Adam Donner

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Assignment 2.3

When deciding where to start a DevOps transformation, it is essential to keep a few key ideas upfront in everyone’s mind. These ideas include evaluate and choose a value stream, understand the work that is being done in the value stream, consider Conway’s Law when the organization and architecture is designed, collaboration between all of the functions, and protect and enable the teams. When all of these are kept in mind, the DevOps transformation will be a success (Kim, Debois, Willis, Humble, & Allspaw, 2017).

It is crucial to choose where and how to start the DevOps transformation carefully. The value stream that is chosen will ultimately determine how easy or how difficult the change is, as well as who all of the players will be and what they will do. Value streams can be either a greenfield or a brownfield service, a systems of engagement, or a systems of record (Kim, Debois, Willis, Humble, & Allspaw, 2017).

In terms of software development, a Greenfield service is a new software project or initiative. It is usually in the early stages of planning and/or implementation. Brownfield services are existing products or services that are already serving customs and have been in operation for an extended period of time (Kim, Debois, Willis, Humble, & Allspaw, 2017). These usually come with a large amount of technical debt. It is also essential to consider if the value stream is a systems of engagement or a systems of record. Systems of record are the ERP-type systems that are relied on to run day to day business such as financial, CRM, or HR (Bersin, 2012). These need to be correct and integrated so that all of the data is consistent. The systems of engagement are systems which are usually directly used by employees for things such as email or learning system (Kim, Debois, Willis, Humble, & Allspaw, 2017).

It is crucial to set goals for the DevOps transformation. Instead of one large overacting goal, success can be found by breaking it into smaller incremental goals. This allows errors to be detected early on in the process. This will also pave the way to a base of support being built and the right to expand the use of DevOps throughout the organization. This is done by finding innovators and early adaptors who actually want to help. By choosing an individual that has a lot of credibility in the organization, it also gives credibility to the transformation initiative. The more teams that DevOps practices can be rolled out to helps to build a base of support. Any holdouts or those who are high profile or influential that are resistant in the organization should be identified. These are individuals that can harm the initiative (Kim, Debois, Willis, Humble, & Allspaw, 2017).

It is essential to understand the work that is being done in the value stream, to make the value stream visible and to expand it across the organization for it to be successful. Organizations are complex. Because of this, it is important to identify all of the members of the team that will be supporting the value stream. This includes the product owner, the development team, quality assurance, infosec or the team that secures systems and data, the release managers, and the value stream manager (Kim, Debois, Willis, Humble, & Allspaw, 2017).

A value stream map gives all team members involved a visual picture of how the work is to be performed. The values stream map allows for an understanding of the areas in the value stream that may cause problems (Kim, Debois, Willis, Humble, & Allspaw, 2017). Items are mapped as adding value or not adding value from the customer’s standpoint. Items that do not add value can be taken out (Lucidchart, n.d.). Using metrics from the value stream map, improvement efforts can be made (Kim, Debois, Willis, Humble, & Allspaw, 2017).

Organizations, even long-standing organizations, need to be open to change in how things are done to adapt to what is currently in the marketplace. This change can cause disruptions and turmoil. It is vital to create a transformation team that can operate outside of the rest of the organization that will be responsible for the daily operations. The team is accountable for making sure that goals are defined and can be measured. The team members should be dedicated to the transformation efforts, are generalists, are respected in the organization, and have a dedicated space just for the team (Kim, Debois, Willis, Humble, & Allspaw, 2017).

A clear, defined, and measurable goal is also essential. Value should be created by achieving the set goal. Everyone in the organization from the bottom to the top needs to be aware of the goals. It is also good to break the overall goal into smaller goals. By achieving the smaller goals, it keeps the progress moving (Kim, Debois, Willis, Humble, & Allspaw, 2017).

Technical debt causes problems for organizations because many times, it is not prioritized correctly. If the technical debt is not paid down, daily workarounds cause strain on the project, and new work never gets done. 20% of all Development and Operations cycles should be invested in maintainability, manageability, scalability, reliability, testability, deployability, and security. When this is not done, the technical debt will continue to increase until this is the only thing that the organization can focus on (Kim, Debois, Willis, Humble, & Allspaw, 2017).

How the development team is organized will have an overall effect on the success of the value stream. Conway’s Law states that “organizations which design systems …are constrained to produce designed with are copies of the communications structures of these organizations…The larger an organization is, the less flexibility it has and the more pronounced the phenomenon.” Conway’s Law allows developers to develop safe as well as independently test, develop and deploy. With Conway’s Law in mind, there are three primary types of organizational structures that apprise value streams. These are functional, matrix, and market. Functional oriented organizations optimize for expertise, division of labor, or reducing cost. Matrix oriented organization try to combine functional and market orientation but typically end up with a complicated structure. Market-oriented organizations optimize for responding quickly to the customer’s needs (Kim, Debois, Willis, Humble, & Allspaw, 2017).

When Operations is integrated into the daily work of Development, the outcome is excellent. This can be achieved by better-integrating Operations capabilities into the Development teams, which in turn make both more productive. This also leads the way to better collaboration and organizational outcomes (Kim, Debois, Willis, Humble, & Allspaw, 2017).

There are three broad strategies that can be engaged to achieve these outcomes. Creating self-service capabilities enable developers to be more productive. By embedding Operations engineers into the service teams, the desired result is recognized. The third strategy is to assign Operations liaisons to the service teams when embedding Operations engineers is not possible (Kim, Debois, Willis, Humble, & Allspaw, 2017).

Integrating Operations engineers into the Development team allows them to be integrated into the daily rituals of the Development team. This enables Operations to get a better understanding of the culture as well as all aspects of planning and daily work. One of these rituals is the daily standup or a quick meeting where everyone on the team gets together and presents what was done yesterday, what is happening today, and what prevented work from getting done. During the standup, everyone is on the same page and knows what is going on throughout the team and not compartmentalized. Another ritual is retrospective. When each developmental interval is finished, the Development team discusses what worked, what did not work, and what can be implemented for future success (Kim, Debois, Willis, Humble, & Allspaw, 2017).

A DevOps transformation can be successful when the entire process from start to finish is understood and put into action. Starting with a value stream, knowing the members of the teams that are involved, mapping the value stream, and integrating Operations into Development will lead to a great outcome.

References

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