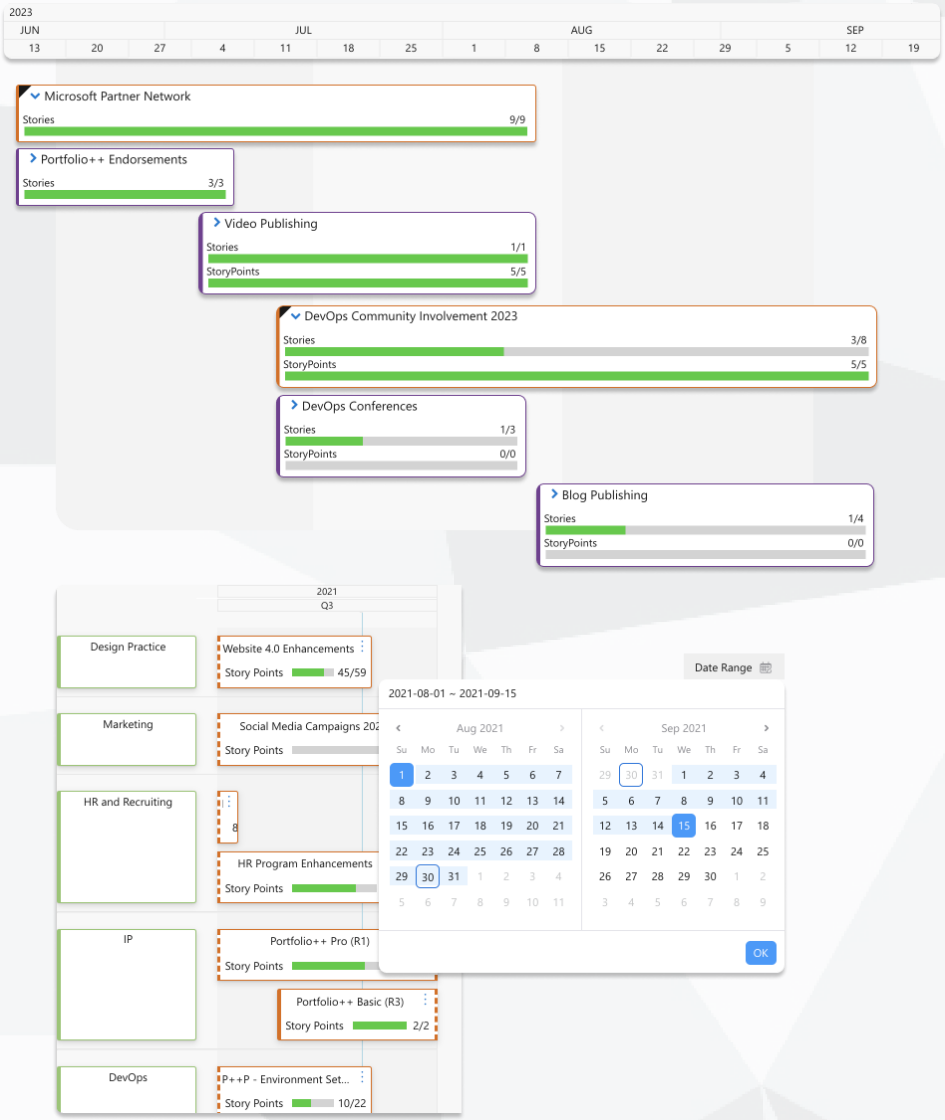
iTrellis

Portfolio++™ is a powerful Azure DevOps extension developed by **iTrellis**, a Kanban University partner, and certified Microsoft Solution Partner in Digital and App Innovation. Portfolio++ is available for free and enables the creation multi-project Gantt styled roadmaps and progress metrics in Azure DevOps. Additionally, users can upgrade to Portfolio++ Pro™, which provides additional features such as Portfolio Kanban. Our team of experts is available to provide Microsoft DevOps consulting services and assist you with your portfolio management needs. To learn more about Portfolio++™, visit our page in the Microsoft Visual Studio Marketplace or contact us at info@iTrellis.com.



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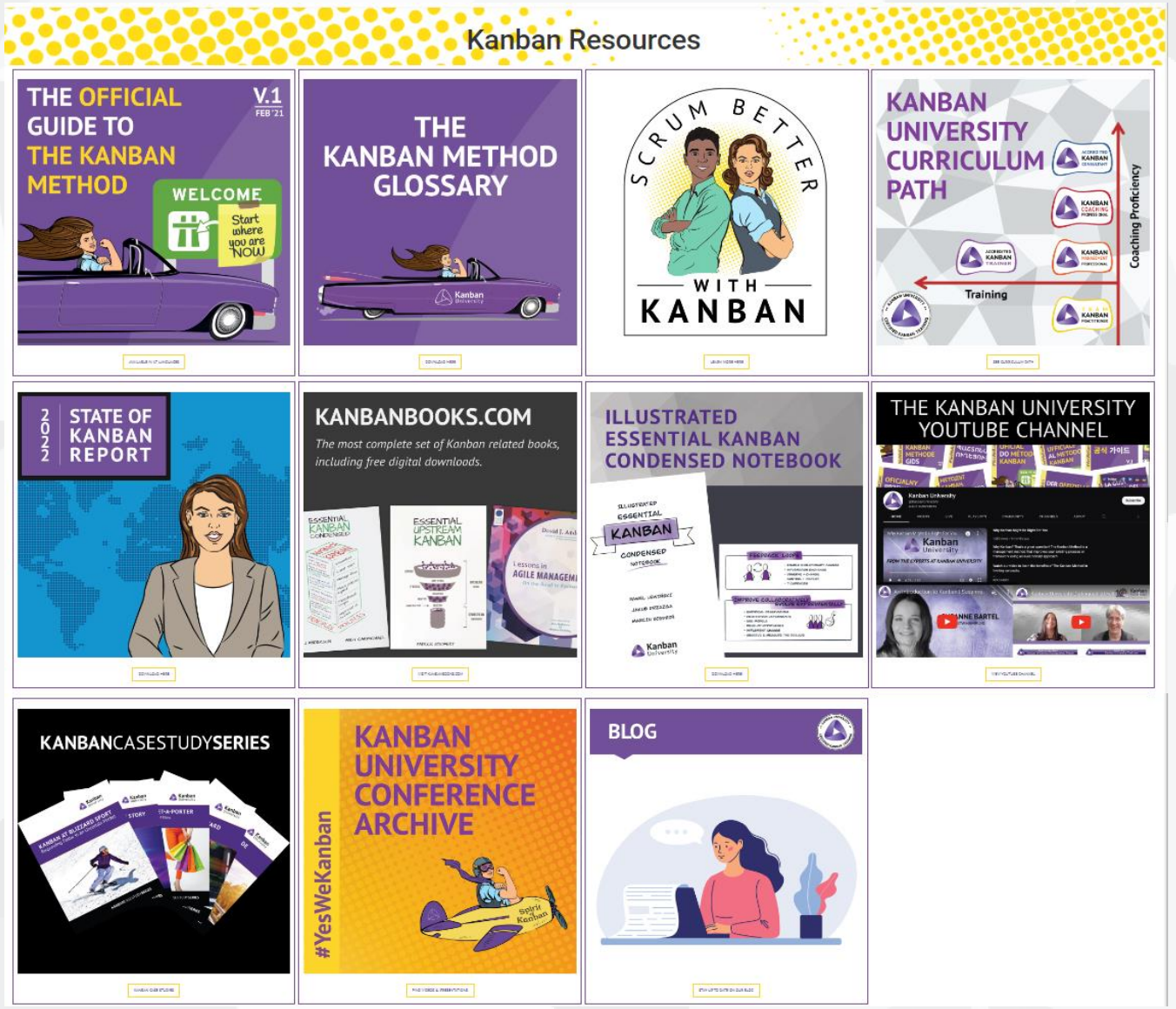
Additional Kanban University Resources

- The Official Guide to the Kanban Method
- The Kanban Method Glossary
- Scrum Better with Kanban Blog Series
- The Kanban University Curriculum Path
- State of Kanban Reports
- KanbanBooks.com
- Illustrated Essential Kanban Condensed Notebook
- Kanban University YouTube Channel
- Kanban Case Study Series
- Kanban Conference Archive
- Blog



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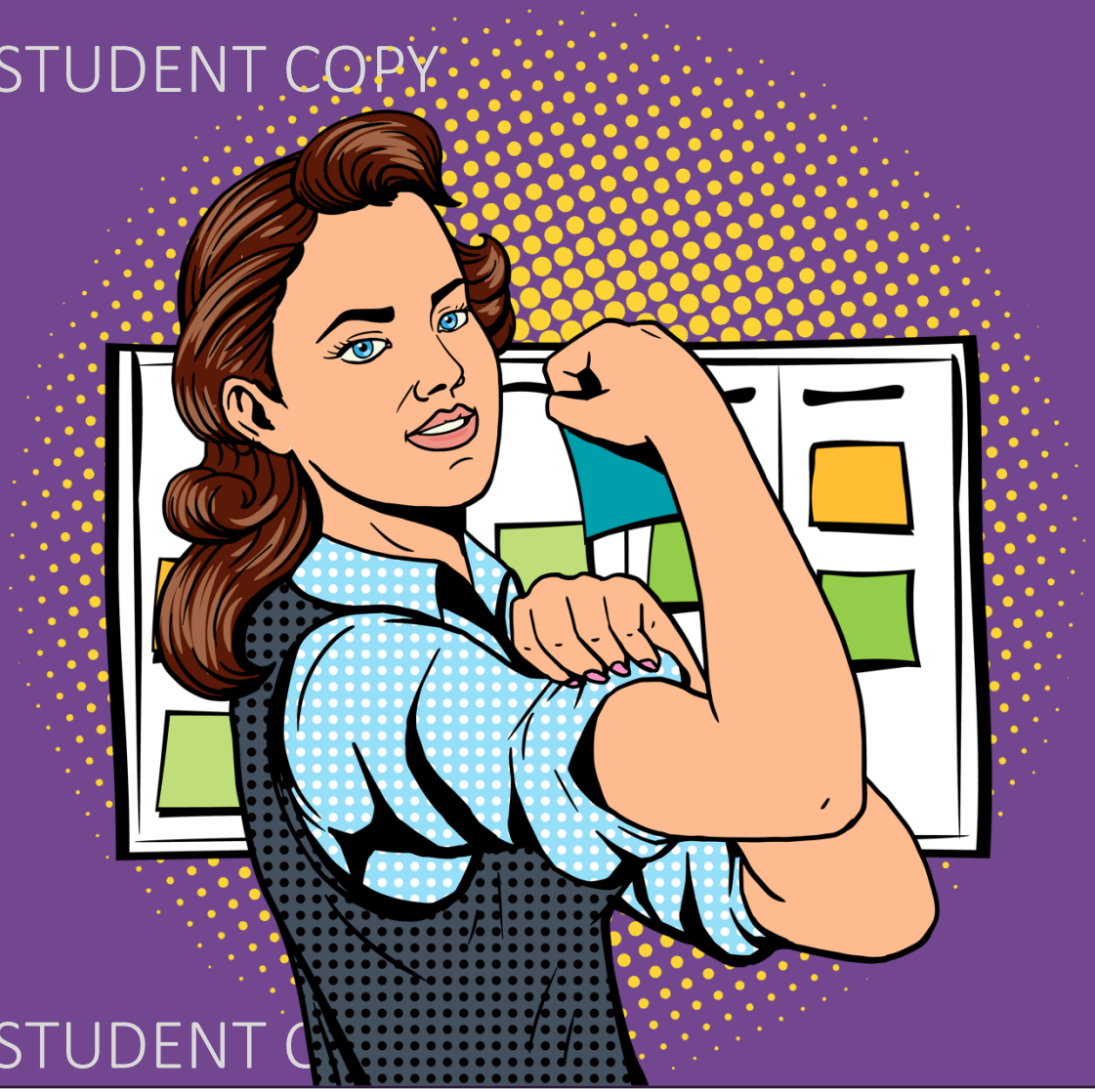

Thank You!

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