Kanban for Gresham IT Service and Support

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Overview

This process is an attempt to address several issues we have encountered with service provision over the last few years

I wanted a system or process that would average our ticketing system (IT Help) and help us as a team to provide more timely services based on priority while maximizing our resource use. In addition, I needed a system that would lend itself to iterative improvement.

I also wanted a system that would maximize the relevance of our morning standups which have flagged of late.

Solution

Recently, a process I had used in the past called ***Kanban*** popped into my brain again as the Analysts were explaining how they used MS Planner. How they were using it did not trigger this idea, it was instead the look of the Planner GUI that brought this back to my forebrain. In reviewing notes from several technical services meetings along with my notes on areas of improvement this work method seemed to address several the issues we were facing with our internal services.

- Communications – What is everyone doing today/this week?
- Where are projects and tickets hung up?
- Who has capacity?
- Team work – How can each of us help our other team members to get things done?
- What's the priority?
- What are our resources right now?

Kanban

The technique itself comes out of the 1950s and was developed by Toyota for the assembly line. It is based out of observations their engineers made as to how the local farmer's markets worked…

In simplified terms, Kanban is a visual system for managing work moving through a process. It is a system for visualizing work, reducing waste by limiting work in-progress, and maximizing our resources. There are many software products (including Planner) that support Kanban, but in our deployment, we are going to use the original Toyota method of moving colored cards on a physical board. ("*Kanban*" roughly translates into 'colored card'…)

This ***Kanban Board*** will be our visual management system. Its intended to add transparency to our process, exposing to the entire team what we are working on every day.

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I did some research and found just a couple of articles on folks who had tried Kanban for services and, after much reading and play testing, decided it would be a good fit for what we were trying to do if we could integrate it into our daily operations starting where we start our day with the Morning Standup.

The Morning Standup Meeting

Because we need to add value to the morning standup meeting, we will be changing that meeting to a model called 'Walk the Board'. Since we are currently more focused on *being busy* as opposed to *progressing our work*, this model will help us to change to a better workflow.

What do we need?

We need the following supplies to get started.

- Whiteboard with rollers so we can use in in various places
- Selection of PostIT notes, flags, and pens
- Space to meet in
- Youthful sense of enthusiasm…

What are our Teams?

It is important to note our team membership because we will likely see teams tending to work in certain areas of the Board and because the process focuses on the team solving problems together.

Currently we have two teams in service/support and each team has two kinds of work: some planned projects and a lot of unplanned support calls.

Network Operations (NO) - supports the LAN, back-office hardware infrastructure, and software infrastructure.

Tony, Jamie, Joe, and Pat

Help Desk (HD) - takes support calls for a huge variety of internal issues, everything from printers that need new toner cartridges, to email outages, to software upgrades and pc problems.

Dan, Chuck, Carlos, Sandy, and Heather

How do we Start?

We setup the basic board:

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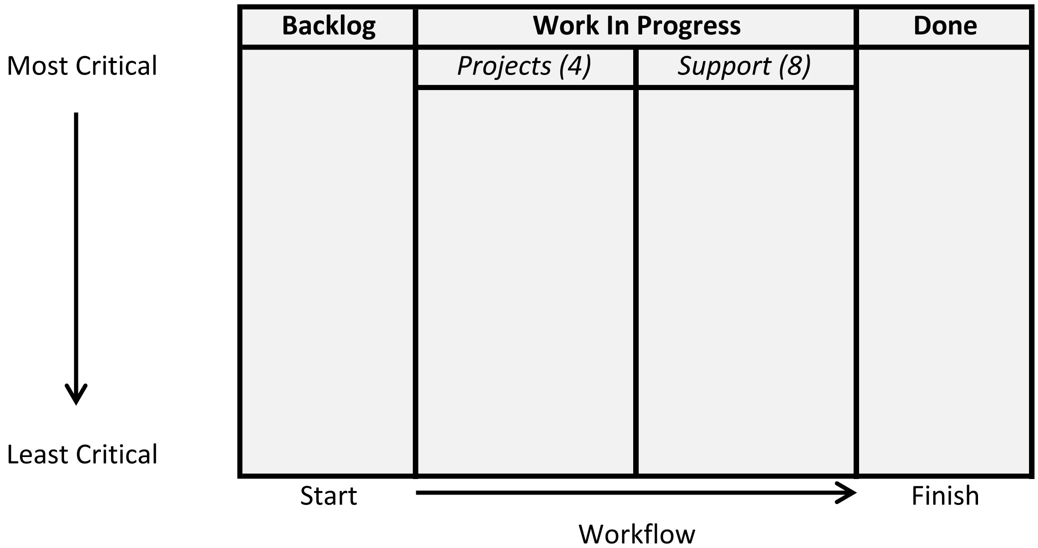

The illustration is self-explanatory. The one thing to note is the *Work in Progress* limits (WIP). I have set initial *WIP Limits* noted in the work ques (Projects =4, Support = 8) based on the number of people in each team. The *assumption* is that each person on a team can take on 2 items at any one time.

Next we bring all our current work, projects and tickets (anything else?), to the first meeting. We will start by going through our lists and creating cards.

Our initial card color key is:

- Incident   Yellow
- Request   Blue
- Project   Orange

On each card, we will write some basic info:

- Ticket Number (If it's a ticket)
- Project Name
- Date the project entered the board (On the back)

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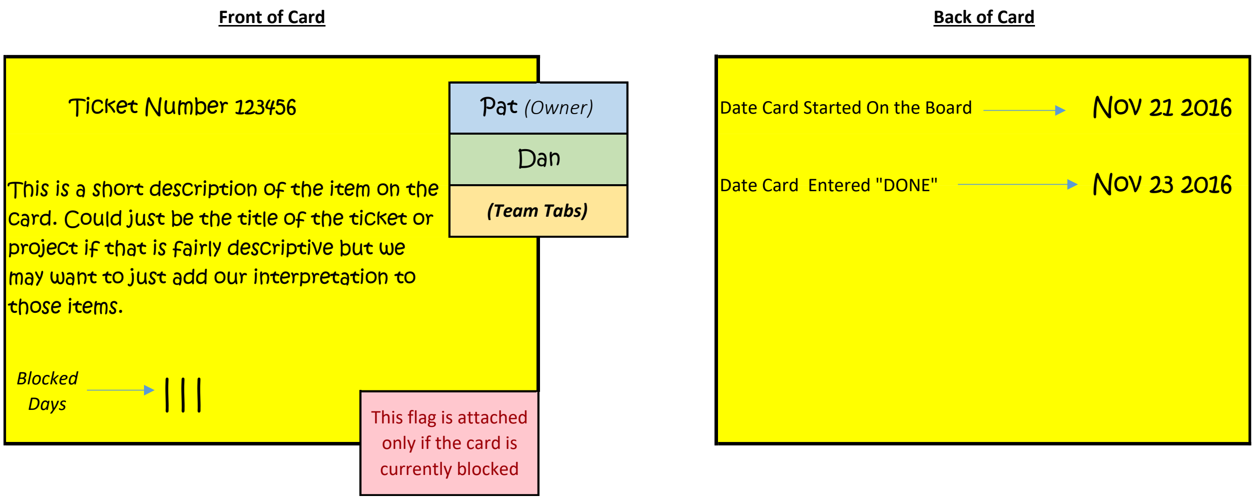

The *Blocked* flag is not used in the first meeting; the *Owner Tab* will be that of the person bringing the card into the WIP column. Owner Tabs are not mandatory in the Backlog column, since that work is not in progress and 'not assigned' yet. The color of an Owner Tab only serves to differentiate team members and we may just want to let members pick their own colors.

To start us off, anything that is currently being actively worked on goes into the appropriate WIP column (also referred to as a *que*) . Note that this will probably exceed the maximum WIP that we initially setup. That's ok!

After we have the active work placed, then we place any inactive work, stuff that has not been started yet, into the *Backlog* column.

Once everything has been placed initially, then we start to refine our WIP listing and arrange items on the board by priority. Top of the board is most critical; bottom is least critical.
Then we do that same task with the Backlog que.

Next step is to identify those items that are Blocked for some reason and are unable to be moved to the *Done* column.

Now that our starting board is all done, then we start working the cards. Our initial goal over the next week is to clear the board of any excess WIP items so that we are below the max WIP threshold. No new items are moved from backlog to WIP until that goal is achieved.

So, this is where the real change begins to happen (and I'll have some more notes below in the "Daily Operations Meeting" section). We are now looking at the board as a team!

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Operating the Board

Now that we are all setup and ready to get working there are some processes that we need to follow.

- This process will constantly evolve. It is designed to be simple to change and improve as needed.
- WIP is estimated and may change over time as we refine our process and as resources change. For instance, when Joe joins us we may be able to add another WIP to each column because of the "bridging" nature of his job.
- WIP is our compass. It will ensure we are focused on moving the work along.
- Cards move from left to right and are "pulled" rather than "pushed" into a new que. i.e. a card may not move from Backlog into the active board unless there is space for it in a que.
- Cards may not be moved from Done back into WIP without the group's OK.
- If an individual has completed all work assigned to them for the day, and the WIP is maxed so no more cards can be pulled from backlog, then they should reach out to other members of their team to assist with their assigned work.
    - What does an Admin or Technician do if they can't help? *Remember, it's not important that workers stay busy, it's important that the work keeps moving*.

Overall Schedule Framework

Basing our work on the rules above, here is how we integrate Kanban into our work.

<u>**The Morning Standup**</u>

Goal?	The goal is to do the primary work with Kanban every morning at our standup meeting.
Who Attends?	The entire Support Team (NO and HD)
Who Leads?	A *Morning Facilitator* is appointed each morning. Note: For the first couple months of use this will be Pat and Heather. After that, the team will take turns facilitating.
How Long?	Meetings will start at 30 minutes but should end up being 15 minutes in length.

Default Sequence of Morning Events:

Each morning's standup will consist of the following actions.

1. **Blockers**- Newly *Blocked* items are marked with a flag and get their first hash mark and existing blocked items are updated with an additional hash mark. Blockers are addressed first and Pat or heather may need to get involved it
2. **Emergency Items** – These are probably new items from the morning that need to be expedited.
3. **Stuck Items** – Items that have not moved since the day before. The group will figure out how to unstick it.

4. **Completed Work** - Any completed work that has not already been moved is pulled from WIP into *Done.* Cards are marked with their completed date.
5. **Prioritize Work** – Everything else on the active WIP gets updated.
6. **New Items** – "Is anyone working on anything that is not on the board? "New items are brought from IT Help and our Projects Listing. A card is created for each and those go into *Backlog* and are marked with a starting date. The Backlog gets prioritized at this point.
7. **Questions**
    a. "Is anyone working on anything that is not on the board?"
    b. "What are we looking to finish as a team?"
    c. "Can we see any bottlenecks or other impediments to the flow of work?"
8. **Post Standup** - IT Help is updated as needed by each item owner.

Process During the Work Day

- New items will come in throughout the day like they always do… New items will not go onto the board until the next day when they will go into the *Backlog*
- Fully completed work is pulled into *Done*
- As WIP numbers drop, the next priority item is moved from *Backlog* to *WIP*. It goes to the bottom of the *WIP* column as a low priority WIP. This ensures that we are always dealing with things by priority. Heather or Pat may adjust priority during the day as needed.
- The whole group should be notified of any Emergency/Critical Items. Heather or Pat can be tagged to assist if needed. Emergency items are placed directly on the board as WIP soon as a ticket is entered. This type of item receives priority. (Do we mark it with a star or something?)

Weekly Retrospective

In addition, we will have one *Retrospective* meeting per week on an ongoing basis. This will start out as an hour for the first month or two as we tweak the daily process. After that they should shrink to be 30 minutes in length. At times, we may want to bump them back to an hour to allow for process review and changes.

At each week's Retrospective, we will review and record the following:

- Throughput: Number of cards completed this week.
- Lead time for each card (Completed date and start date)
- Average lead time for the week
- Number of cards completed that had blocked days
- Total number of blocked days
- A list of places where cards were blocked.

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For the first couple months, our Retrospectives will deal with specific topics around the Kanban system.

Week 1 – “Is there any hidden WIP that we have not gotten on the board yet?”
Week 2 – “Can we identify any impediments to the flow of work?”
Week 3 – “Are we tracking at the right level of granularity?”
Week 4 – A que or buffer happens when work is when work is in a holding pattern before it gets to the next step. Are there any ques or buffers in our workflow that are not represented on the board?

After the first month, we should be able to possibly move the weekly meeting down to 30 minutes or so.

Bi Monthly Technical Service Meetings
We will meet twice a month for an hour to do more in-depth sharing, business items, and projects discussions.

Proposed Project Schedule.

December - Pat and Heather meet to review processes and setup the initial board.
January 5th – Week 1 Retrospective (Instead of the Services Meeting?)
January 9th – Kickoff the New Process. (Is this too much of a lag after the Week 1 Retrospective?)
Rest of January – One hour weekly Retrospective meetings . See notes above.

Things I don’t know yet…

Where will we meet for daily standups?

How does this integrate with IT Help???

Do we go back to the “ticket bucket” as opposed to direct assignment for Teks?