

Great Walls of Wonder

Project team in front of an Agile Wall of Wonder



How to Build Your Own Wall of Wonder

One of the foundations of agile development is increasing the visibility into the software development process through techniques like the demonstration of working software at the completion of an iteration. Another technique is to leverage a visual radiator that shows requirements flowing through an iteration development lifecycle into completed and tested code. I call this a Wall of Wonder as it can have a wondrous effects on business stakeholders and project participants as they see iteration progress and can adapt to bottlenecks and problem areas.

What is a Wall of Wonder?

A Wall of Wonder is a visual radiator that software development teams use to manage their tasks and activities in completing their goals in an iteration. The Wall of Wonder is a highly tactile and visible tool that requires very little in the way of infrastructure or training to implement.

In many software development projects, information related to the project and its overall progress and velocity is 'locked' inside a variety of different tools. Project Managers create

GANTT charts in Microsoft Project, analysts document requirements in Requisite Pro or Doors, developers write their code using an IDE and check it into a version control system, testers write scripts using Winrunner or Loadrunner. In rare cases, this information will be browser accessible but typically it can only be accessed using the original authoring tool and often requires special authorizations to access the files themselves. In every case, it's not clear how any of information relates to one another; are the requirements being developed by the analysts really what the developers need to create the right software, do the testers know what functionality will be available for testing, does the project manager know that the most important/architecturally significant tasks are being completed first? The result is that it's almost impossible to get a definitive understanding of project progress which limits the feedback teams need to adapt and adjust.

One way around this is to create a Wall of Wonder. Using standard index cards, a white board and some tape or magnets you can quickly show overall progress in an iteration and make your daily stand-up meetings more effective.

Creating a Wall of Wonder

To create your wall of wonder you'll need:

- A large whiteboard in a highly visible location (ideally the same location where your daily stand-up meetings are held)
- Index cards (different color cards can be useful to represent different types of tasks but you can use a colored marker instead)
- Tape or if you have a magnetized whiteboard, magnets (you can buy these in small pre-cut squares)
- Post-it Notes: As you can see from the picture to the right, the wall of wonder in this case was a simple

white board next to a large table. This particular location was actually in a hallway which increased visibility into the project and the technique as people walked by. The team did considerable brainstorming around the table and the wall.

Collaborative Development and Fun with Cards

One of the most telling benefits of the Wall of Wonder and leveraging Task Cards is the level of collaboration and engagement that occurs. The cards themselves are an invitation to 'have a conversation' about a feature or requirement, similar to that advocated by Ron Jefferies. Enough information is available on the cards to prioritize and assign work but not so much that a developer will know exactly how to realize the functionality on the card. Another benefit of the cards is that different roles can work together to ensure that all the work on a card is completed. On many of the projects that I have managed the final test of completeness was having a tester walk through the code with a developer to ensure it worked to its specifications and was appropriately documented. The tester was armed with the Red Marker and when satisfied that a card was complete would 'approve' it with a mighty swipe of the marker. Developers who claimed they had completed their task card but didn't have the 'official' red marker check were quickly reminded that they weren't really done. The cards also became a fun way to show progress and bring some friendly competition into the development lifecycle. One of the developers on a project I managed once completed five cards in a single day, from that point on he was nicknamed 'Five Card', a name that persisted for several years after the project!

Creating Task Cards

The Wall of Wonder reflects activities and tasks associated with your iteration and to convey this, index cards are used.

One reason, index cards are so useful in managing complex software development processes is because they're so simple. Index cards are readily available (I've personally driven to many Office Depots to grab cards prior to facilitating planning sessions at client sites), they require little in the way of training, they're highly tactile and they're inexpensive.

The cards used in this example are tasks specifically related to developers and have some important components associated with them.

Using Your Wall of Wonder

There are a variety of ways to create your Wall of Wonder but there are several key themes that should be present:

- The first is that the purpose of the wall is to show progress in an iteration. You should separate disciplines and even application tiers to make this evident and ideally you should use plain language to represent each of the areas (which will make it easier for non-project team members to see progress).
- The second is that the wall should help different roles on the team work together to accomplish the goals of the iteration (which implies that you establish goals each iteration, if you need a template for this you can find one here). This means that analysts should be providing requirements to the development team in enough time that they can write software, developers should be building the system across all tiers (not just business logic), testers should be aware of what has been built and what has not been built in preparing their tests/validation processes.

One effective way to manage your Wall of Wonder is to leverage a 'kanban' style that shows the flow of work through the lifecycle (Requirements, Analysis, Design, Development, Test.

Deploy). Another, and the approach I used on this project, is to list all of the development tasks required to realize a requirement across all tiers of the application (presentation/business/data access). Any approach will work provided that the principles mentioned above are adhered to.

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The End Result

As you can clearly see from the picture, the development team is delighted with this technique and the level of engagement it provides. In all seriousness the Wall of Wonder quickly brought life to Daily stand-ups where team members would review their status on their assigned cards and often returned their completed cards and retrieved new cards during the stand-up. Business stakeholders frequently wandered by to check on progress and enjoyed seeing the tactile nature of the Wall of Wonder which felt 'real' compared to the canned reports they found in their corporate project management applications. For such a modest investment in materials and training, a Wall of Wonder can yield remarkable benefits and is a worthwhile technique for any Agile team to leverage.