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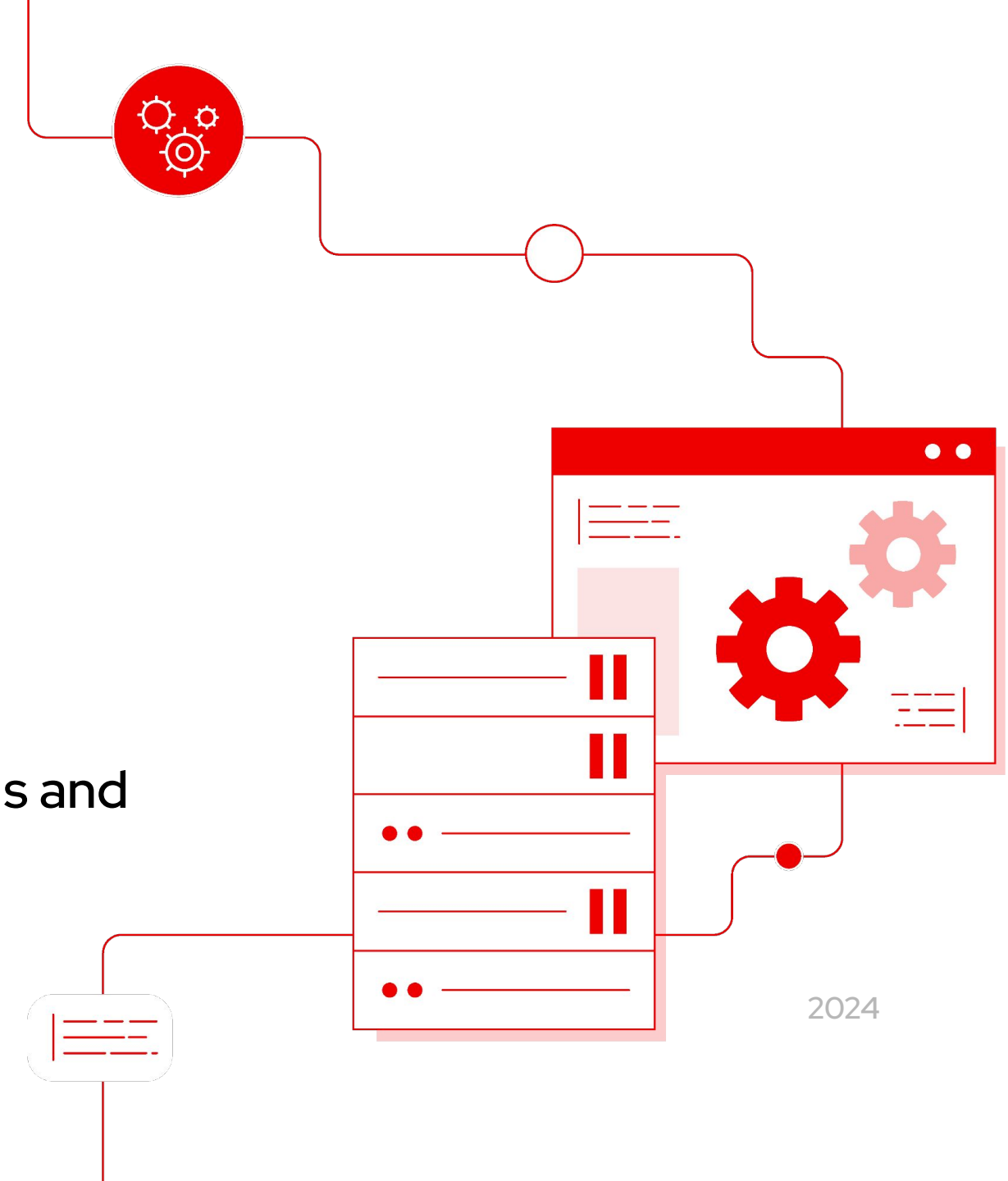
State of Platform Engineering in the age of AI

Findings from a survey of 1000 ITDMs and Platform Engineers



*Research carried out by **Red Hat and Illuminas***

2024

What, why and who?

In 2024, we published an extensive piece of research, designed to get a detailed understanding of market perceptions of **platform engineering** among its decision-makers and practitioners.

By understanding the priorities and strategies of IT and engineering professionals, we aimed to map the present and future state of platform engineering, and to understand the targeted ways Red Hat can help to improve outcomes.

Online survey

- **17 minute** average survey length
- Sampling from third-party databases
- Target personas
  - ITDMs
  - Platform Engineers
- Field dates – **August 20th to September 13th 2024**

1000 participants surveyed

- **500** from US
- **250** from UK
- **250** from English-speaking APAC countries

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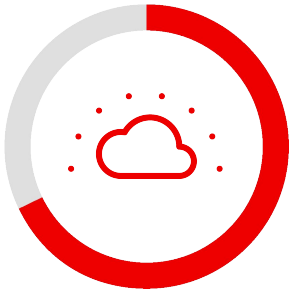
Cloud adoption



68%

of organizations surveyed have developed: **Advanced Cloud Services**, **Serverless infrastructure** or **Multi-cloud**

What it could mean

The majority of the organizations we spoke to were fairly far advanced in their cloud adoption – suggesting a strong foundation for platform engineering innovation.

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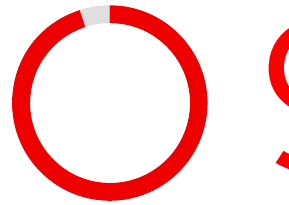
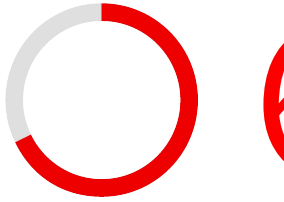
Application proliferation



95%

of organizations develop and manage over 10 applications



68%

develop and manage over 50

What it could mean

Organizations are relatively mature in developing the capability to develop their own applications.

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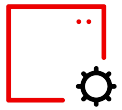
Types of applications

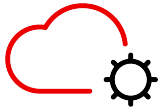
86%

of organizations are developing **cloud-native applications**



66%

are developing **AI applications**



63%

are developing **SaaS applications**

What it could mean

Innovations in AI and as-a-Service models have opened up a range of new possibilities, which organizations are keen to explore.

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Self-service

76%

of organizations are providing self-service capabilities for developer teams

80%

of these are using it for automated provisioning

What it could mean

Organizations are prioritizing empowering their teams to get instant support, suggesting a focus on efficiency and productivity in investment in the developer environment.

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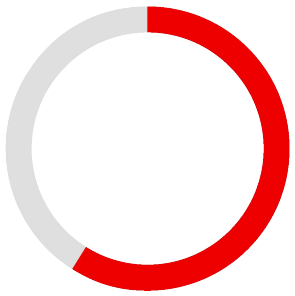
Platform engineering



59%

of organizations have an ‘Established’ or ‘Advanced’ Platform Engineering function

What it could mean

We should focus on talking about how Red Hat can help to advance existing platform engineering capabilities, rather than just explain the benefits of building the function.

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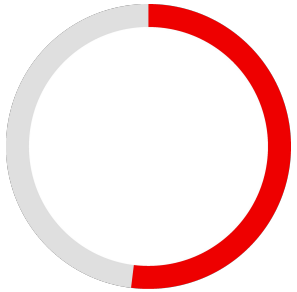
Platform engineering challenges



52%

of **Advanced organizations** are motivated by **security vulnerabilities** to start exploring platform engineering.

Organizations newer to platform engineering are more motivated by difficult in scaling and knowledge silos, while advanced platform engineering environments were driven primarily to address security concerns.

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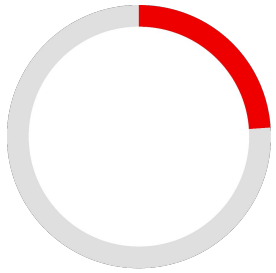
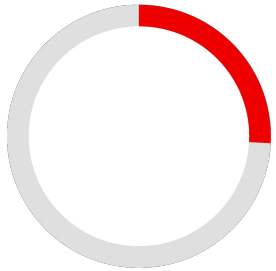
Advanced Organizations see greater success

Double the number of respondents saw an increase in innovation with Advanced maturity compared to orgs at the Exploring or Emerging stages.



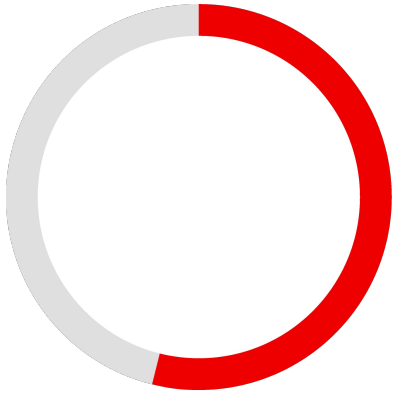
24%

of **Exploring organizations** saw an increase in innovation



26%

of **Emerging organizations** saw an increase in innovation



54%

of **Advanced organizations** saw an increase in innovation

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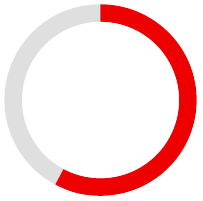
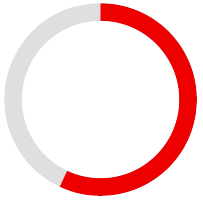
Platform engineering benefits



56%

of those with an advanced platform engineering function cited increased developer productivity as a benefit



55%

cited better application performance

What it could mean

Overall, organizations with more mature platform engineering see greater benefits, for security, productivity and performance. Highlighting successes can help to increase adoption and drive maturity.

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Impact and maturity

94%

of all organizations said that platform engineering had produced at least moderately successful outcomes

What it could mean

Platform engineering has a significant positive impact at every level of maturity, though the impact gets better with increased proliferation.

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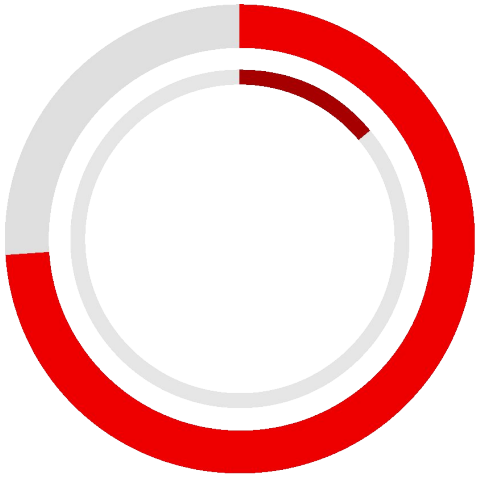
Platform engineering



74%

of organizations have a fully dedicated team for platform engineering, including **14%** who have a large cross-functional team.

What it could mean

With well over half having a relatively mature platform engineering function, increasingly specialized solutions will be required to support new use cases.

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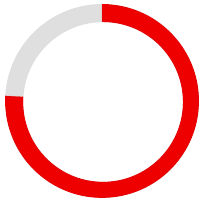
Automation in focus



75%

of organizations have a fully integrated CI/CD pipeline for automation

18%

have achieved complete automation of the software development lifecycle end to end

What it could mean

We can highlight that OpenShift is a comprehensive solution that can integrate with an existing cloud and automation function.

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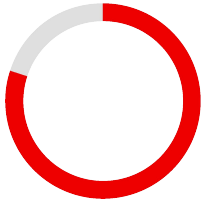
Advanced Monitoring



80%

of organizations have advanced monitoring solutions, including Application Performance Management

16%

have proactive monitoring and automated incident response

What it could mean

Monitoring maturity is relatively high, although there is still limited proactivity in the way organizations respond to incidents.

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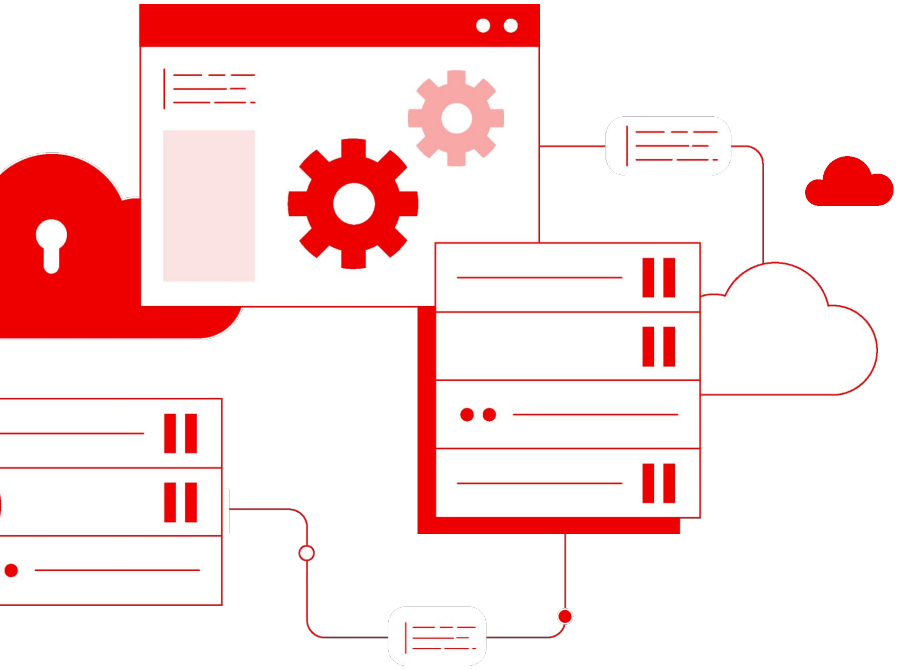

Field perspectives

"Platform engineering is used to maintain work processes and aid employees in their work."

***Platform Engineer**, UK*

"It has improved and promotes test automation which helps in improving software quality and reducing bugs."

***ITDM**, APAC*

What it could mean

There are differing priorities and perceptions between TDMs and Platform Engineers, so a connected approach is required to meet the goals of both groups.

Application Platforms

23% of organizations use Red Hat OpenShift as their application platform

61% use **Azure Kubernetes Service**

58% use **Google Kubernetes Engine**

57% use **Amazon Elastic Kubernetes Service**

What it could mean

Red Hat lags behind the three top providers, which may suggest an opportunity to show the value of an open-source approach to improve flexibility and innovation.

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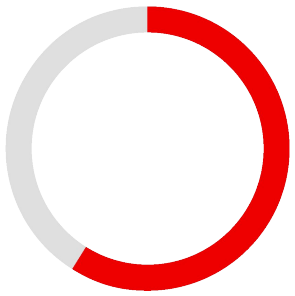
Solution expertise



69%

of organizations look to internal IT and development teams for information on platform engineering, the most common response

What it could mean

Empowering internal development teams with more training and resources for platform engineering strategies might help to boost internal skill-sets and improve operational strategies.

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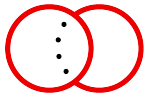
Vendor selection

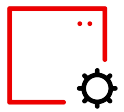
49%

say **security** and **compliance** is an influential factor in picking a platform provider



42%

say **integration** and **compatibility**



39%

say **features** and **functionality**

What it could mean

Vendors need to show how they can provide more than just functionality – with robust, secure platforms that align to customers' unique operational and strategic demands.

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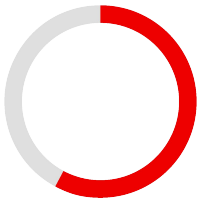
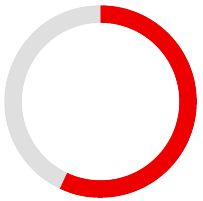
Factors influencing platform engineering



61%

of organizations say cybersecurity advancements will significantly influence platform engineering in coming years



59%

say generative AI will be major influence

What it could mean

Showing how a unified strategy for generative AI and security could help to differentiate Red Hat's open-source approach.

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AI + platform engineering

2%

of organizations say generative AI has little to no impact on their platform engineering strategy.

45%

say it is a core component

What it could mean

Generative AI is clearly understood by most participants to be a potentially transformational influence on platform engineering in the near future.

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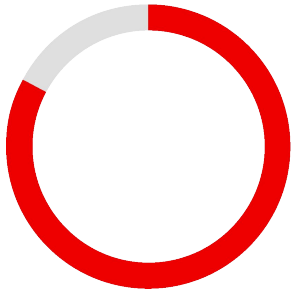
AI for developers



83%

of organizations are using generative AI to support their software development stack

What it could mean

Organizations are looking for ways to make development faster and more efficient, suggesting an appetite to increase capacity for innovation and more complex development strategies.

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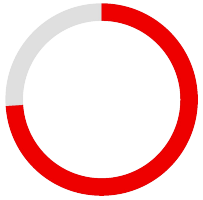
AI models

37%

of organizations have deployed their own tuned AI models



74%

use centrally vetted models via APIs

What it could mean

Organizations in the main are not yet confident in their ability to manage an owned AI model function, although we expect this to grow as teams become more skilled and experienced in doing so.

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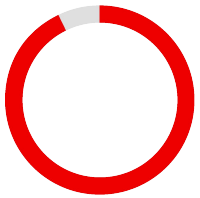
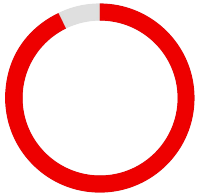
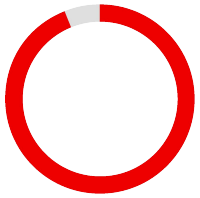
AI use cases



93% have or plan to use generative AI for **document generation**



93% have or plan to use generative AI to **automate code generation**



94% have or plan to use generative AI for **intelligent bug detection**

What it could mean

Vendors need to show how they can provide more than just functionality – with robust, secure platforms that align to customers' unique operational and strategic demands.

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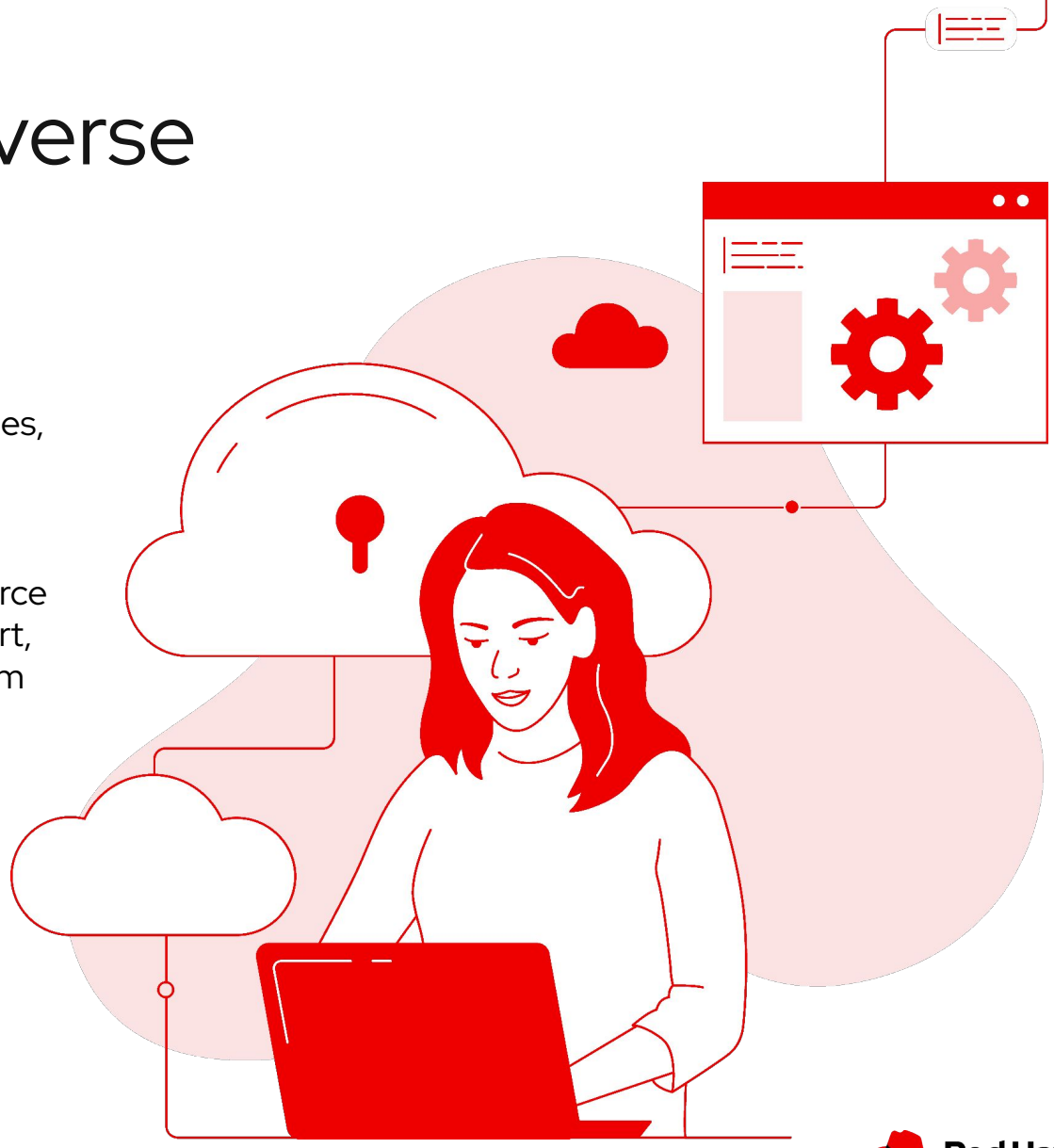
Platform engineering is a diverse and growing opportunity

As organizations gradually accelerate their adoption of a **platform engineering approach**, growing their teams and adding new use cases, we can expect to see a deepening impact on productivity and performance from their application, automation and IT stacks.

By working with them to highlight the benefits of a flexible, open-source approach, and demonstrating our training, resources technical support, we can position ourselves as a go-to partner to enhance their platform engineering function and maximize the outcomes.



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