What is Kanban?
- Visually-driven scheduling system
- Workflow methodology that increases quality and productivity
- Creates a collaborative, goal-oriented environment

History of Kanban
- Means “visual note” in Japanese
- Created by Taiichi Ohno in the 1950s at Toyota
- Inspired by grocery store inventory techniques

Foundations of Kanban
- Visualize your work
- Limit Work-In-Progress (WIP)
- Pull Method

Visualize your Work
- Kanban boards are centrally located in the office or online
- This allows team members to continually update the status of tasks as they are completed
- Kanban increases efficiency by eliminating the need for status update meetings and confusing emails
- Holds team members accountable because their progress is continually tracked
- Promotes collaboration between team members; members can work together to further the status of a task

Limit WIP
- Physically limiting the number of notecards in each column
- Ensures that employees remain focused, dedicated, and cognizant of the particular project’s goals and their respective statuses
- Prevents the accumulation of tasks that lead to worker fatigue and stress
- Having too many tasks in progress at one time impedes on general productivity, which inhibits sustainability
- Makes sure there are enough tasks in each column so that every team member has a task to work on, and it allows extra tasks for developers to switch to if working on one task becomes unproductive

Pull Method
- Tasks are “pulled” from column to column depending on their status
- Prompts teams to prioritize tasks and only pull in new tasks when a team member is ready for more work
- Allows effective collaboration and cooperation among team members
- Emphasizes proactivity instead of reactivity
- Compared to the push method which historically slams team members with various tasks leading to worker fatigue and stress

Potential Drawbacks
- Competition between team members to complete the most tasks
- No deadlines designated on the Kanban board
- Demand as the sole indicator of when to increase inventory – if demand drastically changes over a short amount of time companies may not be able to stay on pace with the needs of the customers

Kanban at Software Development Companies

Kanban at Xbox
- Kanban Board: “Visualize work and limit WIP”
- Columns: Backlog, Specify, Implement, Validate
- Sub-columns within each column, serve as a quality check on each task
- Mathematical formula to determine WIP limit
- Enough tasks for each developer
- Extra tasks if work on one task becomes unproductive

“Every minute of work my teams do adds value for customers to our products.”

Kanban at Spotify
- Kanban Board: Columns: To-Do, Doing, Done
- Rows: Tangible, Intangible, Expedite
- Separates Operations Team tasks and tasks for other departments
- Low WIP limits
- Ensures that “Intangible” tasks are completed

“We’ve noticed that our lead times are shorter, we get more internal tasks done, and the departments we interface with are happier.”

Other Workflow Methodologies

Kanban
- Builds a solid foundation for long-term success by improving quality of whole processes
- Promotes a sense of positive collaboration
- Saves employees time and money
- Improves the standard and quality of projects
- Highly adaptable
- Continual feedback and quality checks
- Simple workflow terminology
- Stimulates and maintains productivity

Lean and Six Sigma Manufacturing
- Focus on decreasing waste and reducing the number of product defects
- Scrum
- Two to four-week sprints
- Focus solely on a specific project to complete in that time frame
- Highly technical, so it tends to be harder for new employees to grasp the terminology
- Waterfall
- Clear flowchart-like path which is designed based on cost and time allotted
- Very little flexibility