**DevOps帮助数字化转型的10个方式**



作者：Carla Rudder

The Enterprisers Project的作家与内容经理

August 13, 2019

译者：付文新 上海 Devops工程师

本文原始链接地址：<https://enterprisersproject.com/article/2019/8/devops-role-digital-transformation>

**从模式识别到新收益流的发现，DevOps 在数字化转型过程中扮演着必不可少的角色。事实上，专家们总是说缺一不可。**

弹性伸缩的DevOps并不是功绩，因为当你的Devops之旅停滞不前时，那么数字化转型也就没什么希望了。专家们说这两者之间有着内在的联系。

DevOps通过转变企业的文化倾向，打破危险壁垒，为持续改变和快速实验铺平道路，从而帮助企业成功实现数字化转型。Conflux咨询主管、团队拓扑的合著者Matthew Skelton说：所有这些要素不但有助于企业满足不断变化的客户需求，而且有助于企业“自我引导”朝着更好的解决方案持续改进。

**[欲知更多，请查看关联文章:**[**为什么DevOps和云平台对数字化转型如此重要？**](https://enterprisersproject.com/article/2017/4/why-devops-and-cloud-are-essential-digital-transformation?sc_cid=70160000000h0aXAAQ)**. ]**

Skelton说：“如果不能在构建和运行IT系统中的不同团队之间进行良好的协作，数字化转型几乎不可能成功。现在的技术变革是如此之快，以至于不能期望一个单独的团队能够了解所有的技术细节，所以我们需要团队能够关注与一个较小的问题领域。如果没有基础设施自动化和精心挑选的团队，数字化转型的步伐将停滞不前。”

**DevOps影响数字化转型的10个方式**

哪一种方式能够帮助你所在的企业在数字化转型的目标上取得更大的成就？

1. **DevOps有助于改变企业在文化上的思维倾向**

来自[Harness](https://harness.io/" \t "_blank)的CI/CD & DevOps传道者 Steve Burton说：“DevOps应该被称为加速任何现代化企业转变的催化剂，不管你是叫它数字化转型、云原生还是鲍勃的甜甜圈。DevOps主要是讲述一种商业理念并帮助企业尽快实现这一理念；它并不是一种技术或者流行语。

企业文化是许多大型组织或企业无法转型的原因，他们太固守于他们这25年来如何开发、运输和运营软件的方式了。DevOps 是一种文化上的思维倾向的转变，归根结底它是想要创建一种没有繁文缛节和官僚主义的环境。”

**2. DevOps有助于团结人、流程和技术**

来自[Perfecto](https://www.perfecto.io/" \t "_blank)的CI/CD & DevOps传道者Eran Kinsbruner说: “evOps让组织更快的向客户发布新的价值，从而促使这些组织成熟并改变数字面貌。Devops团结人、流程和技术：当这三者协调一致朝着同一个目标时候，就是更快的引入变革的时候。

DevOps通过聚焦于数字化变革需要做的事，避免人力和工具的内部浪费，这本身就释放的更多的资源，这些资源要么隐藏，要么浪费在更低优先级的事务上，这样团队就能处理最重要和最关键的特性。

没有DevOps，新技术不能在足够短的时间内更快的发布以跟上竞争响应市场事件和满足客户需求；没有Devops，也无法保证发布的质量和发布流程的自动化，而软件的拓展革新也变得更加困难。”

**3. DevOps 有助于发现利于组织改善的模式**

来自[Ranger4](https://www.ranger4.com/" \t "_blank) 的Devops专家Helen Beal说：“evOps在数字化转型中的作用是帮助组织了解模式与实践，从而提高在面对数据混乱情况下的性能进而改善竞争态势。 从分级指挥控制的传统企业转变成权力分散、自治和平衡的数字化公司，需要所有人的付出，并做出重大的行为上的转变。

DevOps 方法有助于我们理解为什么优化从理念到价值实现的流程不仅仅只是构建一个pipeline，更重要的是从文化角度为我们提供了框架和模型。”

**4. DevOps 有助于团队自我引导**

来自Conflux的咨询主管Matthew Skelton说: “DevOps can help make IT infrastructure more testable, resilient, observable, dynamic, and on-demand. This helps digital transformation by enabling safer, more rapid changes to the supporting IT infrastructure, which then enables safer, more rapid changes to software applications and services. We also discover operational requirements sooner, improving operability. The role of DevOps in digital transformation is also to ensure that all changes to build and deploy systems and IT infrastructure are driven from code in version control, removing the ambiguity of manual configuration and enabling traceability back to version control.”

**DevOps can help to make IT infrastructure more testable, resilient, observable, dynamic, and on-demand.**

When combined with rich digital telemetry from modern monitoring and observability tools, we end up with a powerful awareness of our systems that helps to reduce MTTR (Mean Time To Recovery), enabling teams to take real ownership of production services. This in turn helps an organization to respond more quickly to changing market conditions – to 'self-steer' toward better solutions."

**5. DevOps makes automation a priority**

**IT has been so busy automating the world, we almost forgot the benefit of automating our own toil.**

**Jayne Groll, CEO,**[**DevOps Institute**](https://devopsinstitute.com/)**:** "DevOps has created a focal point around which enterprises can shape their digital transformation strategies. The DevOps principles of increasing flow, shortening feedback loops, and encouraging continuous learning and experimentation are the seeds upon which digital transformation can become a reality. IT has been so busy automating the world, we almost forgot the benefit of automating our own toil. DevOps advocates the optimization of automation to bring its principles to life.

The caution here is that automation by itself is not the magic solution for either DevOps or digital transformation. Automation has to be authored by people and underpinned by both process and culture. But without CI/CD/SRE automation, digital transformation is much more difficult and competitive advantage much more limited."

## ****6. DevOps breaks down silos****

**Jeff Fried, director of product management, [InterSystems](https://www.intersystems.com/" \t "_blank):** "Development teams are oftentimes the masterminds behind any digital transformation initiative. They build and support the architecture that makes enterprise-wide digital transformation a reality – whether that is developing an application for remote collaboration or maintaining the infrastructure to ensure successful data storage and sharing. Any successful digital transformation rollout also comes with an accelerated pace of innovation and requirements for the on-demand updating and development of new tools. As a result, development teams must adopt a DevOps mentality, which will help power their digital transformation initiative by enabling team members to test and troubleshoot quickly, collaborate across the organization, and embrace experimentation, ultimately driving innovation.

**One of the biggest ways DevOps fuels digital transformation is by breaking down organizational silos.**

One of the biggest ways DevOps fuels digital transformation is by breaking down organizational silos. Successful digital transformation initiatives require adoption across the entire organization, but it’s common for traditional business practices to get in the way, such as annual planning cycles or slow processes. By breaking down these silos, development teams can gain better insight into what is and isn’t working across the organization, which enables swifter improvements and creates a culture that embraces the changes that come with digital transformation."

## ****7. DevOps extracts new revenue streams****

**Gur Steif,** **president,** **digital** **business** **automation,**[**BMC**](https://www.bmc.com/)**:** "In a climate where speed to market is an existential requirement, DevOps is one component of a technology strategy that must be considered. DevOps drastically improves agility, allowing extremely fast response to changing requirements or market conditions.

**DevOps drastically improves agility, allowing extremely fast response to changing requirements or market conditions.**

No matter how you define 'digital transformation,' the 'digital' is fundamental, meaning the transformation relies on leveraging technology in new and/or more effective ways to achieve business goals. DevOps represents an evolved way of working, across the entire value chain, for organizations to bring new services to the market and to extract efficiencies – and even entire new revenue streams – that previously were inconceivable."

## ****8. DevOps enables continuous and reliable change****

**Dave Ehringer,** **senior** **architect,** **secure DevOps** **platforms,**[**Liberty Mutual**](https://www.libertymutual.com/)**:** "As we look at most digital transformations, they’re driven by many things such as the desire to enable the business to learn, iterate and move faster. They look to embrace the cloud and to modernize their architectures with approaches such as microservices. They look to reach broader user bases and achieve greater scale. If you don’t have process, culture, and discipline that allows you to continually and reliably introduce change, which is what DevOps can help enable, it isn’t possible to achieve these goals. There is a lot of complexity that comes along with cloud and with operating [microservices](https://enterprisersproject.com/tags/microservices). If you don’t have strong or shared alignment across development and operations, your chances of success is limited. DevOps principles and culture are the fuel for enabling these types of transformations for most organizations."

## ****9. DevOps makes customers happier****

**Mirco Hering,** **global DevOps** **practice** **lead,** [**Accenture**](https://www.accenture.com/us-en)**:** "Large-scale manual efforts and fragmented delivery teams optimized for cost worked when systems evolved slowly and the systems themselves were large applications. In the new digital world, speed and reactiveness is more important than control. DevOps creates the capabilities both from a technology perspective as well as an organizational perspective to deal with the increasing demands in regards to speed and complexity.

**In the new digital world, speed and reactiveness is more important than control.**

There are three main ways that DevOps enables digital transformation. The first one is that it makes the delivery of systems more reliable, cheaper, and faster. This allows organizations to evolve their systems quicker and reduce the waste in the process. Second, it improves the overall service quality to stakeholders. Advanced monitoring and remediation methods mean that problems are often found before the customer notices or that the system degrades in a way that only marginally impacts the customer. The third and perhaps most profound way is that it allows organizations to build better systems.

DevOps organizations are structured for speed with product teams able to react quickly to new information. This new information can come directly from production through telemetry systems that allow organizations to evaluate their functional experiments. And because of the speed of delivery and the decoupled digital architecture, we can run many experiments at the same time, creating systems that make customers happier and happier."

## ****10. DevOps supports rapid experimentation****

**Ben Grinnell, managing director and global head of technology & digital,**[**North Highland**](http://www.northhighland.com/)**:** "A big aspect of digital transformation is transforming into a company that gains competitive advantage by experimenting on its customers in the market, learning from their engagement and revising the services they interact with faster than their competition. As customer interactions and learning from them is increasingly digitally enabled, the key enablers of competitive advantage become:

* The ability for the business to understand/interpret feedback from digital interactions quickly,
* The ability to design changes based on this feedback to improve the product / service,
* The speed at which the business can reliably implement those ideas and get them out to market to start learning again.

Essentially, DevOps enables the three bullets above, which enables digital transformation. Often this happens in pockets in large companies, so the ability to truly transform depends on the ability to scale."