



Bring balance to your organization

The five elements
of digital transformation



Contents



Introduction

03

Chapter 1

The balancing act

Exploring the five elements of digital transformation

05

Chapter 2

The case for an active champion

Why leadership needs to be more than passive sponsorship

08

Chapter 3

Fail fast, fail often, and learn always

A strategic approach to product management

11

Chapter 4

The three economies

How scope balances differentiation and scale

13

Chapter 5

Make platform simplification an organizational goal

Break the limits with the right architecture

15

Chapter 6

If your operations don't run smoothly, your product doesn't exist

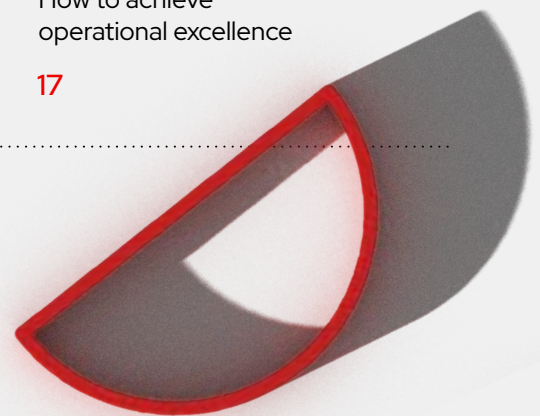
How to achieve operational excellence

17

Conclusion

A holistic look at the five elements

19



Introduction

An approach to digital transformation

Resilience is more than a mindset—it's the key to unlocking your competitive advantage.

Organizations that prioritize resiliency are better equipped to navigate volatility, adapt to change, and seize opportunities.

Digital transformation is a continuous process encompassing people, platforms, and practices in concert with one another—an effective way to instill organizational resilience.

Reframing what's important

Empower building the right things, the right way with less time and effort



People

- Open behaviors
- Breadth of capability
- Continuous learning
- Collaborative teams



Platforms

- Technology
- ReCommoning
- Reusable service
- Operational excellence



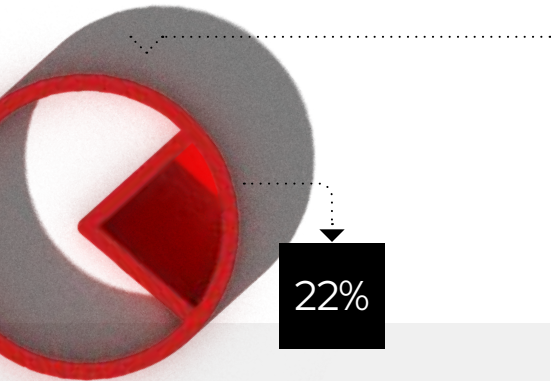
Practices

- Making work visible
- Trust and continuous change
- Prioritized focus
- DevSecOps

Organizations that take this approach to digital transformation are better positioned to outperform their peers in profitability, cost optimization, customer satisfaction, and attracting top talent.

The stakes are high. It's estimated that by 2023 half of all organizations that neglect to invest in market-driven operations will lose market share to competitors as a result.¹

Yet, research also shows 22% of organizations cite organizational resistance to change or inertia as a top barrier for succeeding in digital transformation.²



of organizations cite organizational resistance to change as a top barrier for success.²

Organizations are making technology investments and getting poor results because they aren't prepared to make the necessary changes.

To succeed at transformation, businesses need to reorient how they work by focusing on people and processes as much as they prioritize new technology. This approach will help you avoid becoming part of what IDC calls the "digitally distraught."¹

This short-term thinking drives ad hoc results and limits innovation, as opposed to stronger and more strategic "digitally determined" organizations where transformation is woven into the fabric of the company.

This e-book acts as your digital transformation guide, laying out a framework to help you minimize risks and complexity and seize every opportunity.

↓
Learn more about digital transformation success from IT experts in [What's slowing down your digital transformation? 8 questions to ask.](#)

By

2023

half of all organizations that neglect to invest in market-driven operations will lose market share to competitors as a result.¹

¹ IDC InfoBrief, sponsored by Red Hat and Intel. "[A Holistic Approach to Transformation: Accelerating Customer Outcomes.](#)" Document #US48036321, July 2020.

² Red Hat report. "[2022 Global tech outlook: A Red Hat report.](#)" 11 Nov. 2021.

Chapter 1

The balancing act

Exploring the five elements of digital transformation

While people, platforms, and processes must be equally balanced in order for a digital transformation effort to succeed, there's more to consider. Let's face it: a solution to a complex problem nearly always creates new challenges to address.

When digital transformation fails, we often frame it as a failure in technology or planning. In fact, it's usually due to failures in one or more of the following areas, which we're calling **the five elements of digital transformation.**

These include:



Leadership

Failure is common when people work in an environment where established ways of working are at odds with desired outcomes. When leadership is the weak link, change is impossible.



Product

Failure is often seen when organizations build software that does not deliver or align with strategic requirements. Product failures also occur when software is designed for strategies that aren't a priority for the organization.



Development

Failure to deliver successful development is usually due to an inability to combine technical and communication skills in a way that produces software that has a positive effect on the business. Simply put, development fails when you lose sight of the vision.



Architecture

A failure in your organization's architecture makes it nearly impossible to achieve flexibility, scalability, and security.



Operations

A failure in operations is marked by an inability to keep crucial elements running in the face of nonstop change, making it difficult to adapt to new challenges.

While each of these failures presents a risk, they also present an opportunity.

Every organization that builds or deploys software has some competency in these areas. What is harder to see is how they interconnect.

Understanding these connections between the five elements can help leaders take a more holistic view of their transformation efforts and avoid common—and often hidden—traps.

By doing so, leaders can:

- Start building lasting transformation capabilities.
- Create a more efficient and nimble business that launches new products and services, and closes deals faster than ever before, generating more revenue.
- Foster collaborative, high-performing teams.

With these combined, they can instill more resilience across the organization.

While some of these elements might sound like individual roles or departments, it's important to remember that each element is actually a capability, and within each element, a balance of people, platforms, and practices must be maintained.

Additionally, it's critical to understand that each of these elements highly depends on the others. To find a balance between them, these five capabilities need to interact, reinforce, and support one another constantly. Otherwise, there is potential that one element will undermine the other and collapse.



Looking at digital transformation through the lens of these five elements, you can see the process is less of a journey and more of an orchestrated effort to keep a spinning top upright on its own axis.

When it leans too far in one direction, momentum stalls and things can go wrong.

Leave out any one element and your organization is unlikely to achieve its digital transformation goals.

Let's look at each of the elements in more detail, and outline ways to maximize your chances of success with each one.



Read how to adopt an open approach to digital transformation in [Digital transformation, the open source way](#).

Chapter 2

The case for an active champion

Why leadership needs to be more than passive sponsorship

Leadership is about being bold—moving the business forward with speed and determination. Using the spinning top analogy from the previous chapter, leadership is the handle that sets digital transformation in motion.

But leadership also requires understanding that moving too fast or trying to do everything at once will doom even the best laid plans to failure. A culture that encourages sustained, incremental gains is far more likely to realize the benefits they seek.

Leaders need to show everyone in the organization that digital transformation is more than just another initiative to be implemented. It's about establishing a new model for doing business and then maintaining balance.

Start by encouraging behaviors and ways of working that bring this commitment to life. Senior leaders should articulate the importance of transformation projects to the success of the organization and show people it's a leadership priority.



Share successful project outcomes widely and show how they apply to people in other divisions or regions.

Remember that with change comes wariness, even fear, and that can be particularly true of middle managers, who are closer to the front line.

Seek ways to give them the skills development and training support they may need, and aim to engage them in the process when planning how best to launch and execute projects.

In a recent BCG Research study, a clear disconnect between perceived and actual leadership engagement was revealed.

The survey found that while three out of four executives believed they had good leadership engagement, only a third had made a commitment to engaging middle management.

Today's IT leaders need to be culturally competent as much as they are technically competent.

Mike Kelly

The Open Organization Guide to IT Culture Change⁵

This means that **two-thirds** of the middle managers in these companies don't feel motivated or empowered to deliver outcomes.⁴



Effective leaders encourage their people to find and eliminate barriers created by traditional ways of thinking. They let people know that success comes with experimentation, collaboration, and communication, and they seek to reward that behavior actively.

By taking this approach, leaders can establish a shared vision that allows the organization to be more adaptable, decentralized, and transparent.

⁴ BCG Research. "[Flipping the Odds of Digital Transformation Success](#)," 29 Oct. 2020.

⁵ Kelly, Mike, et al. [The Open Organization Guide to IT Culture Change](#). Red Hat Inc., June 2017.

Leadership creates a safe environment where employees can explore new ideas, fail without retribution, and change the existing operating rules.



Strong leadership:

- Establishes the tone.
- Creates and widely communicates a shared vision and strategy.
- Removes barriers to communication.
- Incorporates transformational goals into every employee role.
- Decentralizes decision-making.

Solid leadership requires an active champion, not just a sponsor. This means more than providing a stamp of approval or a signature on a purchase order.

A strong leader must have—and actively share—a solid vision for how the organization is going to benefit from transformation while empowering people at an individual level. Then step aside and allow change to happen.



Learn how leaders can develop an organizational culture that fosters innovation and keeps teams unified in [Culture matters: The IT executive's guide to building open teams.](#)

Establishing a culture of continuous learning, where it's safe to experiment, allows transformational change to occur. This is vital to address the skills deficit organizations face and can help build skills liquidity. Leadership must promote learning safety by discouraging the practice of assigning blame within the organizational culture. Retrospectives that discourage placing blame provide valuable insights into the community. The lessons learned help people plot courses to succeed by avoiding causes of past failure.⁶

⁶ "A platform ecosystem as a catalyst for transformation," Red Hat, Nov. 2021.

Chapter 3

Fail fast, fail often, and learn always

A strategic approach to
product management

Leadership that adopts a weak, uncertain approach to product management will often create unsuccessful, underdeveloped products. And building vanity applications that do not affect desired business outcomes is a costly mistake.

Effective product management requires a shift in thinking, and it's critical to developing a winning digital transformation strategy: fail fast, fail often, and learn always.

This means moving the focus away from projects to products. Projects end when objectives are met, whereas products continuously grow and evolve as enterprise needs change. Products evolve continuously in response to changing user needs and market forces.

“Adapting to the unknown fundamentally can't be planned for, but through practice and repetition, it can be taught, can be mastered, and can become part of organizational culture.”

Mike Walker

Senior Director and Global Lead,
Red Hat Open Innovation Labs⁷

It's imperative that your organization views your products as experiments that start from a hypothesis and lead to a prototype.

⁷ Red Hat e-book. [“Try. Learn. Modify. The IT executive's guide to navigating change.”](#) July 2, 2021.

Like all good scientists, do not hesitate to discontinue failed experiments.

If the product doesn't do what users want—or is too difficult to use—try a different approach. Formulate a hypothesis and then build a prototype to test it. The experiment succeeds when it proves or disproves the hypothesis.

Remember and accept the fact that product plans rarely remain intact after user testing.



Product management creates a strategy to define software that users need, want, and can easily:

- 1 Translate vision and strategy into actionable tactics.
- 2 Devise hypotheses they can rapidly test rather than create requirements.
- 3 Iterate to gather data that validates models or provides lessons from failures.

Use product management to your advantage by working with teams to create strategies for differentiated value.



See what global leaders say about building organizational cultures on principles like transparency, adaptability, collaboration, inclusivity, and community at [The Open Organization site](#).

Chapter 4

The three economies

How scope balances differentiation and scale

Development fails when it builds the wrong things to deliver on the right vision. It usually means teams are getting caught up in long feedback loops or doing unnecessary rework instead of high quality execution.

Why does this happen?

Partly because of two simultaneous, opposing priorities: the economy of differentiation and the economy of scale.



The economy of differentiation prioritizes:

- Accelerated differentiation
- A focus on innovation
- Creating value
- Flexibility
- Entering new markets
- Getting more customers



The economy of scale prioritizes:

- Operational excellence
- Efficiency
- Standardization
- Repeatable processes
- Best practices
- Controlling consumption

The economy of differentiation demands speed without safety. The economy of scale demands safety without speed. Overfocusing on the economy of

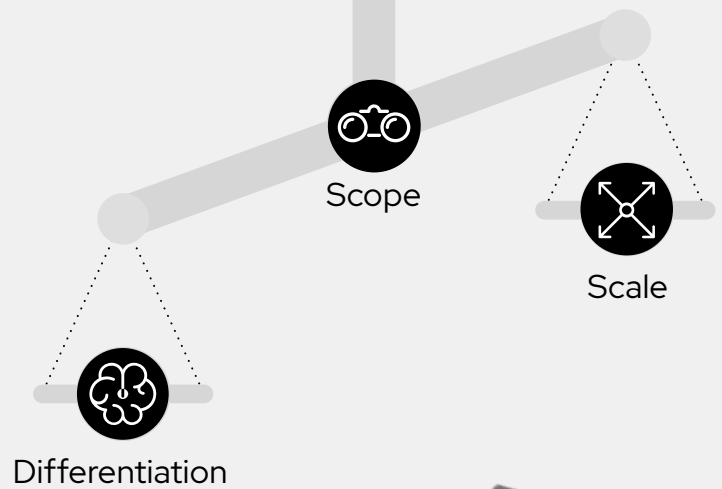
differentiation sacrifices long-term stability. Too much focus on the economy of scale means that rapid, short-term success is missed.

No wonder development fails. However, there's a third priority that can refocus development and position it for success: the scope economy.

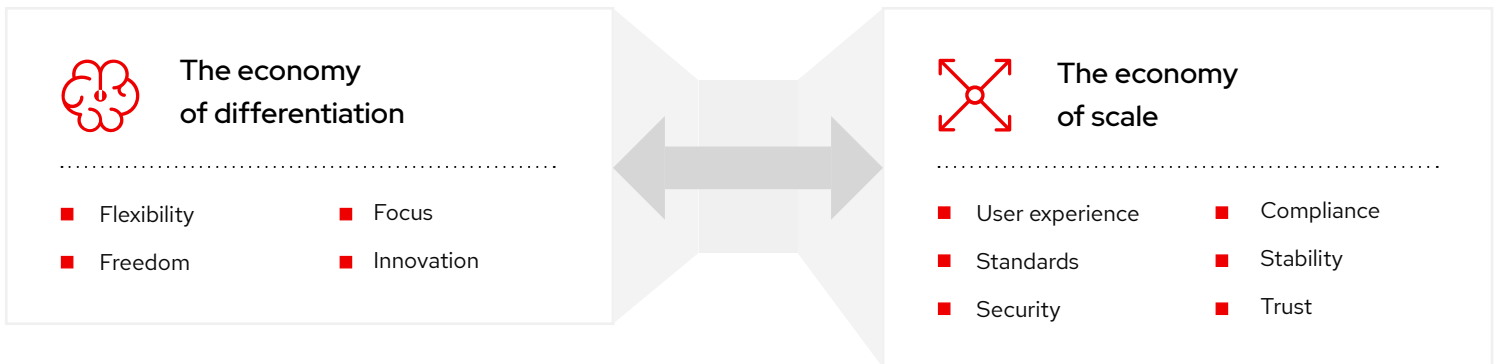
The scope economy balances differentiation and scale supporting both innovation and efficiency.

The scope economy does this by increasing the adoption of sharable resources that are not only consumed, but that gain value when they're in use. By introducing the scope economy into the development element, the opportunity to build trust opens up.

It encourages frequent communication between teams so that developers understand the consequences of coding decisions. It also inspires developers to deliver the right features by building the right products in the right way.



Shared priorities that support the scope economy



Finding balance across economies creates the right conditions for digital transformation, with an approach that supports both innovation and efficiency.

Learn more about the three economies in this [blog post](#) from Jabe Bloom, Senior Director of Global Transformation, Red Hat.

Development shines when:

- 1 It implements product models rapidly using modern development tools and agile processes.
- 2 The focus is on delivering the best product capabilities.
- 3 It uses faster feedback cycles for validation or additional learning.
- 4 Developers gain the freedom to develop, deploy, and manage in any environment, allowing them to focus on innovation.

Chapter 5

Make platform simplification an organizational goal

Break the limits with the right architecture

The next element, architecture, is easy to overlook. The truth is, a product's features don't matter if your organization can't maintain scalability, reliability, and flexibility—all the things that are sometimes referred to as "nonfunctional requirements." If your nonfunctional requirements aren't met, your software will always be nonfunctional.

Even if you build the right software with the right features, poorly designed architecture will always limit your progress.

The right architecture can help you sustain these nonfunctional requirements, as these underlying services are inherently built into the platform.

In fact, many cloud-native organizations benefit by using what is built into their architecture.

Experimentation is at the root of innovation, and it sets up a better chance for digital transformation success. It also recaptures some of the initial joy that drew so many people into your organization in the first place—the ability to create and see that creation grow.⁸

The right architecture:

- 1 Provides a stable technical foundation suitable for both short- and long-term objectives.
- 2 Balances the efficiency of standardization against the need for customization.
- 3 Embraces open, interoperable technologies.
- 4 Provides more flexible IT deployments.

⁸ Burr Sutter, Deon Ballard and Marty Wesley, et al. "[Teaching an elephant to dance: Executive summary](#)," Red Hat, July 2020.

How do you ensure your architecture element is balanced appropriately?

A good start is making platform simplification an organizational goal. There are five ways to achieve this.

1

Take a cloud-centric approach to your architecture.

Choose a platform that can support the most demanding combination of traditional, modernized, and cloud-native applications and runs on any cloud.

2

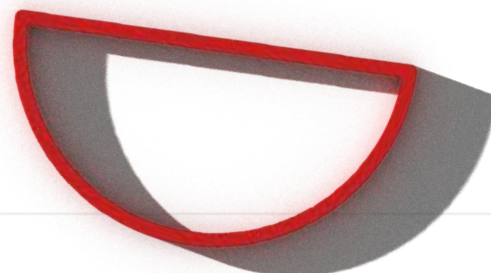
Opt for consistency across any infrastructure and minimize surprises.

Choose a platform that provides a common abstraction layer across any infrastructure to give developers and operations teams commonality in how applications are packaged, deployed, and managed. This allows you to run applications where it makes the most sense, without creating different operational models because of the host environment.

3

Create an event-driven architecture to improve the scalability and responsiveness of applications.

Event-driven architecture can help you achieve a flexible system that can quickly adapt to changes and make decisions in real time. Make purposeful business decisions using all the data that reflects the current system's state.



4

Rapidly scale using modular applications.

Develop skills in microservices techniques such as service mesh, circuit breaker patterns, caching, and service discovery—or work with a skilled partner.

5

Choose an architecture with standardized services.

When the platform enforces standards, developers can focus on domain logic instead of design patterns. Standardized application architectures use standardized instrumentation to report real-time performance metrics and simplify troubleshooting.



Learn how to design an open application architecture in [Teaching an elephant to dance: Executive summary](#).

Chapter 6

If your operations don't run smoothly, your product doesn't exist

How to achieve operational excellence

The fifth and final element is operations. Failure in operations means the right things are not properly running in the face of internal and external change.


It doesn't matter what features your product boasts—if your operations don't run smoothly, your product simply doesn't exist.

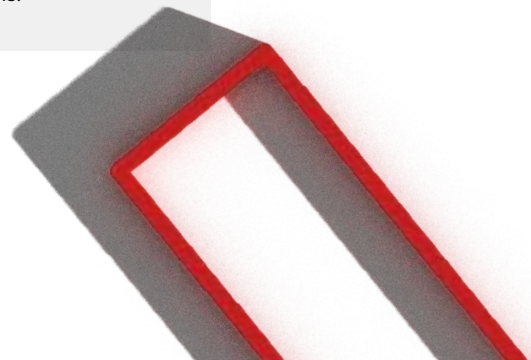
This breakdown causes the socio-technical system to struggle with incidents that negatively affect the organizational mission.

One way to balance this element is to adopt a site reliability engineering (SRE) approach to IT operations. SREs use software as a tool to manage systems, solve problems, and automate operations tasks.

Operations tasks that were historically completed manually are then given to engineers or Ops teams who use software and automation to solve problems and manage production systems.



 What is [SRE?](#)



This SRE approach makes operations scalable and prevents the risk of running inefficient operations.

It also allows an organization to move away from a reactionary approach and toward a foundation of resilience.

By standardizing and automating operations tasks, SREs not only improve the system reliability, they help it improve over time, allowing organizations to simultaneously embrace risk and eliminate toil.

Operational excellence entails developing a strategy to make operations digitally resilient and to keep things up and running. Achieving this resilience means you can quickly adjust processes and anticipate threats.

Strong operations:

- 1 Establish a foundation of resilience from unreliable components by adopting SRE concepts.
- 2 Eliminate toil through automation.
- 3 Encourage action despite risks.
- 4 Use transparent metrics to measure results.
- 5 Establish IT automation and management to increase efficiency and reduce complexity through standardization.



Learn how a platform ecosystem can be a catalyst for transformation. Read [A platform ecosystem as a catalyst for transformation.](#)



Conclusio sion

A holistic look at the five elements

Now that we've looked at each of the elements individually, let's pull back our focus to understand the five benefits combined.

Successful digital transformation can be achieved when all five elements work in harmony, and friction is reduced. By tightly weaving these elements together, objectives become clearer, communication flows easier, and risks are mitigated.



► The five elements combined support the balance of people, platforms, and practices to improve an organization by:

- Creating a safe environment.
- Developing an adaptable, transparent, and collaborative organization.
- Establishing a strategy of differentiation for products and services.
- Presenting strategies and efficiencies to make certain resources are best used to minimize waste and cost.



Ready to learn more about how your organization can balance the five elements that promote successful digital transformation? [Find additional content, research, and e-books.](#)