

Open the *future*

An executive's guide to navigating
the era of constant innovation

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Embracing constant innovation

The new normal

Technological disruption isn't an exception in the IT world; it's the new normal. The days of incremental change are gone, replaced by the reality of relentless innovation. New technologies disrupt the status quo at lightning speed, forcing businesses to adapt or become obsolete.

In this environment, executives must stay ahead of emerging trends, anticipate their effects, and proactively prepare for the changes they bring.

It is no longer enough to apply intermittent solutions to immediate problems. These quick fixes may address immediate challenges, but they often create isolated systems, increase complexity, and hinder long-term innovation. Building a resilient technology foundation is key to preparing your organization for the future. It's about creating an environment where innovation can flourish, unburdened by the constraints of rigid, outdated systems. It's about creating a culture and foundation that can adapt and scale alongside your business, empowering you to seize opportunities and navigate disruptions with confidence.

Red Hat has always thrived in the face of change, disrupting established models with open source innovation. After all, the rapid pace of innovation has always been core to open source software. We've led technological shifts from Linux® to containers to Kubernetes and more, helping businesses embrace change and unlock new possibilities with open source innovation. Our history is built on a commitment to open collaboration, community-driven development, and empowering businesses to adopt change—not fear it.

This guide, drawing on Red Hat's decades of open source leadership and expertise, equips you with the strategies and tools to navigate this era of constant innovation. We will help you understand how to control disruptive technologies from emergence to ubiquity, allowing you to navigate the new normal of constant innovation and disruption.

According to a recent indicator analysis¹:

- Technology disruption is now the No. 1 cause of business change, up from No. 6 in 2022, catapulted by advances in generative artificial intelligence (AI).
- C-suite executives surveyed say that technology is the No. 1 cause of change. 61% expect the pace of technology disruption to accelerate even further.
- Nearly half (47%) of C-suite executives say they are not fully prepared for the accelerating rate of technological change.

¹ ["Pulse of change: 2024 index."](#) Accenture, 12 Jan. 2024.

Understanding the new normal

Disruption, displacement, and the dichotomy of balancing both

What is disruption, and why are we writing about it?

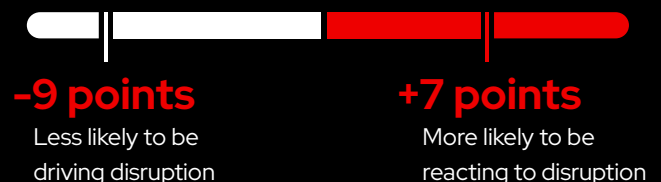
The word “disruption” may seem overused, but its essence remains relevant. Disruption isn’t just about sudden change; it is about the ripples caused by constant technology evolution, the displacement of the old ways of doing things, and the emergence of new possibilities.

Disruption is the new normal of constant innovation.

The only constant is change in business. Technological advancements emerge at a rapid pace, redefining industries and challenging traditional business models. The pressure to adapt and innovate has never been greater. To thrive in this era of constant innovation, businesses must embrace a mindset of agility and continuous evolution.

The key to evolution is shifting from reactive to proactive by adopting a platform-centric approach that allows you to shift from a reactive stance—constantly scrambling to address new challenges—to a proactive stance, where your technology foundation is inherently adaptable and ready to progress.

“Companies are more likely to react to disruption, less likely to drive it.”²



All references to point changes in responses are year-over-year (YOY).

² ["2024 AlixPartners Disruption Index,"](#) 9 Jan. 2024.

The many faces of disruption: Understanding the types

Disruption is not a universal phenomenon. It can appear in various forms, each with its unique set of challenges and opportunities. Recognizing the different types of disruption empowers executives to anticipate and respond effectively.

Technology disruption

This occurs when new technologies emerge that render existing products, services, or processes obsolete. Think of the rise of digital photography disrupting the film industry or the effect of cloud computing on a traditional IT infrastructure.

- **Key questions for executives:** How adaptable is our technology stack? Can we readily integrate new technologies? Do we have the skills and talent to use emerging tools and platforms?

Competitive landscape disruption

This occurs when new entrants or disruptive competitors challenge established players in the market. This could involve innovative products, disruptive pricing strategies, or new go-to-market approaches.

- **Key questions for executives:** How strong is our brand and customer loyalty? Can we differentiate ourselves effectively? Are we prepared to compete in a rapidly changing landscape?

Business model disruption

This involves the emergence of new business models that fundamentally change how an industry operates. Consider the effect of ride-sharing applications on the taxi industry or the rise of subscription-based services disrupting traditional ownership models.

- **Key questions for executives:** How versatile is our business model? Are we prepared to adapt our value proposition or revenue streams if necessary? Do we have the flexibility to respond to shifts in customer expectations?

Partnership & supplier disruption

Changes in your partner or supplier ecosystem can significantly affect your operations. This could include disruptions in the supply chain, shifts in partner priorities, or the emergence of new collaborative models.

- **Key questions for executives:** How reliant are we on key partners and suppliers? Do we have contingency plans in place? Can we adapt to changes in the ecosystem?

))) ((("63%

of executives expect their business models will change significantly in the next year due to disruptive forces."²

² "2024 AlixPartners Disruption Index," 9 Jan. 2024.



Assessing your ability to adapt: Navigating the challenges

Each type of disruption presents unique challenges, and your ability to adapt will depend on various factors, including:



Organizational agility

How swiftly can your organization respond to change and embrace new ways of working?



Talent and skills

Do you have the right talent and skills in place to take advantage of emerging technologies and navigate disruption?



Leadership and culture

Does your organization have a culture that encourages innovation, experimentation, and risk-taking?



Technology readiness

Is your technology platform the foundation for future innovation, or is it built to solve today's problems? Look for solutions that are extensible, adaptable, and can integrate effortlessly with other technologies.



Over 60%

of CEOs surveyed do not think their company is adapting fast enough to stay ahead of disruption.²



Key insight

By honestly assessing your ability to navigate these different types of disruption, you can identify areas of strength and vulnerability, allowing you to proactively address potential challenges and capitalize on emerging opportunities.

² "2024 AlixPartners Disruption Index," 9 Jan. 2024.

The disruption cycle and identifying opportunities

Disruption isn't a singular event; it is a continuous cycle. New technologies emerge, gain traction, and eventually reshape industries. Understanding this cycle empowers businesses to anticipate change and position themselves strategically.

Imagine waves crashing on a shore. Some waves are gentle ripples, while others are powerful surges. Each wave represents a technological shift. In a vast sea of millions of open source projects, Red Hat's approach is to identify the most impactful waves—the open source technologies poised to redefine the landscape—and help our customers ride them successfully.

We have navigated these waters many times before: from the rise of virtualization to the container revolution, from the emergence of cloud-native orchestration to the adoption of hybrid cloud architectures. We understand the patterns of disruption and can guide businesses in making informed choices about which technologies to employ.



How do you choose which waves to ride?

Follow us.

For example, Red Hat is a leading contributor to core Cloud Native Computing Foundation (CNCF) open source projects that support and accelerate innovation across the hybrid cloud. Red Hat delivers this open source innovation to customers via Red Hat OpenShift to give them a consistent hybrid cloud foundation for building and scaling containerized applications.⁴

³ Cloud Native Computing Foundation. "[Cloud native landscape projects and products](#)," accessed September 2024.

⁴ Cloud Native Computing Foundation. "[Kubernetes home dashboard](#)," accessed September 2024.

Displacement is an inevitable part of this cycle. As new ways of doing things emerge, existing ways become obsolete. This creates both challenges and opportunities. Businesses must adapt their processes, retrain their workforce, and embrace new tools. But displacement also opens up new avenues for innovation and growth. Resources once tied to conventional systems can be redirected towards strategic initiatives that propel the business forward.

The dichotomy lies in balancing traditional approaches with tomorrow's opportunities. Enterprises cannot afford to abandon their core systems overnight, but they also cannot afford to ignore emerging technologies. It's about finding the right balance, modernizing where it makes sense, and adopting new solutions strategically.

It's crucial to recognize that not every emerging technology will lead to widespread adoption or industry transformation. Many promising innovations fail to gain traction due to various factors, such as technical limitations, market resistance, and the emergence of superior alternatives.

Therefore, understanding the cycles of disruption is just as important as being able to spot the most influential ones. It's about discerning the signals amidst the noise and making informed decisions about where to invest your time, energy, and resources.

Action



Navigate the disruption cycle

Understand the phases of disruption (emergence, adoption, maturity, displacement) to make informed technology adoption decisions.



Understand your readiness

Conduct a technology landscape assessment to identify any existing systems hindering innovation and develop a modernization roadmap.



Embrace change

Recognize that displacement is a natural part of the innovation cycle and be prepared to adapt your processes, retrain your workforce, and adopt new tools.



Reimagine resources

View displacement as an opportunity to redirect resources from traditional systems to strategic initiatives that promote growth and innovation.



Find the balance

Strike a balance between maintaining core systems and embracing emerging technologies. Modernize where it makes sense and adopt new solutions strategically.

Navigating the disruption cycle: Phases and indicators

Disruption unfolds in distinct phases, each with its own set of characteristics and implications for businesses. Recognizing these phases empowers executives to anticipate change and make informed decisions.



Emergence

The nascent stage where a new technology or concept is born. Experimentation, limited adoption, and uncertainty about its potential effect often characterize this phase.

Indicators to watch for: Early prototypes, proof-of-concept projects, academic research, and discussions within niche communities.



Maturity

The technology becomes mainstream and widely adopted across industries. Standards emerge, competition intensifies, and the focus shifts towards optimization and cost reduction.

Indicators to watch for: Widespread availability of commercial solutions, established industry standards, and integration with existing systems.



Adoption

The technology gains traction, and early adopters begin to see its potential value. This phase is marked by increasing investment, growing awareness, and the emergence of practical applications.

Indicators to watch for: Rising media coverage, venture capital funding, pilot projects within leading organizations, and the formation of industry consortia.



Displacement

The technology reaches its peak and begins to displace older technologies or business models. This phase can be disruptive and challenging for those who have not adapted.

Indicators to watch for: Market consolidation, declining demand for legacy solutions, and the emergence of new business models built around disruptive technology.

Key insight

By understanding these phases and their associated indicators, executives can proactively assess the maturity of different technologies and make informed decisions about when and how to adopt them. It's about staying ahead of the curve, not just reacting to it.



The pace of the disruption cycle varies across industries and technologies. Some technologies may evolve rapidly, while others may take years to reach maturity.

Spotting the signals of change: Anticipating disruption

In an era of constant innovation, proactively anticipating change is paramount. But how do you effectively scan the horizon and identify the signals of impending disruption? Here are some key strategies.

1 Stay on top of what is happening in your market

- Follow market trends, competitors' moves, and emerging technologies through rigorous market research and analysis.
- Identify shifts in customer preferences, new entrants, and disruptive business models that could influence your industry.

2 Activate customer feedback

- Actively listen to your customers and understand their evolving needs and expectations.
- Pay attention to feedback on existing products and services, as well as requests for new features or capabilities that could signal a shift in the market.

3 Follow the innovation

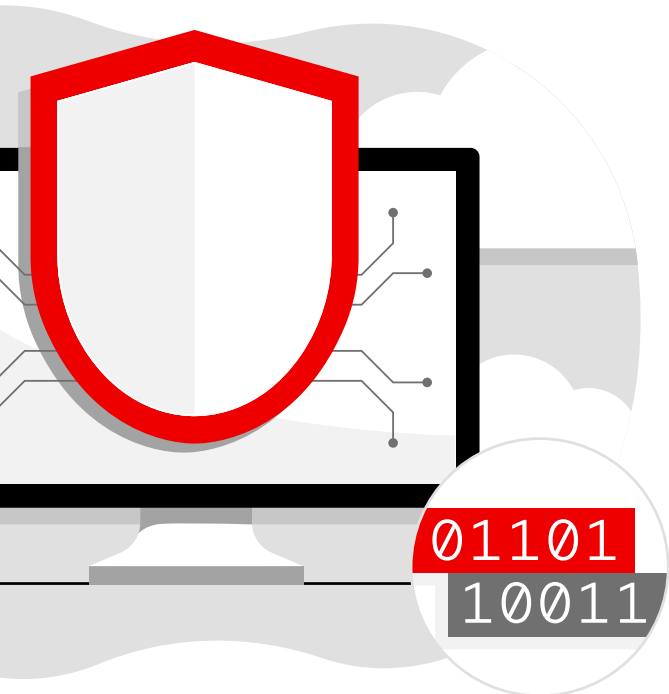
- Track or collaborate with startups and incubators to gain exposure to emerging or cutting-edge technologies and innovative business models.
- Monitor open source communities through participation in open source foundations or platforms like GitHub and GitLab to identify high-activity projects that could signal disruptive potential.

4 Empower internal innovation initiatives

- Encourage experimentation and idea generation within your organization.
- Create channels for employees to share their insights and perspectives on emerging trends and potential disruptions.
- Dedicate resources to scouting new technologies, conducting proofs-of-concept, and sharing insights across the organization.

Key insight

By proactively seeking out these signals of change, you can develop a keen mindset and gain a clearer understanding of the forces shaping your industry and position your organization to respond effectively.



Building a disruption-ready enterprise

In an era of constant innovation, technology alone won't cut it. Enterprises need a foundation of cultural agility and a flexible technology stack.



Cultural shift: Embracing the spirit of experimentation

Cultivate an environment where experimentation is encouraged, learning is celebrated, and calculated risks are embraced. Think of it as nurturing an open innovation lab within your organization. Empower your teams to explore new ideas, test hypotheses, and learn from both successes and failures.

Remember: A disruption-ready enterprise is one where people are not just comfortable with change, but excited by it. It's about creating a safe space for calculated experimentation, where the pursuit of innovation is valued alongside operational excellence. Cultivate a growth mindset where setbacks are seen as learning opportunities, not roadblocks.

How to:

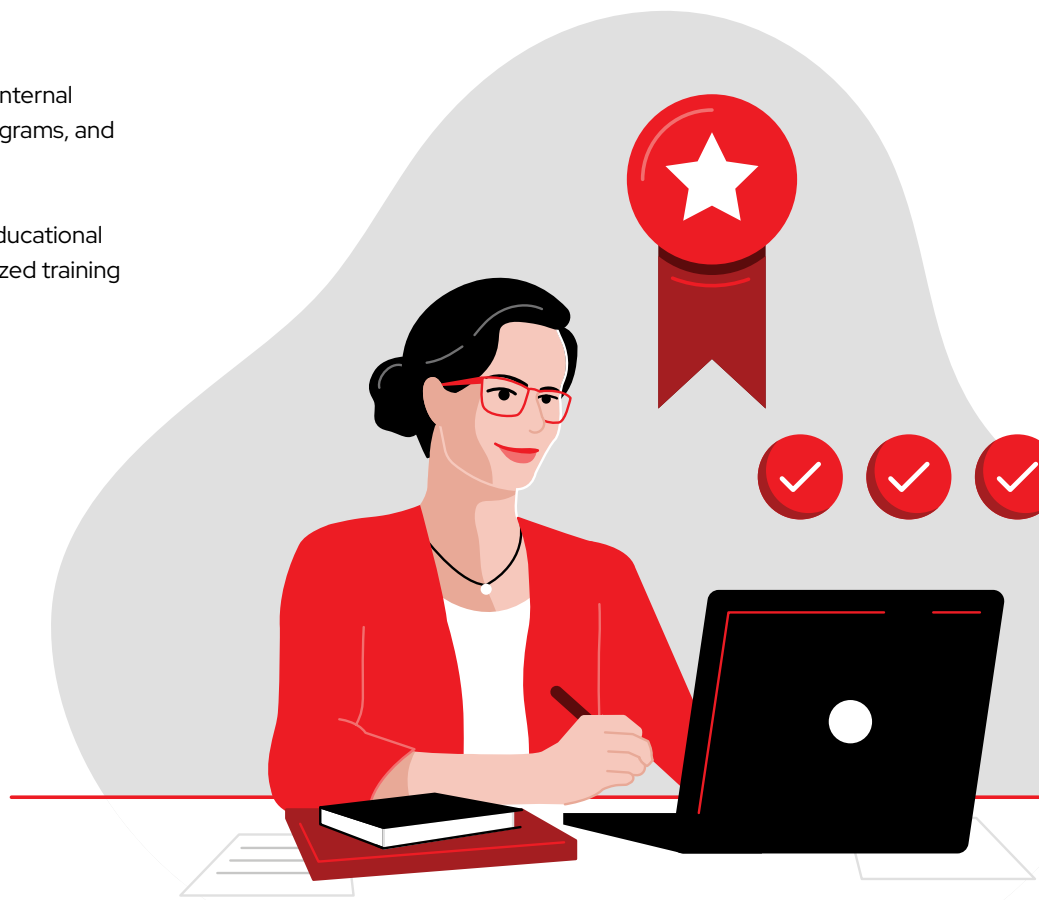
Cultivate a spirit of experimentation

- Establish dedicated innovation time where employees are encouraged to explore new ideas and technologies outside their day-to-day responsibilities.
- Create internal hackathons or innovation challenges to foster creative problem-solving and cross-functional collaboration.
- Recognize and reward employees who take initiative and demonstrate a willingness to learn and experiment.

Continuous learning and upskilling are also crucial. Technologies evolve at lightning speed, and your workforce needs to keep pace.

Create an environment of continuous learning

- Invest in comprehensive training programs that cover both technical and soft skills.
- Encourage knowledge sharing through internal communities of practice, mentoring programs, and lunch-and-learn sessions.
- Partner with external organizations or educational institutions to provide access to specialized training and certifications.



Technology foundations: Providing innovation anywhere and everywhere with a hybrid cloud foundation

A disruption-ready enterprise needs its technology foundation to be as adaptable and dynamic as the world around it.

That means your innovation cannot be confined to a single location or environment. Responding to relentless innovation requires the flexibility to develop and deploy applications wherever it makes the most sense—on-premise, in the public cloud, across multiple cloud environments, or at the network edge.

Rather than assembling a patchwork of disparate technologies or quick fixes applied to individual challenges, adopt a platform-centric approach to technology that will allow you to foster innovation without creating disruption. A consistent platform approach empowers your teams to innovate rapidly, experiment fearlessly, and adapt to new market demands and technological advancements without interruption.

A consistent hybrid cloud platform provides this, delivering the flexibility you need to embrace innovation without sacrificing stability, security, or control. By establishing a unified foundation across your entire IT environment, you can:

- **Accelerate development and deployment**
Move workloads between different environments more smoothly, allowing rapid development cycles and deployment of new applications and services in less time.
- **Optimize resource use**
Dynamically allocate resources based on demand, ensuring optimal performance and cost efficiency across your hybrid cloud infrastructure.
- **Enhance security and compliance**
Implement consistent security policies and controls across all environments, safeguarding your data and ensuring regulatory compliance.
- **Empower innovation at the edge**
Extend your IT capabilities to the edge, supporting real-time data processing, intelligent decision-making, and new customer experiences.

A hybrid cloud foundation acts as a springboard for innovation, helping you to embrace new technologies and respond to market opportunities with speed and versatility. This fosters an environment where innovation can flourish, unburdened by the constraints of traditional IT infrastructure.

“70% of business leaders say their tech architecture creates confusion, conflict, and disagreement.”⁵

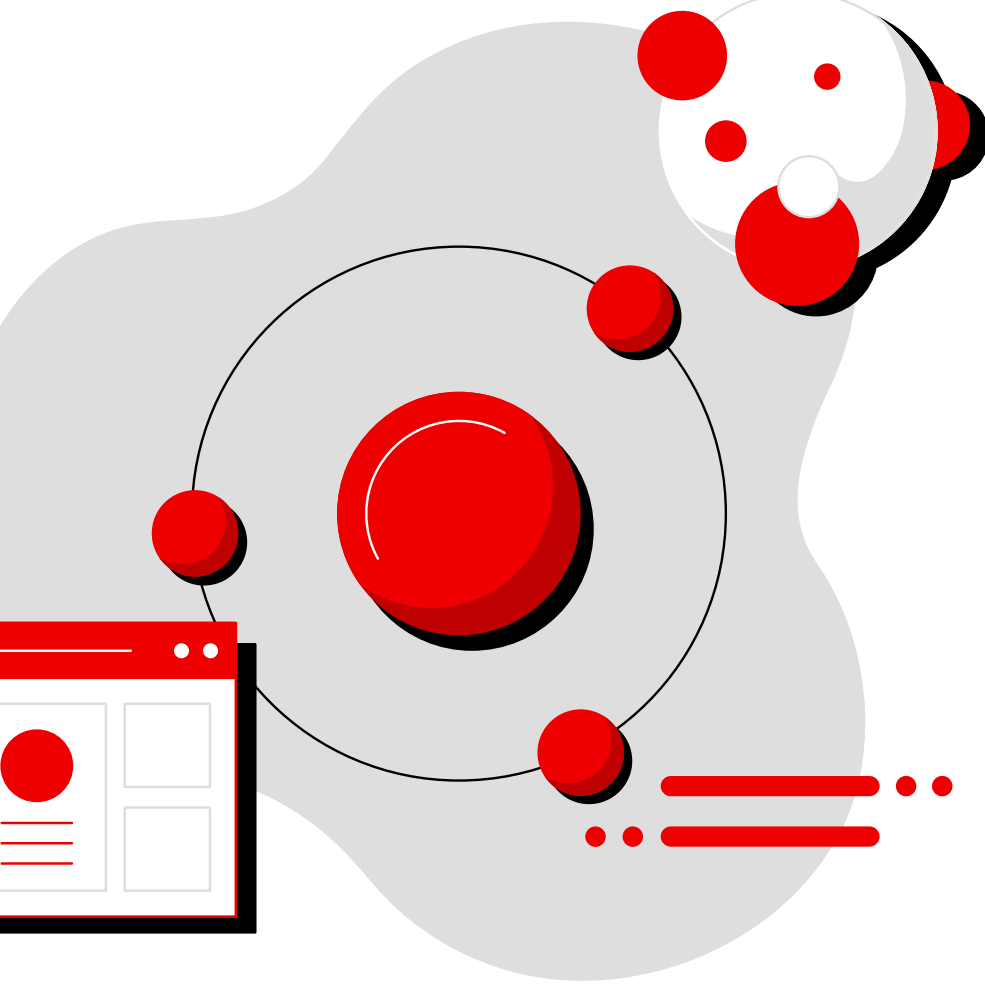
“65% also say their tech architecture is crucial to how they use IT to improve business performance.”⁵

How to:

Assess your infrastructure to support innovation everywhere

- Conduct a thorough assessment of your existing IT infrastructure to identify existing systems that are hindering innovation.
- Explore options for modernizing these systems through refactoring, replatforming, or replacing them with cloud-native alternatives.
- Consider adopting a hybrid cloud architecture that combines the best of on-premise and cloud environments, providing the agility to scale, experiment, and deploy new technologies more quickly.

⁵ IBM Institute for Business Value. [“Architecting for AI agility: How hybrid by design can help tech architectures accelerate business outcomes.”](#) *The Great Tech Reset*, 15 July 2024.



Technology foundations: Building on open source

Building a disruption-ready enterprise requires a flexible and adaptable technology foundation. Traditional systems, while often reliable, can become bottlenecks in an era of rapid change or, worse yet, a source of significant risk when it comes to security and compliance.

To truly thrive in the era of constant innovation, organizations need to shift their focus from tactical fixes to strategic investments in adaptable platforms. These platforms should provide a solid foundation for current needs while also supporting future growth and evolution. They should empower businesses to adopt new technologies, experiment with innovative ideas, and respond to market changes with agility.

Combining a consistent hybrid cloud foundation with the power of open source technologies creates a powerful synergy that fuels innovation and advances business transformation. This forms the backbone of a resilient, adaptable, and future-ready enterprise that can thrive in the face of constant change.

The open source advantage: Your catalyst for agility

Open source isn't just a development model; it's a strategic mindset that fuels agility, innovation, and choice. It builds a resilient foundation for your enterprise, readying you to embrace the next wave of innovation (and the next wave, and the next wave, and so on) with agility and confidence.



"Without open source software and their ubiquitous code-creation networks, firms would pay an estimated **3.5 times** more to build the software and platforms that run their businesses, or **roughly US\$8.8 trillion.**"^{6,7}



Attract and retain top talent

Tap into the vibrant open source community to access skilled individuals passionate about leading-edge technology. Contributing to and adopting open source solutions can help attract and retain skilled individuals.



Promote cost efficiency

Open source solutions often offer significant cost savings compared to proprietary alternatives.



Accelerate innovation

Open source fosters a collaborative environment that encourages experimentation and the rapid development of new solutions.



Shape the future of technology

Open source encourages contributions from all users, including your organization. This means that you can help shape what a technology looks like, from suggesting features to helping test integrations with the systems and tools that matter most to you. Be a catalyst, not just a consumer.



Embrace freedom of choice

With a vast ecosystem of tools, frameworks, and communities, you have the freedom to select the best solutions for your specific needs and avoid vendor lock-in, making open source solutions ideal for navigating the new normal of constant innovation.

Action

Evaluate your current technology stack. Identify areas where open source solutions could enhance agility, reduce costs, or foster innovation.

⁶ Hoffmann, Manuel, et al. "[The value of open source software](#)," Harvard Business School Strategy Unit Working Paper No. 24-038, 1 Jan. 2024.

⁷ Rachel Layne. "[Open source software: The \\$9 trillion resource companies take for granted](#)," Harvard Business School Working Knowledge, 22 March 2024.

Using open source innovation: The strategic choice

With tens of millions of new open source projects launching each year, the abundance of open source technologies can be both exhilarating and overwhelming. Open source communities are a hotbed of pure innovation, constantly pushing the boundaries of what's possible. For enterprises, this represents a thrilling opportunity to access cutting-edge technology and stay ahead of the curve. But the question remains: Should you embrace a do-it-yourself (DIY) approach or opt for enterprise open source solutions?

The DIY dilemma: Building your own car

Open source software is everywhere. 96% of codebases analyzed by Black Duck in the 2024 Open Source Security and Risk Analysis report contained open source.⁸ How an organization adopts and uses open source software matters. Using open source in a DIY fashion is akin to building your own car. While it offers unparalleled freedom and customization, it also demands considerable time, expertise, and resources. You're responsible for sourcing every component, assembling them meticulously, ensuring compatibility, and maintaining the vehicle over time.

In the enterprise world, this translates to:



Integration headaches

Integrating disparate open source components can be complex and time-consuming, leading to potential compatibility issues and delays.



Security risks

DIY open source often lacks the rigorous security testing and hardening necessary for critical enterprise workloads, leaving your organization vulnerable.



Legacy open source is pervasive in commercial solutions. Many production applications are being deployed that incorporate legacy open source packages. This prevalence of legacy packages is an issue, as they are often no longer supported or maintained by the developers or have known security vulnerabilities. They often lack updates for known security issues both in their codebase or in the codebase of dependencies they require to operate.⁹



Support gaps

Community support can be fragmented and inconsistent, forcing your team to troubleshoot issues alone, potentially impacting productivity and uptime.



Compliance hurdles

Ensuring regulatory compliance with DIY open source can be challenging and resource-intensive, requiring dedicated effort and expertise.

⁸ Black Duck. "2024 Open source security and risk analysis report." 27 Feb. 2024.

⁹ Perlow, Jason. "A summary of census II: Open source software application libraries the world depends on." The Linux Foundation, 7 March 2022.

The enterprise open source advantage: A car ready to drive

Enterprise open source solutions are the equivalent of buying a car that's already built, fine-tuned, and ready to hit the road. These solutions are curated, tested, and supported by experienced vendors, providing a continuous and reliable experience for enterprise environments.

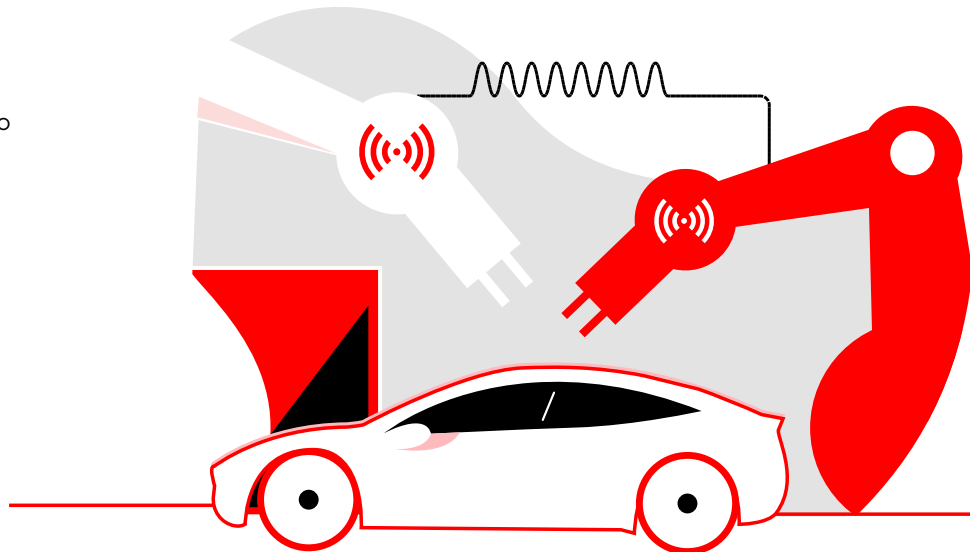
As the saying goes, "You wouldn't buy a car with the hood welded shut." You need the ability to access the engine, perform maintenance, and customize the vehicle to your needs. Enterprise open source offers that same openness and flexibility, while also delivering:

- Certified and hardened components**
Rigorously tested and hardened components to minimize security vulnerabilities.
- Streamlined integration**
Pre-integrated solutions reduce complexity and speed up deployment.
- Enterprise support**
Expert support is readily available to help you resolve issues more quickly and efficiently.
- Compliance certifications**
Solutions often come with certifications to meet industry-specific regulations.

Choosing wisely: DIY vs. enterprise

- Assess risk tolerance**
Determine which environments, such as developer sandboxes or innovation labs, are suitable for experimenting with DIY open source and which require the stability of enterprise-grade solutions.
- Evaluate technology partners**
Choose vendors with a strong track record in open source, community engagement, and commitment to enterprise support and security.
- Develop an adoption plan**
Establish a clear strategy for incorporating both DIY and enterprise open source, defining escalation points for when innovations are ready for production.

Key insight
By making informed choices about open source consumption, executives can maximize the benefits of innovation while minimizing risks, ensuring their organizations are equipped to thrive in the era of constant change. Remember, the goal is to use the power of open source strategically, whether through DIY experimentation or by partnering with trusted vendors for enterprise solutions.



Action

Build a formal strategy for where upstream open source technologies should be used and where trusted, consistent, and comprehensive production open source platforms are required.

Do you know what open source code your organization is built on?⁸

96%

of the total codebases contained open source.

53%

of the total codebases contained license conflicts.

77%

of the total codebases originated from open source.

31%

of the total codebases contained open source with no license or a custom license.

10 years

14% of the codebases assessed for risk contained vulnerabilities older than 10 years

24 months

49% of the codebases assessed for risk had components that had no development activity in the past 24 months



2.8 years

2.8 years was the mean age of vulnerabilities in the codebases assessed for risk

12 months

1% of the codebases assessed for risk had components that were at least 12 months behind on code maintainer updates/patches

⁸ Black Duck. "2024 Open source security and risk analysis report." 27 Feb. 2024

Advising on the cost of community (DIY) versus enterprise open source, IDC said, "evaluating the cost of open source software is more complicated than it may seem on the surface."¹⁰

Among other advice, IDC advises technology buyers to follow these recommendations:

"Be thorough. Evaluate all costs, both up front and ongoing. That means considering predeployment costs like infrastructure requirements, resources required for implementation and customization, and security implications. Also consider post-deployments costs like maintenance and license management.

Root out hidden, security-related costs. While open source software is typically regarded as more secure than commercial alternatives, that security can be compromised during deployment as it integrates with other systems or during updates, upgrades, or patches. Costs related to security workarounds and remediation can be insidious and difficult to quantify but they should be considered."¹⁰

Getting started: Your path to innovation

The journey towards a disruption-ready enterprise begins with deliberate action. Here are some concrete steps executives can take to initiate and accelerate their transformation:

1 Establish an innovation council

- Form a cross-functional leadership team dedicated to driving innovation and exploring emerging technologies.
- This council should be empowered to make strategic decisions, allocate resources, and champion experimentation across the organization.

2 Conduct a technology landscape assessment

- Engage with Red Hat experts or internal teams to conduct a comprehensive audit of your existing technology landscape.
- Locate established systems that are hindering innovation, pinpoint potential bottlenecks, and assess your overall readiness for disruption. Invest in a platform-centric approach that can serve as a foundation for innovation and agility.
- Collaborate with consultants and engineers to develop a tailored roadmap for modernization and technology adoption.

3 Define a pilot project

- Select a specific business challenge or opportunity where innovation could make a significant impression.
- Assemble a cross-functional team with diverse perspectives to explore potential solutions and take advantage of open source tools and technologies to prototype and test your ideas in less time.

4 Embrace a “fail fast, learn faster” mentality

- Encourage a culture of experimentation where failure is seen as a learning opportunity, not a setback.
- Celebrate successes and share lessons learned from both wins and losses to foster a continuous-improvement mindset.

5 Invest in talent development

- Provide employees with the training and resources they need to develop new skills and embrace emerging technologies.
- Foster a learning culture where continuous upskilling and reskilling are encouraged and supported.



Key insight

Building a disruption-ready enterprise is not a unique project nor does it have an end state; instead, it's an ongoing commitment to adaptability and innovation. These efforts should be supported by a technology foundation that delivers innovation everywhere, and a platform that promotes consistency, security, and scalability. It should be backed by a trusted partner with the expertise and experience navigating the waves of innovation coming from open source communities.

AI, the great disruptor

Seizing the moment with open source in AI

How open source (further) revolutionizes AI: Democratizing innovation

AI is no longer a futuristic concept; it's a transformative force reshaping industries and redefining possibilities. From automating routine tasks to powering groundbreaking discoveries, this era of AI is poised to revolutionize how we work, live, and interact with the world around us.

And this era isn't built on a single vendor or a single monolithic, one-size-fits-all solution. AI, perhaps more than any other technology of the millennium, is built by an ecosystem. And, by default, it's a hybrid. AI—real, usable, enterprise-ready AI—will be defined by the hybrid cloud.

But across all of these advancements, the most interesting thing about AI over the past year has been something the IT world already expects: the advent of choice. What used to be achievable only in massive models and with exotic hardware can now be done with an AI model several magnitudes smaller running on a developer laptop. And this is all being driven behind the scenes by open source.

We're currently in the UNIX twilight of AI, populated by walled gardens, restrictive licenses and fee-limited features. Even if a model or tool is ostensibly open source, the computing, storage, and data requirements can be almost impossible to overcome. Open source communities, powered by an ecosystem of vendors, customers, and users like you, are uniquely suited to overcome these challenges. This is where

open source delivers the real possibilities of AI.

AI's true potential lies not just within its technological capabilities, but in its capacity for accessibility. Open source principles applied to AI can democratize innovation, making powerful tools and frameworks available to everyone, not just a select few. This openness fosters collaboration, accelerates development, and ensures that the benefits of AI are shared broadly.

67%

of business leaders cite generative AI as the biggest disruptive opportunity.²

72%

of organizations have adopted AI in at least 1 business function.¹¹

248%

YOY increase in the number of open source generative AI projects.¹²

² "2024 AlixPartners Disruption Index," 9 Jan. 2024.

¹¹ Singla, Alex, et al. "The state of AI in early 2024: Gen AI adoption spikes and starts to generate value," McKinsey & Company, 30 May 2024.

¹² Github Blog. "October: The state of open source and rise of AI in 2023," 30 July 2024.

Understanding the AI landscape: A primer for executives

As AI continues to evolve, it is important for executives to have a foundational understanding of the key concepts and distinctions within the AI landscape. Let's explore 2 critical areas:

Generative AI

What it is: Generative AI (gen AI) refers to models that can create new content, such as text, images, or music, based on patterns learned from vast data sets.

Why it matters: Gen AI has the potential to revolutionize content creation, design, and communication, helping businesses generate personalized experiences, automate creative tasks, and unlock new levels of productivity.

Predictive AI

What it is: Predictive AI goes beyond simply predicting outcomes; it recommends optimal actions or decisions based on complex data analysis and optimization algorithms.

Why it matters: Predictive AI can help businesses make smarter, data-driven decisions, optimize operations, and improve efficiency across various functions.



Use cases across industries: Where to start

By embracing both gen AI and predictive AI, businesses can unlock new levels of efficiency, innovation, and customer satisfaction. Here are just a few examples of the transformative power of AI.

	Industry					Across industries
	Healthcare	Finance	Manufacturing	Public sector	Telecommunications	Software and application development
Generative AI	Designing new drug molecules, generating synthetic medical images for training, and creating personalized health reports.	Generating financial reports, creating synthetic data for testing, and developing personalized investment recommendations.	Designing new product prototypes, generating synthetic data for simulations, and creating personalized marketing materials.	Generating responses to citizen inquiries, creating educational content, and summarizing complex policy documents.	Creating personalized customer recommendations, generating marketing campaigns, and automating network troubleshooting.	Creating code snippets, automating code reviews, generating documentation, and even suggesting entire functions or modules based on natural language prompts—allowing developers to focus on higher-level tasks and innovation.
Predictive AI	Predicting patient readmissions, recommending optimal treatment plans, and optimizing hospital staffing levels.	Detecting fraudulent transactions, predicting market trends, and optimizing portfolio allocation.	Predicting equipment failures, optimizing production schedules, and improving quality control processes.	Optimizing traffic flow, predicting crime hotspots, and improving resource allocation for public services.	Optimizing network performance, predicting customer churn, and identifying new revenue opportunities.	Predicting potential bugs and vulnerabilities in code, identifying areas for performance optimization, and suggesting improvements to code quality.

Getting started with an open source foundation for AI: A roadmap for executives

Today, an enterprise has thousands of applications. Tomorrow, you'll still have those thousands of applications and likely as many AI models. Every organization will take its own path in the AI era. As you forge yours, the framing discussed previously in this guide is something you can apply. Here's a roadmap to guide you as you explore possibilities for AI in your organization.

1 Align AI with business strategy

Start by identifying key business challenges or opportunities where AI could make a significant impression. Don't just chase the latest trends; focus on initiatives that align with your strategic objectives and deliver measurable value.

Prioritize areas where AI can deliver immediate value, such as improving developer productivity with coding assistants or optimizing customer service with chatbots.

Ask: How will you use AI to improve nearly every aspect of your business? How can you create new business differentiators, improve your customers' experiences, increase productivity, and reduce costly errors?

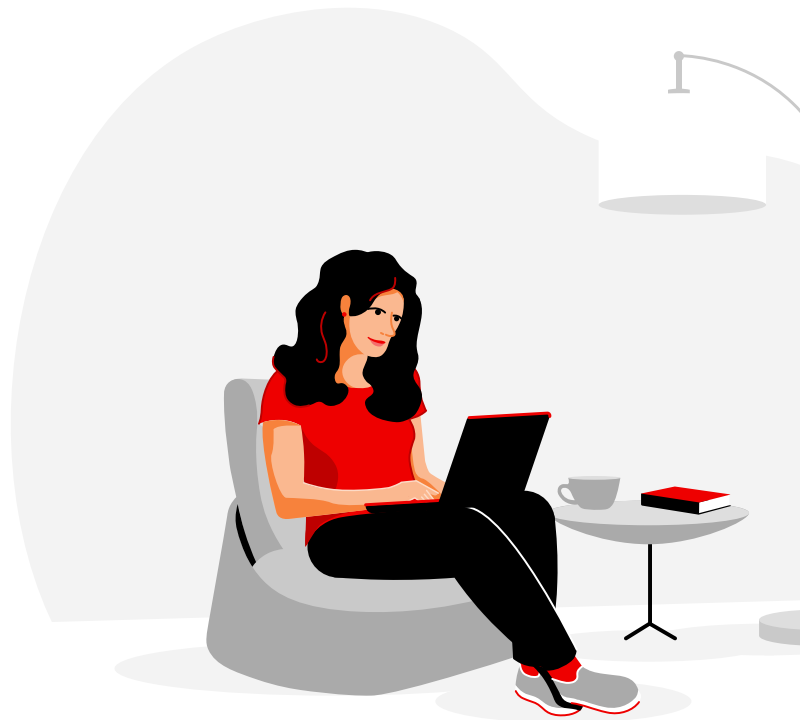
2 Assess your AI readiness

Evaluate your organization's current capabilities and identify gaps in terms of data, talent, and infrastructure. This will help you prioritize investments and build a solid foundation for AI adoption.

Ask: How AI will affect your technology stack, operational models, and the teams responsible for bringing these capabilities to life?

3 Build a cross-functional AI team

Bring together data scientists, developers, business analysts, and domain experts to collaborate on AI initiatives. Foster a culture of shared ownership and ensure that AI projects are aligned with business needs.



4 Start small and iterate

Begin with a pilot project to test your approach, gain valuable insights, and demonstrate the potential of AI within your organization. Choose a use case with clear objectives and measurable outcomes.

5 Choose your AI platforms wisely

When choosing AI solutions, consider those built on open platforms that provide flexibility and choice. Avoid vendor lock-in and ensure that your AI investments can evolve alongside the rapidly changing AI landscape. Open source AI tools and frameworks can accelerate development, reduce costs, and help avoid vendor lock-in.

6 Foster a culture of continuous learning

Encourage your team to stay abreast of the latest AI advancements through training, conferences, and community engagement. The AI landscape is constantly evolving, and continuous learning is key to staying ahead.

7 Measure and iterate

Establish clear metrics to track the progress and results of your AI projects. Use these insights to refine your approach, optimize models, and promote continuous improvement.

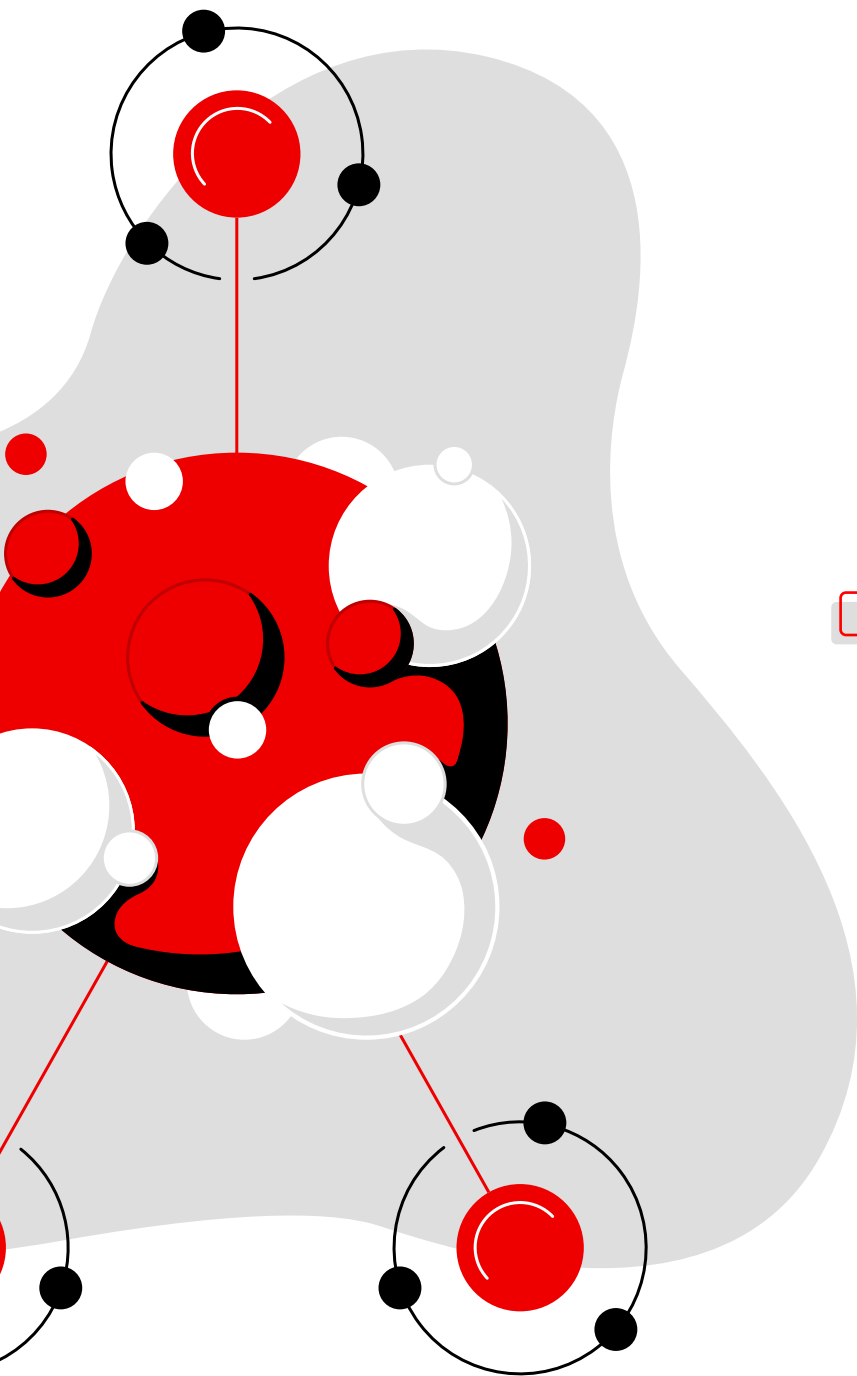
8 Partner wisely

Determine which trusted companies you should partner with to stand the best chance of success with their AI opportunities—today and in the future. Just as with disruptive technologies before it, how an organization adopts AI will be a defining and differentiating decision.



The Red Hat advantage

Your trusted partner in the era of constant innovation



Navigating the complexities of disruption and to benefit from emerging technologies requires more than just leading-edge tools.

It demands a trusted partner with a proven track record of empowering enterprises to embrace innovation and navigate the ever-changing technological landscape.

A history of open source leadership

Red Hat is synonymous with the rise of enterprise open source. We've been at the forefront of this movement for decades, championing collaboration, advancing innovation, and empowering businesses to break away from the constraints of proprietary software. Our open source DNA is unwavering and woven into everything we do, from our products and services to our culture and values.

We understand the unique challenges and opportunities facing businesses in the era of constant innovation. We have helped countless organizations across industries navigate disruption, modernize their IT infrastructure, and unlock new possibilities through open source technologies.

The freedom and flexibility to innovate without constraints

We recognize that the future of IT is a hybrid landscape. Businesses need the flexibility to build and deploy applications wherever it makes the most sense—whether that’s on-premise, in a public cloud, or at the edge. Red Hat’s open hybrid cloud vision isn’t just about technology; it’s about helping you build an IT foundation that’s ready for the future.

It is this philosophy that guides our approach to innovation. Our solutions help you adapt to emerging technologies and new or changing business needs. At Red Hat, we are not just solving today’s challenges, but giving you the tools and knowledge needed to adopt the flexible, adaptable platform that can support your evolving needs.

Red Hat’s open hybrid cloud platforms let your teams deliver any application, anywhere, with confidence because they are:

- **Trusted:** Built on a foundation of security, compliance, and reliability, our platforms provide a security-focused and stable environment for your critical workloads. You can innovate with peace of mind, knowing your data and infrastructure are protected. That’s why more than 90% of companies in the U.S. Fortune 500 continue to rely on Red Hat.¹³
- **Comprehensive:** Our platforms offer full capabilities across public, private, and hybrid cloud environments—from application development and deployment to automation and management. You can choose the tools and technologies that meet your specific needs, build and run applications where you need them (whether in your datacenter or at the network edge), and explore and experiment without being locked into a single vendor or ecosystem. You have the flexibility to choose the right tools and technologies for your specific needs, without being locked into a single vendor or ecosystem.

- **Consistent:** Red Hat platforms provide a unified experience across hybrid cloud environments, with simplified operations that can accelerate innovation. You can move workloads between on-premise, public cloud, and edge environments, ensuring optimal performance and resource use.

Red Hat OpenShift, Red Hat Enterprise Linux, and Red Hat Ansible® Automation Platform are the bedrock of this open hybrid cloud foundation, and are trusted across industries by organizations that want to take advantage of the superior innovation coming from open source communities with the consistency, flexibility, and security required to navigate an era of constant change.



Red Hat
Enterprise Linux

540% return on investment¹⁴



Red Hat
OpenShift

468% return on investment¹⁵



Red Hat
Ansible Automation
Platform

668% return on investment¹⁶



Use the Red Hat business value [calculator](#) to see a customized report of the potential value Red Hat can deliver to your organization.

¹³ Red Hat client data and [Fortune 500](#) list, September 2024.

¹⁴ IDC Business Value Executive Summary, sponsored by Red Hat. "[Executive Summary: Value of Red Hat Solutions Versus Non-Paid Open Source Alternatives.](#)" Document# US50423523, March 2023.

¹⁵ Forrester Total Economic Impact™ Study commissioned by Red Hat, "[The Total Economic Impact™ Of Red Hat OpenShift Cloud Services.](#)" 4 March 2024. Results are for a composite organization representative of interviewed customers.

¹⁶ IDC Business Value White Paper, sponsored by Red Hat. "[The Business Value of Red Hat Ansible Automation Platform.](#)" Document# US51839824, 12 March 2024.

Making AI accessible and adaptable for all

We believe in democratizing AI. In the same way we supported open hybrid cloud platforms to offer businesses options and flexibility, we are committed to making AI accessible and adaptable for all.

We believe that the cloud is hybrid, and so too is AI. Our open source AI platforms and tools—Red Hat OpenShift AI, Red Hat Enterprise Linux AI, and Red Hat Lightspeed—provide a collaborative foundation for innovation, helping you use the latest advancements while maintaining control and avoiding vendor lock-in. With Red Hat, you can benefit from the transformative power of AI to improve efficiency, unlock insights, and create exceptional customer experiences wherever your business needs dictate.



Community and ecosystem: The power of collaboration

We believe that the best ideas come from collaboration. Red Hat is deeply embedded in the global open source community. We actively contribute to, collaborate with, and learn from the brightest minds in the industry. This engagement ensures that our customers benefit from the latest innovations, practices, and security enhancements.

Partnering with Red Hat isn't just about getting access to technology; you're gaining entry into a vibrant ecosystem of contribution, knowledge, and expertise. We understand that innovation does not happen in a vacuum. Our vast partner ecosystem uniquely positions us at the heart of the IT industry. We collaborate with leading technology providers, system integrators, original equipment manufacturers (OEMs), and independent software vendors to deliver comprehensive solutions that meet the growing needs of enterprises.



Expertise and experience: Guiding your transformation

We understand the unique challenges and opportunities facing enterprises in the era of constant innovation, and we're committed to helping you navigate this complex landscape. Our team of experts possesses a wealth of knowledge across a wide range of technologies, from Linux and virtualization, to cloud computing and automation, to AI and machine learning.

We're not just technologists; we're strategic advisors who can help you chart a course toward a future-ready enterprise. We have a proven track record of identifying and supporting open source technologies that are poised to redefine the landscape. Our deep engagement with the open source community, coupled with our expertise in enterprise IT, helps us guide you toward the innovations that matter most for your business.

We will help you navigate the waves of innovation coming from open source communities and the complexities of the disruption cycle, assess the potential benefits of emerging technologies, and develop a strategic roadmap for adoption.

Embracing the era of constant innovation with Red Hat

In an era defined by constant innovation, Red Hat is your trusted partner. We empower you to adopt open source, navigate disruption, and build a future-ready enterprise that can thrive in the face of change. Together, we can turn challenges into opportunities and unlock a world of possibilities.

Support and security: Innovating with confidence

We believe that embracing new technologies shouldn't come at the cost of security or stability. Red Hat provides robust support, security, and compliance capabilities to mitigate risks, allowing you to innovate with confidence, knowing that you are building on a foundation that is trusted in the world's most intensive environments. Our enterprise solutions are backed by world-class support, proactive vulnerability management, and a commitment to open standards.



About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, Ansible, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted advisor to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.