

Executive Summary

Many software engineering organisations today seek to build high performance teams to cater to the demands of changing business environments. Often, these changes in the business environment are enabled by rapidly evolving technologies. Software engineering organisations however are challenged by the demands for rapid changes, enhancements, upgrades, high quality and urgencies. With the definition of agile software development and management concepts in the early 2000's, software engineering organisations continued to seek newer and better ways of accomplishing their tasks and meeting these demands from the business environment. The DevOps approach emerged almost a decade after this, which has agile software development methodologies as one of its key practices that drive the approach. It is not merely a form of organising a team comprising of development and operations personnel; instead it is an approach that forms a collaborative and open culture within the team and the organisation alike to improve efficiencies and help teams deliver business value at the rate at which it is expected.

The GME team at Pearson PLC adopted the DevOps approach to deliver a unified monitoring platform for Pearson within a very short time-span. The team had two months to develop a proof of concept of Pearson's requirement, and six months thereafter to deliver a solution that was capable of consolidating all monitored data from over 3000 different software applications from almost twenty different monitoring tools, and correlate this data to help the viewer identify the root cause of a problem when alerted. The GME team also had to integrate this platform with Pearson's top 20 revenue generating software applications. The DevOps approach enabled the GME team at Pearson to meet and greet these demands and deliver a high quality software solution. As the GME team followed an agile software development methodology, they delivered small increments of business value every two weeks to the Pearson throughout since its inception. The leadership of the GME team strongly believed in empowering the team members to innovate and make decisions that would help improve the value delivered through this product. Innovation taking place within the team has helped enhance the team's collective knowledge and skill-base that further enabled them to complete work items at a faster pace and deliver more and more business value. A key aspect worthy of mention is how the team's vision was originally defined and communicated to the team by the leadership of the GME. This vision was communicated to the team as a 'dream' to achieve and thus helping them relate their

work better with it. The GME team also followed the other key DevOps practices including implementing continuous integration and continuous deployment that helped remove repeating tasks and reduce the time taken to deploy code to a production (live) environment, creating a mind-set of the ‘fail-fast’ approach that also empowers the team to take risks, innovate, make decisions, and be accountable of their actions, and steer away from a ‘blame-culture’. This case study highlights how the definition and communication of the team vision, agile practices adopted by the team, and innovation taking place within the team that contributed toward the collective knowledge and skill-base of the team helped the GME team achieve an increasing velocity of value delivered to the business. The GME team is identified as a high performance team in this case study based on the rate of increasing team velocity through this time period that also highlights a relative peak achieved during the months of April, May and June 2015.

It is however important that as the product continues to mature, the GME team continues its high performance and productivity. The may not always have the same members; new members may join the team, and it is very important that the GME team communicates and shares the vision and DevOps practices with them to ensure that the values of the team, the vision of the team is not lost and is carried forward regardless of the changes in team membership. As the product matures, it is important to engage technical resources of the team when defining the short-term goals, for they will be able to contribute towards the goals with their technical know-how related to business requirements. Innovation has been a core driver of the GME team; enabling them to deliver newer and better ways of technically resolving a business problem. The team needs to be empowered to innovate and make decisions throughout so that better value is always delivered through the product to the Pearson. One of the most important recommendations to the GME team would be beware of the constant pull towards traditional and less flexible methods of software development; this would limit the team from performing well and rapidly deteriorate their efficiency rates.