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It's Friday afternoon in the testing department, Simon, Suzanne and Maik are meeting at the whiteboard. They want to know whether kanban can contribute value to their test team. Suzanne picks up the pen and writes on the top post-it: 'Kanban for our test department'. She sticks it in the middle of the whiteboard and triumphantly looks at her colleagues. "How's that?" she asks, but Maik corrects her, "Actually it isn't kanban, but 'visual management'. Kanban is a lean process management system aimed to optimise the flow. You use a kanban board, which may consist of a whiteboard with different columns on it. Each of the columns represents a step in the process. This process is also called the value stream.

"Post-its represent tasks for the team and are stuck on the board," he continues. "During its life-cycle, each post-it, or task, makes a tour from the left column on the board (the backlog) to the column furthest to the right (completed tasks)."

"Teams doing kanban have a daily meeting at the board," adds Suzanne. "Kanban helps to distribute the work, makes clear where the bottlenecks are and ensures an optimal handling of work packages."

Simon is enthusiastic. "That is just what we want!" he says. "Better control of our test tasks and an increase of our efficiency. Our testing department has many duties. We do reviewing, test design, execution and regression testing. We are simultaneously working on several projects and releases and we have a TPI trajectory. The business demands changes or asks us to assist with production disruptions. A better grip on our activities sounds good and saving valuable test time sounds even better!"

Maik is not done yet though: "In visual management we use kanban, but besides the kanban board we have two other boards. These are the week-view and the improvements board. On the week-view board, we present the steering information. We keep track of the team's production and use this to evaluate the effects of decisions and improvements the team makes.

This way we create a feedback-loop that can be used to continuously improve. Monitoring the production also helps to show the value of the team to the stakeholders. On the improvements board, we put down all innovative ideas for improvement. Because the whole team meets around the board to discuss the progress, many bottlenecks and potential improvements are identified. By gathering all ideas we ensure they don't get lost and the team can implement them in a controlled manner."

"Well, I'm convinced," says Suzanne. "We should call it visual management." She writes a new post-it and sticks it on top the first: 'Visual management for our test department'.

Workflow then kanban

Kanban is applicable to different kind of processes. In fact, it can be used as soon as you have a workflow with a fixed number of steps. Kanban is often applicable for the test process, since many test departments work with a fairly standard workflow. You can think about the process that has been formulated in your general test strategy. It is, however, often difficult to keep track of all activities. Test departments are simultaneously working on a number of projects and are called upon when production problems need to be solved.

Kanban can help to keep a good overview on all these activities. The activities are divided into smaller work packages and are tracked on the kanban board. This gives insight into the activities that are in progress and completed. This overview enables the test team to keep a balance between:

- High and low priority functions;
- Operational and project activities;
- Test improvements and operational activities.

Flow over utilisation

Kanban is based on the theory of constraints (TOC). TOC aims for a maximum throughput by removing bottlenecks. Originally, TOC is applied to manufacturing processes. If you aim for a maximum utilisation of the team resources, like in traditional manufacturing, each team will push their products in the workflow. However, if the workflow contains a bottleneck, for example integration,

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Within Kanban nothing is predetermined, this make you very adaptive as a team. The team can shift priorities when the content of the releases or the functionality changes or when the team needs to assist with solving production disruptions. Every day, during the standing meeting, the team determines what risks need to be addressed and what activities represent the most business value.

partial products will pile up and the process blocks itself. Many traditional managers aim for utilisation, 'we pay you to work' is their motto; they make sure that everybody is fully engaged.

By shifting the emphasis from utilisation to flow, bottlenecks gain attention. The focus will shift to maximising the number of completed products and it is these completed products that represent business value. There is a pull, instead of a push; the integration team indicates the amount of products it can handle, and the other teams deliver just enough for the integration team to do so. That's why within Kanban we like to work with WIP (work in progress) limits. The WIP limit indicates how many tasks a team can handle. If a sufficient amount partial product is made, a team member might idle for a while. No problem, because we know that our turnaround time is optimal.

This principle is easily translated to testing activities. The maximum flow yields a maximum number of tested system components, changes, bugs or risks.

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New insights can be taken into the decision-making and the Kanban board helps to manage the resources. If required, tasks can be placed in the 'priority lane' and will be handled with greater urgency. This makes the teams work in a truly risk-based manner. The impact of changes to the plan are shown on the board and are clear to everyone. Since management is involved in the daily meetings they understand the impact of these decisions.

Greater visibility and better cooperation

Kanban triggers greater visibility and better cooperation. With the board as the new place to hang out, testers are challenged to help each other. Together with their teammates, they can discuss what it takes to finish a task as quickly as possible. It also pays to invite other disciplines to the standing meetings.

"I spoke recently one of our clients about him joining our daily meeting and he said that he would rather let the testers join the daily development meetings," said Suzanne.

"Great idea," says Simon, "but while our organisation is Agile. That wouldn't work in more traditional organisations. In these organisations it can really pay



to invite someone from the business, the release manager or someone from the development team to the testers' Kanban board. We have seen that this really boosts the commitment and involvement."

It is vital for a test department to demonstrate the value it adds to the business. Cooperation is a good enabler for this, because the people with whom you work, know what difference you make and visual management seems to be a perfect tool for this. The boards give a permanent status overview and a manager can visit the board at any time.

It is also important to tell a good test story and great opportunities for telling your story arise during these meetings. Team members exchange information about their insights, challenges and their progress. This ensures that others know what is happening. Interested parties can see for themselves what work is being done and what needs to be done. This promotes involvement and involves stakeholders in decision making

More fun, from workflow to personal flow

"Have you ever been in flow?" This is an unexpected question. Suzanne and Simon love working while in flow. They meet and have brainstorming sessions. Apparently, the question is relevant for

many people and flow is not obvious to everyone.

"Many people are in flow when they are busy with their hobby, but they are not when at work," explains Maik. "Lean, Kanban and visual management ensures that people are positively challenged. They are part of the team and get into flow much faster."

"How's that?" asks Simon.

"When working with kanban, you're working together," says Suzanne. "The whole team is working towards a common goal. Team members are asked to perform the things they are good at. The advantage is that you can be yourself, with more responsibility and autonomy. You'll also get immediate feedback on your performance, since the board makes visible what you have accomplished."

"More results and more fun?" Simon asks. Maik and Suzanne nod affirmatively.

Maik, Simon and Suzanne can't imagine that any serious manager does not want to invest in this. Satisfied with the outcome of this initial brainstorming they take a photo of the whiteboard. "We need to involve more people in this discussion," says Simon. "We have a lot to learn, but with this we can certainly improve out testing process and get recognition for the value we contribute."

They 'high five' and go home for the weekend.

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