FORTRA

The Definitive Guide to Data Security

Taller walls aren't the answer.

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Introduction

You don't know what you don't know.

Your data security policies and processes have gaps—places where sensitive information can go astray and end up in the wrong hands.

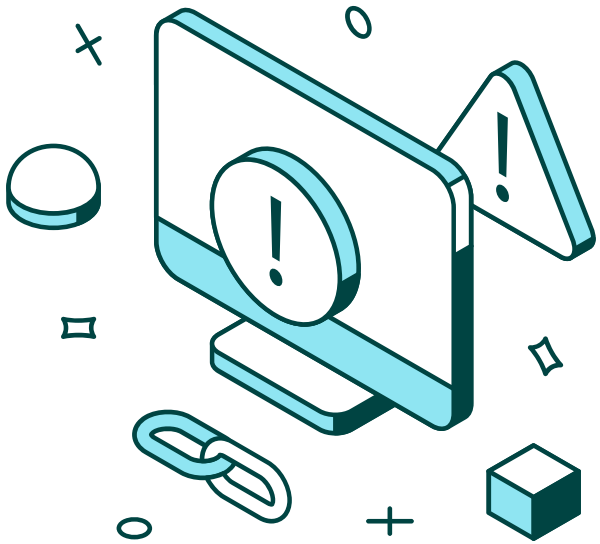
For most businesses, today's information security is built as a series of metaphorical walls—protections and defenses erected around applications, devices, networks, and online identities. Beyond those walls, we rely on each individual employee following policies as a virtual extension of these fortifications.

The good news: we have become expert at building defenses around applications and networks, including perimeter-based security, strong authentication, encryption, mobile device management, and secure containers. All of these solutions offer vital protections.

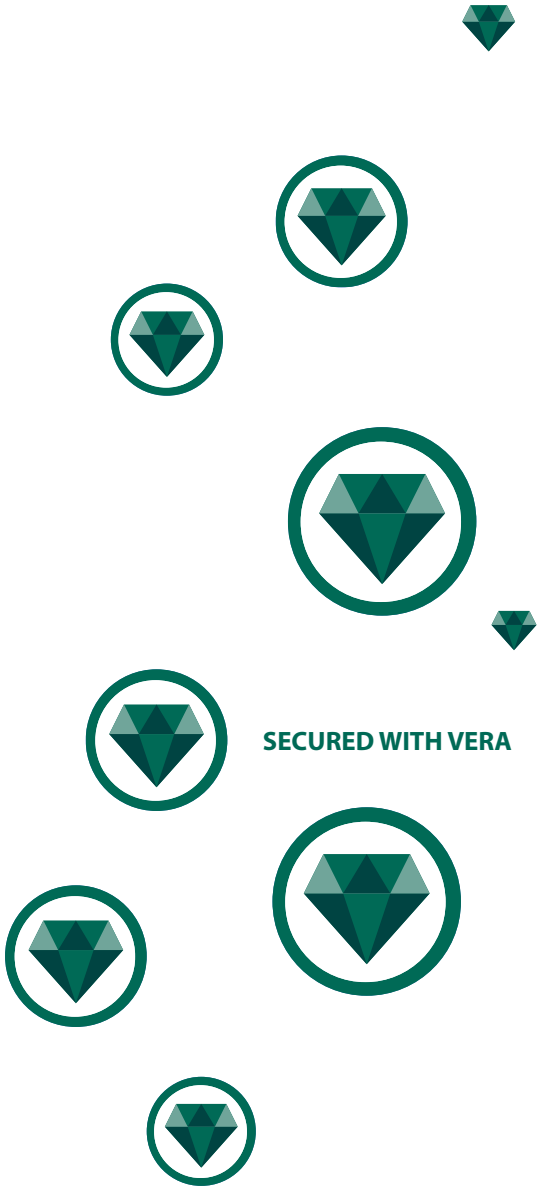
But when they fail—when there's a breach in our defenses—we try to strengthen the barriers we already have. We don't adapt. And that doesn't work.

Each time you read about another data breach in the paper, some little voice whispers in your brain, *"That can't happen to us, right?"*

But, deep in your gut, you know sensitive business data may be at risk somewhere out of sight, beyond your reach.



Data is the vital stuff of business, but to protect our crown jewels, we have to shift our security to protect what really matters: the data itself.



NOT PROTECTED

If you lock everything down, business will grind to a halt.

Building higher walls and stronger perimeter defenses may make you feel safer for a while. But this strategy can't deliver lasting protection, for two reasons:

Walls are crumbling. Physical boundaries and network perimeters are dissolving. The more complex the IT environment becomes, the more difficult it is to protect the systems, devices, people, and networks handling corporate data. Sensitive data escapes through the gaps in the defenses.

Business is storming the walls, from the inside out. Data delivers value when it's being used by employees as well as people outside of your organization, with devices and applications that you cannot control.

Data is the vital stuff of business, but to protect and control our crown jewels (our intellectual property or regulated information) when they're in use by partner or collaborator hands, we can't rely on walls. We have to shift from infrastructure-centric security measures to data-centric approaches to protect what really matters: the data itself.

If your team is struggling to secure sensitive data in a world without well-defined borders, you need to change your approach and understand:

- Why building bigger walls around data, devices, networks, and applications doesn't work anymore
- How to find and detect the four key gaps in your information security architecture
- How to bridge those gaps by protecting data in use

To get out from behind our walls, we first have to understand how we got into our current situation.

PART I
The Walls are Crumbling

Part I

Our Path to the Present

Taller, higher, stronger walls

Great minds and innovative companies have spent decades addressing the challenges of information security. As technologies change and expose vulnerabilities, new solutions rush in to fill the vacuum, adding layers to secure the people, places, and things handling business data.

Back in the day, the mainframe environment consisted of a single access point, one network, and only a few privileged accounts to protect. Admins controlled logins to the mainframe and locked down the computer in a secure, temperature-controlled citadel. The mainframe itself took care of the rest.

Then the computing perimeter started expanding, and defenses became more complex.

Distributed client/server computing multiplied the systems and networks needing protection. Computers multiplied. Client devices multiplied. But, most employees still operated within corporate networks.

As information systems expanded to the cloud, logins multiplied. Mobile devices mushroomed at an unprecedented rate.

This expanding technological footprint is reflected in business structures. With constant connectivity and mobility, people around the globe can collaborate with each other. Virtual teams and organizations assemble and disperse for specific projects.

The result? More apps, more data, more networks, and more logins. The numbers continue to grow.

A decade ago, IT could track the networks, connections, and perimeters related to sensitive data. Today, everything connects to everything else, borders have disappeared, and the complexity of the underlying environment continues to increase by orders of magnitude.

In their Virtual Networking Index (VNI), Cisco predicted that there will be 4.8 billion internet users by 2022, up from 3.4 billion in 2017. And IP traffic will continue to skyrocket. They predict that by 2022, more IP traffic will cross global networks than in the first 32 years after the internet was created.

4.8

BILLION

Internet Users by 2022

Cisco Virtual Networking Index (VNI)

The Old Ways Can't Serve Our New World.

With each new stage, the security industry has developed new solutions and taller walls to fortify systems, secure online identities, defend networks, and protect data.

1. Network security measures like firewalls, sniffers, vulnerability scanning, and intrusion detection protect the perimeter.
2. Identity and Access Management (IAM) solutions secure, centralize, and manage user authentication.
3. Data loss prevention (DLP) systems track sensitive data exiting or traversing corporate networks.
4. Digital Rights Management (DRM) restrict access to proprietary information.
5. Secure FTP solutions track and manage the transfer of files between networks and entities.
6. Secure document vaults protect content in heavily regulated industries like healthcare and financial services.
7. Mobile Device Management (MDM) solutions enforce policies for corporate smartphones and tablets.
8. Cloud Access Security Brokers (CASBs) manage security policies involved in accessing cloud-based resources.
9. Secure sync and share and enterprise collaboration solutions create safe environments for exchanging and sharing information.

In 2015, Gartner estimated that businesses spent $75 billion on enterprise security. Fast-forward to today, as Gartner predicts 2021 spend in security and risk management will exceed $150 billion.

And yet even with that investment, the number of data breaches is increasing.

Part I

How can we spend this much and still have so many problems?

We've neglected the data. We've been securing infrastructure: the applications, devices, networks, and identities—not sensitive data itself through its entire life cycle. We're building castles designed for a siege, not for trade and commerce. Ponemon research shows that although more than half of organizations send sensitive data in the cloud, only 37 percent have any consistent encryption strategy. This is the problem with building more walls—there are too many gaps for information to slide through.

Our walls expose four critical security gaps. Each security solution outlined above fills an important role, but as the environment continues to get more complex, sensitive data finds the gaps in each layer of defense.

MOST ORGANIZATIONS SHARE THESE FOUR CRITICAL GAPS:

1. The Behavior Gap: The difference between what people should do, and what they really do when confronted by a wall
2. The Visibility Gap: Where your sensitive data travels, and who accesses it once it's shared beyond your borders
3. The Control Gap: The inability to pull back access to lost files or leaked information
4. The Response Time Gap: Time lag between a new, risky behavior and your team's ability to correct it

Nearly every business has these gaps. Take a look and see if they seem familiar.

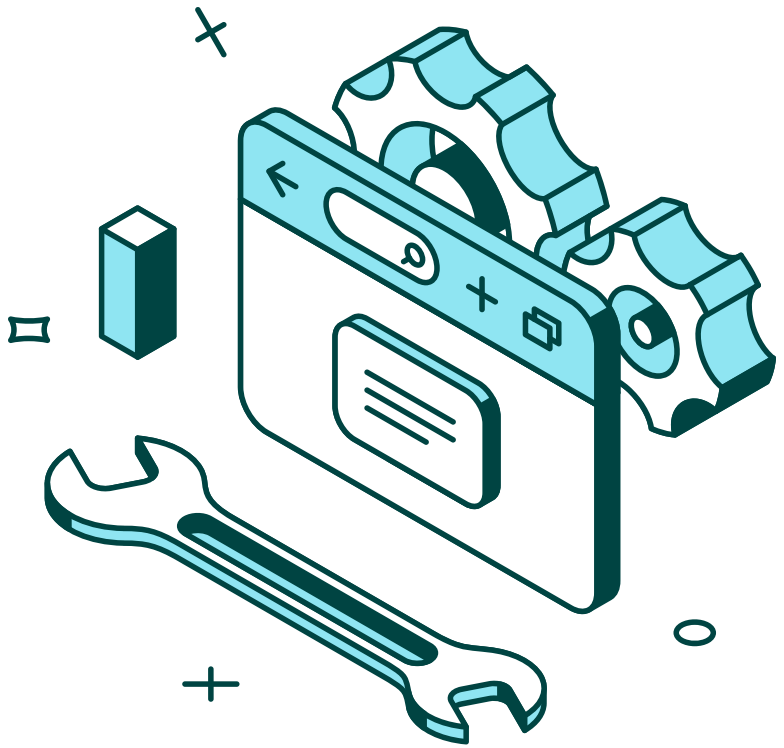
PART II

Finding the Four Key Gaps

Part 2

The Behavior Gap

"None of our employees use the security tools we've provided."



To understand the Behavior Gap, let's follow the story of a fictional media company, Pageantry Media.

In media and entertainment businesses, creative capital and assets drive revenue and growth. Pageantry Media carefully guards plots and scripts ahead of releases, so its competitors cannot see what's coming up next. Hundreds of people work with the intellectual property: designers, artists, marketers doing focus groups and game developers. Everyone wants to use their own tools, and everyone operates on tight deadlines. Faced with pressure to get the job done, people find ways to work around security systems, and those precious story lines leak out into the world.

No matter what industry you're in, this story probably sounds familiar. Sensitive data falls into the Behavior Gap.

Part 2

Why Does the Behavior Gap Exist?

Businesses are made up of people. We're human, not programmable. And we want to find the fastest, most effective way to do our jobs.

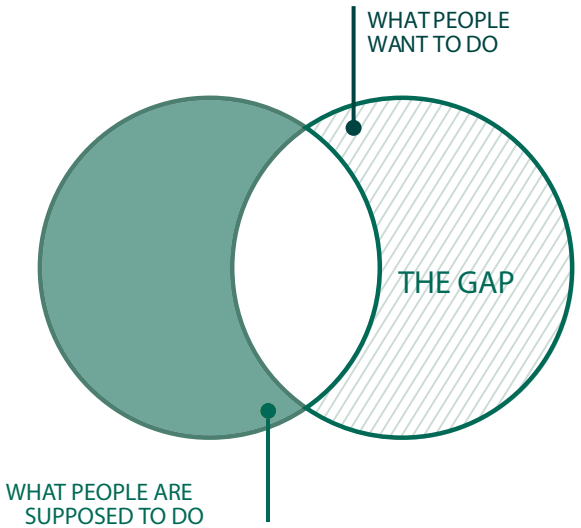
Most employees want to do the right thing with sensitive data. But more importantly, they need to get their work done. People are evaluated and paid based on goals accomplished. When security makes their jobs more difficult, it creates an inherent conflict. When people have to jump over too many hurdles, they're likely to look for another path.

Usability is the Achilles' heel of information security solutions.

When security tools are difficult to navigate, people will look for alternatives:

- Putting sensitive files on a USB stick so they can work on another device
- Bypassing the secure FTP server and mailing themselves files as attachments so they can work on personal devices
- Copying and pasting data from a secured file into an unsecured document "for convenience"

These actions put sensitive data at risk.



Why Does This Gap Exist?

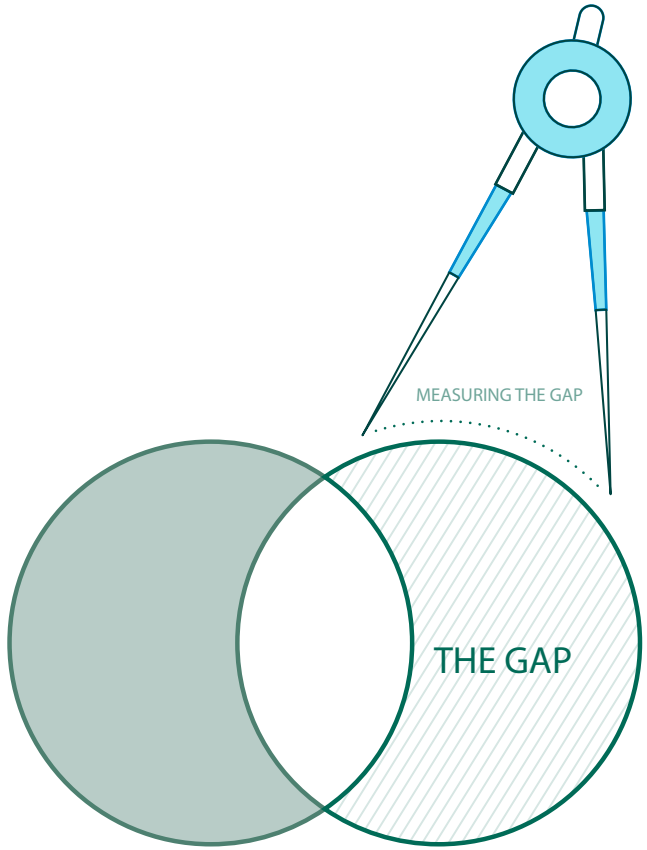
Part 2

People don't usually tell you about the ways they're misusing data, so you'll have to guess.

Here are a few signs that your Behavior Gap may be larger than you think:

- Is your help desk swamped with calls with people trying to figure out how to get things done in your secure environment? The ones who don't get answers are probably finding a better way.
- Do people get more work done on the weekends, from home, than in the office using secure systems?
- Do people ever express frustration with the applications or processes?

If you answer yes to one of these questions, you may have a significant Behavior Gap.



20%

Compromised credentials were responsible for 20% of data breaches globally.

IBM Security's Cost of a Data Breach Report (2021)

The Visibility Gap

Part 2

"I can't tell where, when, or how my data is being used."

Everyone at Turret Financial Services understands the importance of protecting financial and customer information to comply with the SEC, FDIC, SOX, and other regulations. But, Turret Financial must collaborate with external auditors, lawyers, customers, and investors. The IT team worries how their partners and investors will use the firm's sensitive data. Compliance officers lay awake at night worrying:

- Has material financial information been disclosed prematurely?
- Have investment strategies been forwarded to competitors?
- Who is accessing our customers' information?

Once files are shared beyond Turret systems and servers, they fall into the Visibility Gap.

The Visibility Gap is everything you cannot see. It's the unmanaged territory where data flows when it leaves the devices, networks, and applications that you directly control. Information crosses the Visibility Gap when your business collaborates with external partners or entities. Often, the real work gets done outside of your scope of vision.

Why does this gap exist?

Once you send a file as an email attachment outside of your managed domain, it disappears into the wild. The same thing happens when someone copies protected information into an Evernote file or saves a file on a personal USB. It disappears from your view.

This gap grows in proportion to the complexity of the information environment. You only see into some of the pieces of the puzzle, while employees can access an almost limitless number of devices and applications. What you don't know can hurt you. If data is regulated, you bear responsi bility for it, even when you cannot see it.

The Visibility Gap

Part 2

In a Fortra survey, CISOs and CIOs reported that **data visibility** is their biggest cybersecurity weakness.

Fortra Cybersecurity Challenges in Financial Services - Market Survey Report

How big is your Visibility Gap?

By definition, the Visibility Gap is difficult to see. Information in the gap lies outside of your monitoring, auditing, and tracking technologies.

But you can detect its path, like the wake left by a large ship.

- [ ] Where does your data live?
- [ ] Is it secure?
- [ ] Who has access to it?
- [ ] How often are files and da ta sent outside your organization?
- [ ] How many thir d-party partners do you collaborate with?
- [ ] What kind of information do y ou send to consultants and third-party contractors?
- [ ] Can you track and audit who accesses the data, even when it's not within your servers or on your devices?

The Control Gap

Part 2

"I can't proactively lock down access to lost files or leaked information. Once it's out, it's out."

Stronghold Health is a regional network of hospitals and clinics, with thousands of members and affiliated physicians and clinicians. Every physician and care provider is carefully trained on the importance of protecting Personal Health Information (PHI) to comply with the HIPAA Privacy Rule. But physicians routinely consult with others on problematic cases. A simple email malfunction like accidentally sending an email containing PHI to the wrong email address or hitting "reply all" by mistake can result in a potential violation. The hospital's compliance officer has no choice but to report a breach in these situations, because there's no way to shut down access to the PHI record once it has left the system.

The Control Gap

Stronghold Health suffers from the Control Gap—the lack of ability to limit or revoke access to information once it's outside of managed networks and systems. It leads to anxiety, uncertainty, compliance violations and breach notifications.

Do the symptoms sound familiar? Chances are that you've got a Control Gap, too.

Why does this gap exist?

You control most of the path:

- You can control access to enterprise logins with Identity and Access Management
- You can monitor and manage access to cloud-based file sharing applications with Cloud Access Security Brokers
- You can scan files that leave the organization with Data Loss Prevention (DLP) systems
- You can shut down an employee's corporate device with Mobile Device Management

But not the last mile—where data is in use. In the course of doing businesses, data leaves the systems and networks within your sphere of influence. Someone downloads the spreadsheet, or copies and pastes the description of your as-yet-unreleased product into a personal document.

The Control Gap is the natural extension of the Visibility Gap: once a file leaves the networks, devices, and applications that you manage, it's effectively out of your control

How big is your Control Gap?

- Have you ever accidentally sent a sensitive email to the wrong person?
- Have you ever suspended a relationship with a vendor or contractor, then worried about what they would do with the files they had?
- Has someone ever left your company on less-than-ideal terms?
- Do you work with any regulated data that has sensitive deadlines or timelines, or that should "self-destruct" once a specific time period is past?

Unless you live in a ideal world, you've got a Control Gap.

Part 2

We've all done it

Made an **unintentional error** when **sharing data**

Sent information to the **wrong person**

Accidentally forwarded files to an **unauthorized recipient**

The Response Time Gap

Part 2

"Our security team is always reacting."

Chivalric Consulting helps its clients leverage cutting edge technologies for competitive advantage. Chivalric's consultants are constantly chasing the next innovation and trying the newest technologies. The company's security team is always playing catch-up, formulating and spreading policies to protect confidential client information as its consultants continue evaluating and deploying new applications.

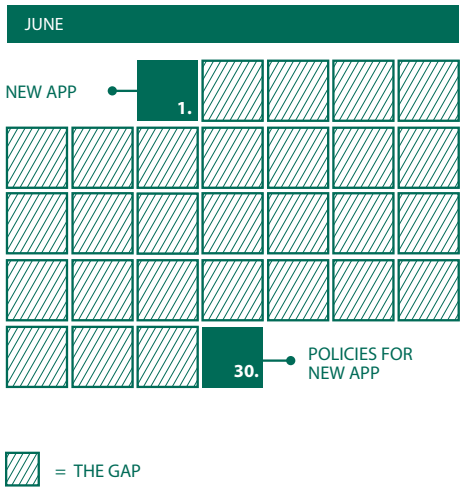
Like many businesses, Chivalric Consulting has a significant Response Time Gap. The Response Time Gap is caused by the delay between a new application or behavior that affects sensitive data and your ability to understand and respond to that behavior. It might be weeks or months, during which you don't know what's happening with sensitive information.

287days

It took organizations worldwide an average of 287 days to identify and contain a data breach.

Part 2

IBM Security's Cost of a Data Breach Report (2021)



Why does this gap exist?

Technology changes quickly. In many organizations, employees bring their own devices, applications, and expectations for how to work. Departments purchase applications and devices, which in turn generate more sensitive, proprietary information.

In the rush to get business done, security is often left to play catch-up. And security breaches may be the unintended consequences of this gap.

You could try locking down sensitive data, banning new applications, and standing your ground. But it's like standing in front of a moving freight train.

You might have time to see it coming, but eventually you won't be happy.

You need security that operates at the speed of business, with flexibility to adapt to the unknown.

How big is your Response Time gap?

Your Response Time Gap may be measured in days, weeks, months, or quarters. The longer it is, the greater the risk of people taking measures into their own hands, or sensitive data going untracked into new applications.

To detect the length of this gap, you'll need to understand:

- How many unanswered requests do you have to evaluate or support new applications?
- How long does it take, on average to fill those requests?
- How important is it for your employees to be current with the latest technologies?
- How long does it take to find out about new applications or devices that employees are already using?

Part 2

The Limitations of Existing Defenses

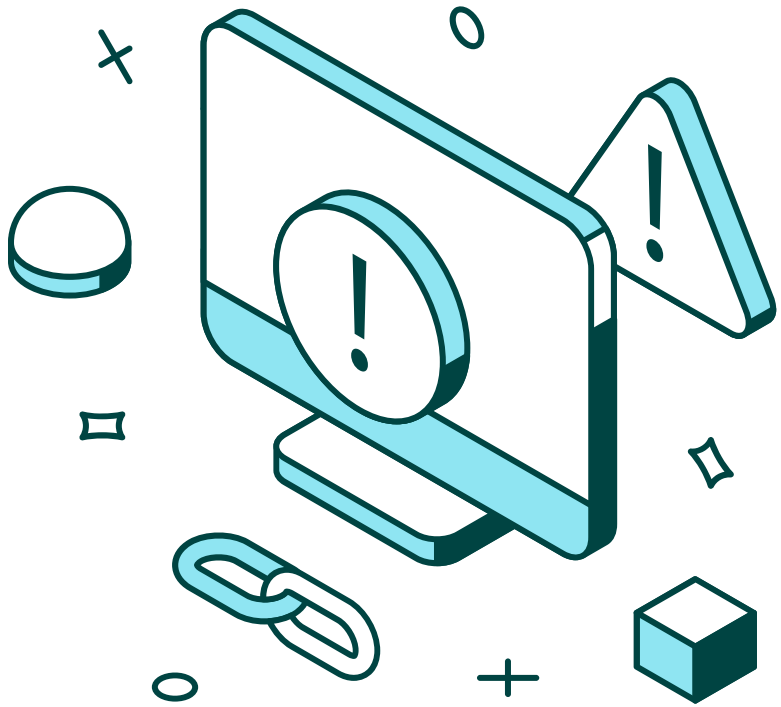
"We're going to need a bigger moat."

These four security gaps are products of applying current approaches to an increasingly complex information security environment.

You cannot fill pervasive security gaps by doing more of the same things.

It's time to put aside our siege mentality, and look at protecting the data as it works out in the world, beyond our walls.

Data is the vital stuff of business. You need layered, data-centric security that works in a world without walls, from the start of the data's journey to wherever it travels.



PART III

The Best Defense: Data Security

Part 3

Data-Centric Security for a Borderless World

Protecting your data throughout its whole journey, wherever it travels

Don't I already have data security?

Nearly every organization has made security investments. But too often, organizations have focused on a traditional approach which focuses on securing ever-changing infrastructure. The better approach is to protect data along its entire journey, from creation to everywhere it goes.

Which of these security gaps is most vital for you to resolve?

- ☐ **The Behavior Gap:** You need intuitive tools you can deploy and roll out easily that users actually adopt.
- ☐ **The Visibility Gap:** You need better discovery, monitoring, tracking, and auditing capabilities for your data, both at rest within your network and also as it is received and shared – and the ability to protect that data, too.
- ☐ **The Control Gap:** You need total control over your data security, starting with labeling data your way, inspecting data as it comes into your network, and both securing it as well as controlling who can access it once it departs.
- ☐ **The Response Time Gap:** You need to equip users and security teams alike with the policies, processes, and tools they need to both know about and respond to security issues immediately.

Part 3

Security for Data Anywhere and Everywhere

Powerful, Layered Data Security from Fortra

Everywhere it goes, your data needs protecting. We can help. Fortra offers a comprehensive, powerful data security suite designed for today's hybrid IT reality. We partner with organizations to provide layered data protection where you need it most.

From understanding what data you have to controlling its access and sharing it securely, we can help minimize threats and maintain compliance – wherever data is stored or moved. Our complete solution set includes data classification, DLP, email security, managed file transfer, encryption, and digital rights management for ultimate, data-centric security from one trusted vendor.

Agari
Email Security

Clearswift
Email Security

Digital Guardian
Data Loss Prevention

FileCatalyst
File Acceleration

GoAnywhere
Managed File Transfer

Titus
Data Classification

Vera
Digital Rights Management

Part 3

How Fortra enhances your data security

The best way to see how is to get in touch so we can discuss your requirements and show you in action. But here are a few important points of how our solutions help close data security gaps in your organization:

- We work side-by-side with you to implement our solutions in a manner that meets your business objectives – whether you need to meet new trading partner requirements, prepare for a regulatory audit, or protect legal data. We design intuitive, user-friendly solutions that can integrate within your security ecosystem to enhance existing investments.
- Since we know CISOs and IT professionals need better visibility, we take that into account – across our dashboards, auditing, reporting, and more. Flexible data markings support organizational initiatives to tag data according to sensitivity – and apply as many labels as you need in order to effectively protect the data. Web interfaces make it easy to manage data transfers, encryption, and rights management.
- Data no longer runs you. You run the data – from adding labels and visual markings so you know what you have, to restricting access when it leaves the organization. At every point as data travels inbound and is shared externally, our technology is there to protect.
- From notifications to email alerts, we ensure the right people are informed when something goes wrong – whether that's policy violations or threatening inbound email or file transfers that failed – as well as helping to reduce false positives and prioritizing what actually takes your attention.

About Fortra

Fortra is a cybersecurity company like no other. We're creating a simpler, stronger future for our customers. Our trusted experts and portfolio of integrated, scalable solutions bring balance and control to organizations around the world. We're the positive changemakers and your relentless ally to provide peace of mind through every step of your cybersecurity journey. Learn more at fortra.com.

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