

Building a Culture of SRE in Traditionally Non-Technology-Focused Companies

EBOOK



Site Reliability Engineering (SRE) is a practice where you proactively build processes and adopt tools to make your services more reliable. The practice of SRE has exploded in popularity and reach since it was launched to the world by Google in 2003. In the early days of SRE, the practice was adopted first by the major tech players—the firms where technology wasn't only critical to their business, but technology was their business.

Yet the practice of SREs is a practice that can be applied to all sizes of businesses, big businesses, and small startups, but also all types of businesses—not just tech-centric companies. Most traditionally non-technology-focused companies are now realizing the importance of a solid IT infrastructure for their business practices. These non-tech businesses still require tech infrastructures in order for their businesses to succeed. Whether they need scheduling applications, communications applications, digital commerce, inventory, or process planning, software applications and systems are now critical for nearly all types of businesses.

These businesses depend on technology nearly to the same level as the traditional hi-tech companies do, and tech problems and solutions are similar for them as they are for their hi-tech counterparts. This means the practice of SRE applies uniformly not just to tech-centric companies but to companies of all shapes and sizes.

What do we mean by Traditionally Non-Technology-Focused?

Traditional non-technology-focused companies are companies whose main reason for being in business is not technology itself; rather, technology is used to assist them in achieving their non-tech business goals. They may use online storefronts, have a customer-facing app, have internal processes that make use of technology, or otherwise use technology to perform their normal business processes. **Some examples of traditionally non-technology-focused industries include:**



MANUFACTURING



TRADITIONAL
COMMERCE



EDUCATION



MEDICINE



FINANCE



AEROSPACE



TRANSPORTATION



AGRICULTURE

From our conversations with leaders in these industries, we've realized that even if they're on the cutting edge of their fields, their IT practices may be out of date. Since IT best practices are not a fundamental aspect of their business, they often treat technology as a lower priority and often lag behind state-of-the-art IT best practices. Yet, the reality is that for many of these companies, IT processes and systems are fundamental to their modern business model, and following state-of-the-art IT best practices is truly business-critical. In particular, a tech culture built around SRE and other related principles will improve their IT processes and systems and, hence, enhance their core business.

How does a traditional non-tech company adapt SRE best practices? **It's a multi-step process.**

STEP ONE

Get on board with investing in reliability

Before you can make any major progress toward SRE excellence, you need to believe that reliability is an important goal in your IT infrastructure. It's easy to think about basic IT services to be a simple cost center in non-tech industries simply because they aren't seen as central to their overall business value. Yet, understanding the value of these systems to your business and realizing the cost associated with the failure of these systems will go a long way towards adopting a reliable tech mindset, critical to your long-term business success.

Here, SRE best practices can help. A proper SRE practice requires time and energy to implement but pays for itself quickly by reducing outages and increasing customer retention.

Understanding the cost of tech failure is fundamental to analyzing the risks/rewards associated with investing in modern tech processes.

Critical to adapting a proper SRE practice is to get everyone in your organization—both up and down the management chain—on board with this reality. Investing in modern tech processes is an investment in your company's business success.

Build a robust incident management process

Building an incident management process is one of the most basic processes needed to improve the reliability of your tech processes. When a problem occurs with your IT infrastructure, how do you respond to that problem? How do you get your systems up and running again so your business impact is contained? How do you communicate the status of the issue to key stakeholders during the management of the incident? And most importantly, how do you ensure the incident doesn't happen again?

An effective incident management process is a cornerstone of IT service management, ensuring that, when services are disrupted or degraded, the impact on business operations is minimized. **There are several parts to a good incident management process:**

DETECTION

The detection phase is the foundation of incident management. It involves continuous monitoring of IT services to identify any anomalies or disruptions quickly. Effective detection relies on a comprehensive set of tools and processes that can monitor various aspects of the IT infrastructure, from network traffic and application performance to system logs and user activities. The ultimate goal is to detect incidents before they affect users or escalate into more significant problems. Barring that, detecting incidents and engaging the appropriate resources to resolve the issue as soon as possible to minimize the impact on the users as much as possible.

ALERTING

Once an incident is detected, the alerting mechanism kicks in. This system should be configured to notify the appropriate response team or individual based on the type and severity of the incident. Alerting can be done through various channels, such as emails, text messages, or specialized incident management tools that provide real-time notifications. The alerting process must ensure that the right people are informed promptly to initiate a swift response.

RESPONDING

Responding to an incident involves a series of coordinated actions aimed at mitigating the impact and restoring normal service operations. This phase requires a predefined response plan that outlines the steps to be taken, the roles and responsibilities of the response team, and the communication protocols to be followed. The response team assesses the incident, implements temporary fixes or workarounds if necessary, and works towards a permanent solution.

POST-INCIDENT ANALYSIS & LEARNING

Post-incident analysis is crucial for learning from the event and preventing future occurrences. This step involves a thorough investigation of the incident to identify the root cause and contributing factors. The learning phase should result in actionable insights that can improve the incident management process, enhance monitoring and detection capabilities, and refine response strategies.

TRACKING

Effective incident management requires meticulous tracking of every incident from detection to resolution. Incident tracking helps maintain a record of what happened, the response actions taken, and the outcomes. This information is valuable for auditing purposes, compliance with regulatory requirements, and as a historical database for future reference.

CONTINUOUS IMPROVEMENT

Once the analysis process determines improvements that can be made, ensuring these changes are implemented in a timely manner is an important step in closing the feedback loop. The incident management process should be subject to continuously improving your organization's detection and response capabilities. Continuous improvement ensures that the incident management process evolves in line with changing IT environments and business needs.

COMMUNICATION

Throughout the incident management process, effective communication is essential. Stakeholders, including IT staff, management, and end-users, should be kept informed about the status of the incident and the steps being taken to resolve it. Clear and timely communication can reduce confusion, prevent misinformation, and maintain trust in the IT team's ability to manage incidents.

A good incident management process is a well-orchestrated sequence of steps that begins with proactive detection and ends with strategic learning and tracking. By investing in a robust incident management framework, organizations can ensure that they are prepared to handle disruptions efficiently, minimizing the impact on business continuity and customer satisfaction.

Get ahead of customer unhappiness with SLAs/SLOs

Service Level Agreements (SLAs) and Service Level Objectives (SLOs) play a pivotal role in enhancing customer satisfaction by providing a clear framework for service delivery.

What's the difference between an SLA and an SLO? An SLA is traditionally a formal contract between your company and your customers. SLOs are typically specific internal goals of your organization itself, typically designed to help you reach your SLAs. However, both of them share one common purpose: they are designed to help you meet your customer's expectations and keep them satisfied. As such, SLAs/SLOs both play an important role in your relationship with your customers.

RELIABILITY

Consistently meeting SLOs and SLAs means you can provide a more reliable service to your customers and, hence, improve their satisfaction.

TRUST BUILDING AND ACCOUNTABILITY

SLAs and SLOs hold you accountable. By adhering to these requirements, you foster better relationships with your customers. Customers' confidence in your service grows when they see that you can consistently meet your service commitments.

ENHANCED COMMUNICATION

By defining SLAs and SLOs, you can communicate more effectively with customers about service issues and resolutions, further improving the customer relationship.

EXPECTATION MANAGEMENT

SLAs set clear expectations for service delivery, including important aspects such as uptime, response times, and resolution times. The transparency offered by published SLAs helps customers understand what to expect and reduces uncertainty.

SLAs and SLOs are essential tools for managing customer expectations, ensuring service reliability, building trust, and fostering a culture of continuous improvement, all of which contribute significantly to customer happiness.

Grow a cultural foundation that supports the practice of SRE

Adopting a Site Reliability Engineering culture within an IT infrastructure is not just a technical shift but a philosophical and cultural change that redefines how organizations perceive and manage their operations. The SRE fosters a culture of collaboration and shared responsibility between development and operations teams. It breaks down traditional silos and encourages a unified approach to problem-solving, where both developers and operators work towards a common goal of reliability and excellence. This cultural shift promotes a sense of camaraderie and partnership, essential for fostering innovation and agility within the organization.

Creating a culture of SRE requires accepting that failures are an inevitable part of innovation. Instead of aiming for zero failures, SRE culture emphasizes learning from incidents to build more resilient systems. This approach demystifies failure, removes the stigma associated with it, and encourages a blameless post-mortem culture where the focus is on improvement rather than punishment.

At its core, SRE is about continuous improvement. It values the iterative process of enhancing systems through small, incremental changes. This philosophy acknowledges that perfection is unattainable and that the path to reliability is through constant refinement and adaptation.

SRE culture encourages the importance of the customer experience. It recognizes that the end-user's satisfaction is paramount and that reliability is a key driver of customer happiness. By prioritizing the user's perspective, SRE ensures that services are not only functional but also delight customers with their performance and stability.

Adapting an SRE culture is a transformative journey that reshapes the cultural and philosophical landscape of IT infrastructure. It champions collaboration, embraces failure as a learning opportunity, and relentlessly pursues improvement, all while keeping the customer's needs at the heart of every decision.

Expand SRE's benefits throughout your organization

Once you've adopted the modern SRE practice for your core IT infrastructure, look at how you can apply the general SRE practice to the non-technology aspects of your business. These are the processes and systems that are core to your business: manufacturing line processes, transportation coordination processes, order fulfillment systems, and customer management tools. Your non-tech business processes can benefit from adopting the SRE culture and philosophy.

Every process has problems, and all processes and systems can be improved. By implementing the SRE culture of incremental improvement, learning from mistakes, and blameless incident management and analysis, you can institute the principles of modern SRE cultures into your non-IT processes and systems.

Here are some ways that modern SRE practices can impact your non-technical business systems:

Manufacturing Processes: Analyzing production line inefficiencies or defects and making incremental improvements to your manufacturing process will improve quality.

Supply Chain Management: Investigating disruptions or inefficiencies in the supply chain can lead to more robust and responsive logistics solutions.

Order Fulfillment Processes: Reviewing delays or errors in order fulfillment can help streamline logistics, inventory management, and customer communication.

Customer Service Workflows: Reflecting on customer complaints or service interruptions can enhance service protocols and training methods.

Healthcare Delivery: Examining incidents in patient care can improve patient safety, decrease costs, and improve standard medical procedures.

Sales and Marketing Campaigns: Evaluating the performance of sales strategies or marketing campaigns can refine targeting, messaging, and outreach efforts.

Human Resources Processes: Looking back at recruitment, onboarding, or retention issues can improve HR policies and employee satisfaction.

Financial Operations: Analyzing financial reporting errors or budgeting issues can enhance accuracy and strategic financial planning.

Facility Management: Reflecting on maintenance issues or safety incidents can improve building operations and worker safety protocols.

By applying modern SRE processes, including blameless retrospectives, to these areas, organizations can foster a culture of openness and learning, leading to more efficient and effective processes.

Measure, iterate, and evolve

Continuous improvement is a cornerstone of the SRE process, and that includes improving the SRE process itself. SRE isn't a practice you implement at one time and then operate perfectly forever. It's something that should constantly shift in response to changes and what you learn.

The same is true when you apply SRE processes to your non-technology business models and systems, as well as your core technology supporting those businesses.

Following standard processes and procedures that are measured and analyzed allows you to tweak those processes and measure any corresponding improvements. By constantly following standard processes, continuously improving those processes, and measuring the results, you can improve any system or process in an effective manner.

The core is to create a culture that supports focusing on incidents rather than hiding them, encourages blameless analysis, and encourages a learning culture.

Conclusion

The integration of Site Reliability Engineering into traditionally non-technology-focused companies is not merely an interesting idea but a strategic imperative. As these industries increasingly rely on technology to drive their business processes and customer interactions, the principles of SRE become essential for ensuring that their IT infrastructure is not just a support mechanism but a competitive advantage. By adopting SRE best practices, companies across all sectors can proactively enhance the reliability of their systems, streamline operations, and ultimately deliver a superior experience to their customers. Additionally, applying the concepts and methods of the IT operations SRE culture to your non-technical processes and systems can help your overall business by improving quality and, ultimately, customer satisfaction.

The journey towards SRE excellence requires a cultural shift, one that values proactive problem-solving, continuous learning, and a relentless pursuit of operational excellence. It demands investment not just in tools and processes but in people and mindsets. When everyone from the C-suite to the front lines understands the critical role of reliable IT services, a company can truly transform its approach to technology.

Embracing SRE is about more than just preventing software outages; it's about building a resilient foundation for innovation and growth. As non-tech industries continue to evolve in an increasingly digital world, those that prioritize the reliability and efficiency of their IT services will not only survive but thrive. The future belongs to those who recognize that technology is integral to success, no matter the industry, and that SRE is the pathway to harnessing its full potential.