NATIONAL ASSOCIATION OF Community Health Centers®

IMPROVEMENT METHODOLOGIES FOR INFORMATICS

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WHAT IS LEAN?

Lean is a methodology that looks at what is not adding value from the customer's perspective and eliminates or modifies those activities, in turn maximizing value to the customer. Lean:

- Is applicable to any type of process either in an organization or one's personal life.
- Shifts the way one thinks about the work they are doing to become more customer centric.
- Creates a culture of continuous quality improvement.
- Focuses on eliminating waste that is not adding value from the customer's perspective
- Utilizes the people who do the work to improve the work.
- Focuses on what is in your control!

WHEN TO USE LEAN?

Lean works well when applied to processes that already exist and are not optimized or a new process that needs well-designed workflows created to integrate into an organization or more complex process. Some examples in the informatics world include:

- Clinical workflows that seek to improve the completeness of a certain activity such as a pre-visit planning process
- Steps to create an electronic clinical quality measure
- Data reporting process to the government or other organizations

WHAT IS AGILE?

Agile is a Lean planning method that focuses on a iterative (versioning) approach to break down larger projects into more manageable tasks, allowing maximum flexibility for solution modifications and improvement, and staff time optimization. When using Agile, you are working hand in hand with the customer to understand their needs while iteratively developing artifacts to meet those needs which gives your team the ability to quickly respond to change. Some key aspects of Agile are as follows:

- Development is small, incremental releases throughout, and iterative.
- Requirements are built out at a high level.
- The customer is involved throughout the development cycle.
- The team is empowered to make decisions and prioritize the work.
- Visual boards are used to plan and track the work.

There are two well-known Agile methodologies: Kanban and Scrum.

WHEN TO USE AGILE?

Agile works well for project management and software/product development. Specifically, Kanban is more flexible for project management, inventory control, or even tracking your everyday workload. Scrum works particularly well for software or product development. Some examples in the informatics world include:

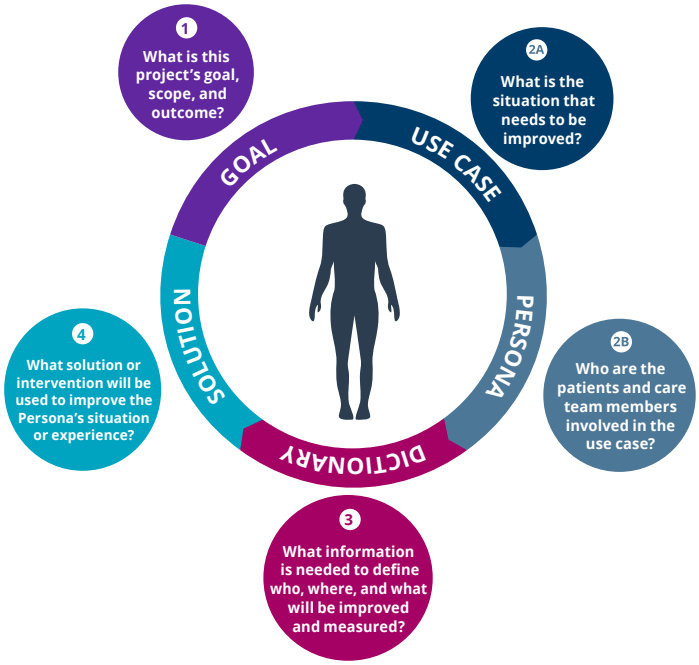
- Converting data sets including mapping, analytics, and dashboard creation
- Overall project management utilizing workplans and deliverables

WHAT IS HUMAN CENTERED DESIGN (HCD)?

Human Centered Design (HCD) is a creative approach to problem solving that starts with building empathy with people and ends with innovative solutions that are tailor-made to suit their needs. HCD emphasizes finding problems as much as solving them. HCD starts with the description of the human stakeholders and their stories and builds from there towards process and solutions. Some key aspects of HCD are as follows:

- Builds empathy through interviews and observations to understand the customer journey
- Emphasizes finding problems as much as solving them
- Creates prototypes to test early and often
- Allows and encourages pivoting as learnings are identified around the customer's needs
- Involves the customer throughout the process

FIGURE 1. HUMAN CENTERED DESIGN FRAMEWORK



WHEN TO USE HCD?

HCD is best applied to complex, gnarly problems and pairs nicely with Agile and Lean. Once a solution is found through applying HCD, Agile can be used for implementation and Lean to standardize the workflows. An example in the informatics world includes designing the EHR backend and interface for maternal health, providing care coordinators with timely, relevant data for care coordination.