Implementation of external DevOps in pharmaceutical companies

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Resumen

El negocio que requiere desarrollos y despliegues constantes necesita a DevOps como un mod-el de desarrollos digitales. Con esto, esperamos obtener un método de análisis para cubrir la necesidad e implementar DevOps como un outsourcing. Su objetivo es la producción de desarrollos y servicios de software por igual para ahorrar en costos en las campañas de publicidad ATL y BTL.

La industria farmacéutica busca llegar a nuevos clientes utilizando campañas digitales constantes que requieren un desarrollo continuo para cubrir el lanzamiento y el soporte de campañas publicitarias para sus productos. Estos desarrollos tienen diferentes metodologías como "lean startup" que permiten acortar sus ciclos de desarrollo y mantenerse al día con sus campañas publicitarias.

Este sector en su mayoría no requiere un área interna de DevOps a la que se debe contratar a proveedores externos para su desarrollo e implementación, reduciendo los costes operativos y aprovechando la experiencia de las empresas contratadas para cumplir sus objetivos.

DevOps, Outsourcing, Leanstartup

Abstract

The business that requires constant devel-opments and deploys need DevOps like a mod-el of digital developments. With this, we hope to obtain a method of analysis to cover the need and to implement DevOps like an outsourcing. Their goal is the production of developments and software services equally to the save in costs in ATL and BTL publicity campaigns.

The pharmaceutical industry seeks to reach new customers using constant digital campaigns that require continuous development to cover the launch and support of advertising campaigns for their products. These develop-ments have different methodologies as "lean startup" that allow shorten their development cycles and keep up with their advertising cam-paigns.

This sector mostly do not require internal DevOps area to which are in the need to hire external suppliers for its development and im-plementation, reducing operating costs and tak-ing advantage of the experience of the compa-nies contracted to meet its objectives.

DevOps, Outsourcing, Leanstartup

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Introduction

Publications on job sites suggest otherwise, but DevOps is not a job DevOps is that developers understand the reality of the operations and the operations team understands what is involved in development. DevOps, the concept is an important aspect of development and delivery of software. But the position of DevOps is a symptom that organizations that hire not understand what is really DevOps. It allows development and operations to collaborate in delivering software. But that is not his ultimate goal.
DevOps point is to allow your company to respond to market forces as quickly, efficiently and reliably as possible. Without the business, there is no reason that we are talking about DevOps problems, much less spend time solving them

The new challenge facing managers DevOps is all the attention that the subject obtained by the business. What was once an arcane task, elabo-rate coordination and project management is now part diplomacy, part protector and a good amount of innovation.

Agile DevOps originated as a way to support the agile practice more frequent code releases. But DevOps is more than that. The fact that continuous integration is practiced does not mean you are doing DevOps. Operations man-agers are the key stakeholders that agile teams need to work to free software.

DevOps is a philosophy that supports and pro-motes collaboration and communication be-tween different departments and teams in-volved in the development of a product or ser-vice. Usually, it is a natural extension of lean and agile concepts, and that applies in relation to operations, especially technological.

For example, when in the process of conception, design and development, it is correct and con-veniently involves people who will be involved, it is being applied DevOps philosophy. If one of the teams is set aside for, say, avoid obstacles and barriers you can put the DevOps philosophy is ceasing to apply. Thus, someone who puts obstacles and barriers, but offers no alternatives, agreements or solutions are not applying DevOps.

To better understand that this is, first we must talk about agile methodologies. According to these there is a pattern of work in which some perform development and other customers, but exploiting Operations collaborate with each other, creating work teams composed. The DevOps engineer is key because it has a labor arbitrator between the two worlds to define useful processes and to detect errors earlier.

Instead, the previous model of operation, when the client received a complete software product and detect errors and new requirements and it was late and it was incredibly time. To clarify the term for the uninitiated, according Joy can be compared with a football and a basketball. The first has only three changes and therefore less options to correct errors while the second, as in the DevOps philosophy, can make the changes you want whenever it detects that something is wrong.

The article will be developed in sections as fol-lows:

Section 1: How to work around the DevOps?
Section 2: Need for the pharmaceutical industry
Section 3: Ease of Implementation
Section 4: Continuous Deliveries
Section 5: Quality
Section 6: Implementation in the company
Section 7: External implementation

Section 8: Delivering value

How to work around the DevOps?

As a portmanteau of developer and operations (DevOps), DevOps is intended to express a unification of the two disciplines such that they should forge a new and more considerate approach for each other. Management and orchestration software companies are fond of using the new DevOps label, but software automation controls only explain part of the story.

The DevOps is driven by the fact that markets move fast, so software development needs to deliver more quickly if firms are to stay profita-ble.

But if you get a DevOps pitch from a consult-ant or supplier of any shape that doesn't men-tion definable metrics, call stack analysis and the ability to use microservices to finesse defin-able tasks and jobs, then walk away quietly. [Bridgwater, A. (2015)]

Need for the pharmaceutical industry

Driven by a demand from established enterprises wanting to adopt a DevOps model and wanting guidance to get them there. The focus on working with customers is one which resonates with other consultancies in the DevOps space. A key part of the value proposition is in helping clients understand how DevOps will look in their organization, and how to approach the transformation to get them there successfully.

The point about buy-in is an important one. Companies looking to DevOps may not appre-ciate there is an initial up-front cost, not just in the transformation process, but in acquiring new skills and using them to automate manual pro-cesses.

Getting the most from DevOps requires more than just investment for cultural change. Transi-tioning to a culture which can deliver high-quality software at high cadence only works if your products are technically structured to ben-efit from rapid deployment. Combining tech-nical change with cultural change gives the greatest potential for improvement.

An interesting aspect in the growth of DevOps consultancies is the type of clients wanting to implement DevOps is no longer the preserve of start-ups, but has a place in all types of enter-prise.

Common to all the consultancies is a belief that DevOps is a model that can change businesses and help them to achieve their goals. [Sharma, P. (2016)]

Ease of Implementation

DevOps is a relatively new concept in comparison to Agile development, so it should come as little surprise that IT enterprises have a myriad of experiences and instances of Agile approaches. And there is no need to throw everything out and start over - both Agile and DevOps are complimentary. Building a DevOps state of mind requires more than giving developers root, installing a configuration management tool or using a source code repository. At the end of the day all aspects of the people, process, tech-nology continuums get impacted by DevOps.

DevOps is a business problem, so be sure to get buy-in early from senior leadership and collabo-rate with middle management to ensure align-ment. The organization as a whole must commit for DevOps to be a success.

Consider extending Agile principles beyond of the code to the entire delivered service to help in the breakdown of complex systems into sim-ple components and modular services allowing rapid and incremental changes.

Development and Operations staff need to build new skills to add to their core skills in a DevOps environment. And as this cross-pollination begins to occur, new skills will emerge that you will need to identify and plan for.

Begin to mesure things like: deploy frequency, change fail rates, mean time to recover, lead time for changes. [Callanan, M. & Spillane, A. (2016)]

Continuous Deliveries

The acquisition brought with it the funding and resources needed to allow the business to grow and expand to become a global player.

It so happens that they made the right choice to implement continuous deliveries (CD) and DevOps and did indeed reap the best of both worlds.

Deliver too soon and you may have wasted money on building solutions that the customer decides they no longer need, as their priorities or simply their minds have changed. Deliver too late and someone else may well have taken your customer away from you. The important key-word here is deliver.

There is a reason for stating that the culture, default behaviors, and engineering practices of a small software house would be classed as pretty good rather than ideal.

The business has grown in size, numbers, and turnover. The customer base spans a number of countries and software platform is being used by millions of customers on a daily basis.

Sitting above all of this, the parent company also has well established program and project management functions to control and coordi-nate the overall end-to-end product delivery schedule and process.

Do whatever is needed to streamline the process of software delivery and make it seam-less and repeatable. In essence, implement CD and DevOps. [Swartout, P. (2014)]

Quality

From a development team's perspective, the product release represented a closed-loop pro-cess that was repeatable and formulaic.

This era of predictable variables and finite schedules ended. The conflict between contrib-utors is now best laid to rest. Quality assurance (QA) engineers have almost no place in a scrum team. Products grow from prototypes.

The development-to-support chain of command was as defined earlier. Developers worked from a spec, and the "Minimum Requirements" doc-ument was a rigid set of constraints.

The DevOps notion emerge from many of the same industry forces that have brought the job description of QA engineer closer to that of developer. There are specific areas where the DevOps wave has served to completely and permanently improve product development and ownership, thanks specifically to a sharper focus on metrics and process standardization.

The aspect of the modern software landscape that most benefits creators is the availability of both thin and thick client solutions at design time.

When dealing primarily with client-side code, the variability of client permutations and a lack of accurate behavior measures make QA input far less objective and verifiable.

Prioritizing bug fixes provides make or break influence over a software release. Mandating bug fixes prior to a release is a different respon-sibility. Getting bugs fixed in specific windows of the development cycle opens the opportunity for more and more interesting testing. [Roche, J. (2013)]

Implementation in the company

Experiences where people believed broadening was career-threatening because it no longer sat within the narrow guidelines of the next-level certification some arbitrary IT authority had laid down.

When people realised what their joint responsi-bilities are, that is really key to the success of DevOps.

We now countries where we have 50% of IT in DevOps teams and 50% working in a waterfall way, and we have countries where business is fully included in DevOps, and others where it is not, it was essential to have a strong leader on the DevOps team to steer the ship.

People like to keep doing the same thing, unless acted upon by an external force

Starting small and being accountable for your success and showing the difference that doing things this way makes to the organization.

When new leaders come in, there is disruption. They bring in new ideas, and they can be great, but they can also be negative and stop some of the progress being made. We have heard this from other organizations when new leaders came in and the DevOps program was put on pause.

It's the people in the middle who have to deliv-er, come hell or high water, that we need to get on board.

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External implementation

The evolving IT enterprise needs to break away from the shackles of traditional IT and con-stantly explore and embrace new and exciting ways of doing things. How DevOps will impact outsourcing.

So as the DevOps journey begins, what does it mean for the IT service providers? Most com-panies outsource some part of their software development work, so it becomes inevitable that their DevOps journey includes their outsourcing partners. This means a significant transition awaiting IT outsourcing companies.

Outsourcing vendors are also waking up to the new realities and are looking at building their capabilities in this direction. As the traditional IT moves more closer to IT as-a-service model, any development/enhancement services being provided by vendors would only fit the action if they work on the DevOps conveyor belt model and have rapid provision capabilities.

The IT services industry will have to invest in developing a large cross-functional resource pool over the coming years. We are also likely to see a consolidation of boutique firms that are currently offering DevOps solutions to enter-prises.

The advent of innovative technologies and or-ganizations growing interest in DevOps certain-ly marks the beginning of a transformational era for IT outsourcing. It is a change that service providers need to embrace and get geared up for. If they do, the opportunity will be big but if they don't, the loss could be even bigger.

Significant investments are needed in areas like agile development, business-driven develop-ment testing, automated testing, automated security testing, and so on. These capabilities exist in isolation in most service providers to-day. But the need of the hour is to merge these capabilities to create a multi-disciplined/cross-skilled workforce.

As organizations strive to succeed and stay ahead in this application-driven economy, IT service providers can turn the DevOps challenge into a rewarding opportunity by showing them the real business value and charting the future roadmap. [Vasudevan, S. (2015)]

Delivering value

The main challenge is not really a tech chal-lenge, but a communication challenge. If we can get people to communicate and collaborate more, the technology just seems to work.

Getting people together to share ideas and see what works is how DevOps is most successful for us.

If you have an operations team and a develop-ment team, plus a DevOps team that sits in the middle, you have somewhat missed the point. If you have an operations team and a DevOps team, plus a DevOps team that sits in the mid-dle, you have some what missed the point.

Making things that used to take a while such as firewalls and some domain name system chang-es, which used to be process driven faster and selfservice are real wins which "people get quite excited about. [Evenstad, L. (2015)]

Conclusions

DevOps is a great methodology to work around the business creating the relationship between development and the business. I disagree in the implementation of DevOps because is the need of the business to educate their personal in the business.

The pharmaceutical industry is one of the busi-ness that excludes the employees of various areas in their business models, the external im-plementation of DevOps keeps exclusive and private the information of the business model, but is important to keep no disclosure agree-ments with this personal in the case of need.

Nowadays is really easy to implement DevOps with all the information available and the com-panies that help your business to implement this methodology.

The continuous deliveries are key to keep the business running with their TI area. The quality with this deploys is important to coordinate the business model with the needs of the business.

Implementing DevOps internally is key, because no one knows the business better than an senior employee. You can't equal the knowledge the business with an external implementation. This is not relevant to the deliveries of value that DevOps help to improve.

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