

COURT OF APPEALS OF VIRGINIA

Present: Judges Beales, Friedman and Callins  
Argued at Leesburg, Virginia

PEGASYSTEMS INC.

v. Record No. 1399-22-4

APPIAN CORPORATION

OPINION BY  
JUDGE FRANK K. FRIEDMAN  
JULY 30, 2024

FROM THE CIRCUIT COURT OF FAIRFAX COUNTY  
Richard E. Gardiner, Judge

E. Joshua Rosenkranz (Christopher J. Cariello; Eric A. Shumsky; Jeremy Peterman; James A. Flynn; Jonas Wang; Monica T. Monday; Michael J. Finney; Orrick, Herrington & Sutcliffe LLP; Gentry Locke, on briefs), for appellant.

Adeel A. Mangi (Jeffrey S. Ginsberg; Muhammad U. Faridi; Clinton W. Morrison; Robert W. Loftin; Jonathan Y. Ellis; Ellen D. Marcus; Sheila M. Costin; Patterson Belknap Webb & Tyler LLP; McGuireWoods LLP; Holmes Costin & Marcus PLLC, on brief), for appellee.

Amicus Curiae: Northern Virginia Chamber of Commerce (Vernon E. Inge, Jr.; Michael H. Brady; Whiteford, Taylor & Preston L.L.P., on brief), for appellee.

Amicus Curiae: Professor Harvey S. Perlman (Juli M. Porto; Blankingship & Keith, P.C., on brief), for appellee.

Amicus Curiae: The American Intellectual Property Law Association (Richard T. Matthews; Williams Mullen, P.C., on brief), for neither party.

Amici Curiae: Professors Mark Gergen and Pamela Samuelson (William M. Jay; Rohiniyurie Tashima; Goodwin Procter LLP, on brief), for neither party.

This case raises questions about trade secrets, corporate espionage, and the proper measure of unjust enrichment damages for such offenses under the Virginia Uniform Trade

**PUBLISHED**

Secrets Act (VUTSA). The trial below resulted in the largest damages verdict in the history of the Commonwealth of Virginia—an award of over two billion dollars. A jury found Pegasystems, Inc. (Pega) used improper means to misappropriate trade secrets from Appian Corporation (Appian). On appeal, Pega asks this Court to reverse the jury verdict and enter judgment for Pega because it contends, as a matter of law, there was insufficient evidence that Pega misappropriated any trade secrets. In the alternative, Pega seeks a new trial, arguing the trial court erred in excluding certain evidence and in granting flawed jury instructions (particularly with respect to proximate cause). We reject Pega’s claim that it is entitled to judgment as a matter of law; however, we find that the trial court committed a series of errors that require us to reverse the judgment as to Appian’s trade secret claims.

## BACKGROUND<sup>1</sup>

### I. The Business Process Management Industry

This controversy involves companies engaged in the business process management (BPM) industry. Appian and Pega are competitors and “industry leaders” in the BPM field. Both companies offer platforms that enable third party business customers to build complex software applications using “low-code application development platforms.” These customers purchase the BPM platform to generate programs or applications (apps) that automate processes, such as fulfilling orders or opening new customer accounts. A BPM customer might use its own employees to design a project or it might hire outside “developers” to do so.

At trial, Pega portrayed itself as having expertise in platforms catering to big, complex, and sophisticated problems with many permutations for “very large . . . companies.” Pega’s

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<sup>1</sup> On appeal from a judgment of a jury verdict, “[w]e consider the evidence and all reasonable inferences fairly deducible from it in the light most favorable to the prevailing party below.” *MCR Fed., LLC v. JB&A, Inc.*, 294 Va. 446, 457 (2017) (quoting *Government Emps. Ins. Co. v. United Servs. Auto. Ass’n*, 281 Va. 647, 655 (2011)).

platform put a premium on “scalability”—the ability to quickly and reliably create, customize, and modify apps used by large numbers of users. Thus, Pega suggested its BPM product was particularly useful for complex undertakings. Appian painted Pega’s product as overly complex, difficult to grasp, hyper-technical, and clunky. By contrast, Appian’s BPM product focused on ease-of-use, speed, and simplicity.

The gist of this dispute is that Appian contends that Pega misappropriated its trade secrets to copy and steal Appian’s user-friendly features to enhance Pega’s appeal with a broader base of potential customers. Appian further asserts that in the course of stealing its secrets, Pega illicitly obtained trade secrets regarding weaknesses in Appian’s BPM platform and Pega used this ill-gotten knowledge for its own advantage.

## II. Pega Studies Appian’s Product

Pega acknowledges that “[l]ike most companies in a competitive market, . . . Pega stays abreast of its competitors.” Appellant’s Br. at 8. The trade secret claims in this case primarily arose from activities that Pega’s then-head of competitive intelligence, John Petronio, managed from 2012 to 2014. Pega’s goal was to examine how Appian’s BPM platform performed from the perspective of a developer creating apps. In so doing, Pega hoped to improve its own platform and to learn of Appian’s weaknesses to better market its own platform. Pega did not have access to Appian’s platform because, as Appian witnesses confirmed, Appian “never made [its] software publicly available without license terms.” Appian’s software, including its “internal workings,” remained a mystery to Pega. Internally, Pega acknowledged that Appian was “guarded” with respect to its “technology.”

A. Pega Hires a Consultant, Zou, to Gain Access to Appian's Platform

Through a staffing agency, Petronio sought a source to demonstrate how developers used Appian's platform. In seeking out a consultant, Petronio informed the recruitment company that, "[a]ccess to the Appian BPM tool is a must" and "make sure they aren't 'loyal' to Appian because [Pega] doesn't want it getting back to Appian that Pega is doing this work." This search culminated in Pega hiring Youyong Zou to provide consulting services for Pega about Appian's BPM platform. Zou's consulting work for Pega was a side-job; he worked for Serco, a company that implemented government contracts. Zou had access to Appian's platform through his employment with Serco, which licensed Appian's platform.

As part of his consulting services, Zou provided presentations to Pega in which he demonstrated Appian's platform, illustrating strengths and weaknesses. Petronio described Zou as Pega's "spy." Appian characterized Zou as Pega's "Trojan horse." Pega took measures to hide Zou's identity by giving him an alias and blurring his username on screenshots. Over a two-and-a-half-year period, Zou spent approximately 200 hours consulting for Pega and received \$23,608 in compensation.

Pega's executives observed some of Zou's demonstrations, which were recorded for training purposes. Pega recorded nearly 100 videos of Zou using Appian's platform, in which Zou would explain strengths and weaknesses of various features on Appian's BPM system. *See, e.g.,* Pl. Ex. 853-910 (training videos). Zou also demonstrated building apps with Appian's software. At trial, Appian established Pega's widespread use of Zou's tutorials. Several of the videos "cascaded" through Pega's product management team. Zou even came to Pega's Massachusetts headquarters for an all-day meeting with Pega's senior leadership. Pega's engineers participated in meetings with Zou, including Kerim Akgonul, Pega's Head of Product Management—the group responsible for making improvements to Pega's platform. Petronio

encouraged Akgonul to meet with Zou to “see something in [t]here that [Akgonul] might like for our product.” Pl. Ex. 853 at 01:00-01:15. Appian’s expert opined that following Zou’s demonstrations, Pega made changes to its platform that had “striking similarities” to Appian’s product. Moreover, Pega used the information gathered by Zou to improve its own platform and also to identify and attack Appian’s weaknesses.

#### B. Pega Employees Access Appian’s Platform Independent of Zou’s Efforts

After Zou stopped consulting for Pega, Pega continued its attempts to access Appian’s trade secrets via improper means. For example, in 2017, three years after Zou stopped consulting for Pega, Pega employees accessed Appian’s platform using aliases to discreetly view Appian’s free trials.

#### III. Appian Learns of Pega’s “Research” and Files this Action

In 2015, Petronio and Pega parted ways. Appian hired Petronio the following year as a consultant. He later became Appian’s Senior Director of Market Intelligence and Strategy. Eventually, in 2020, Petronio informed Appian about Zou and his consulting work on behalf of Pega. Appian responded by suing Pega and Zou.

Appian brought claims against Pega under the Virginia Uniform Trade Secrets Act, Code § 59.1-336 et seq., based on Pega’s alleged misappropriation of trade secrets through its dealings with Zou, and under the Virginia Computer Crimes Act, Code § 18.2-152.1, et seq., relating to Pega’s efforts to obtain improper access to Appian materials.

#### IV. What Secrets Did Pega Allegedly Receive?

The trade secrets that Appian contends were misappropriated by Pega basically fell into three categories: (1) functions of Appian’s platform that Appian accused Pega of copying; (2) knowledge relating to weaknesses of Appian’s platform which Pega used to its own advantage;

and (3) access to Appian's confidential documentation such as its user manual which assisted Pega in copying Appian's strengths and exploiting its weaknesses.

A. The Copied Functions that Improved Pega's Platform

Appian identified five functions related to "the architecture and design underlying specific features of Appian's platform" that Pega copied to improve its platform based on Zou's demonstrations. Appellee's Br. at 8. Dr. Marshall, Appian's expert witness, provided extensive testimony over the course of multiple days. He testified that it appeared Pega made improvements to its platform based on trade secrets it obtained from Appian. Marshall testified that Pega misappropriated the following features of Appian's platform, which constituted trade secrets: (1) Smart Services, (2) Custom Data Types, (3) Ease-of-Editing Functionality, (4) Out-of-the-Box Ability to Deploy Applications to Mobile, and (5) Out-of-the-Box Integrated Social View of Worklist and Tasks. These features can be briefly summarized as follows:

1. smart services: this tool enables a developer to implement a function by dragging and dropping an icon into an app;
2. custom data types: these features allow a developer to group related pieces of data together;
3. an edit button: this tool lets a developer toggle between testing an application and editing it;
4. out-of-the-box mobile: this feature permits apps to run on both a desktop and mobile device without additional configuration;
5. out-of-the box social: this provides a pre-programmed user interface that displays work lists and tasks in a social feed permitting easy communication among teams.

Pega countered that none of these features were unique to Appian, that it was commonplace for businesses to study competitors' products, and that its own software did not utilize any of Appian's innovations.

B. Pega Gains Access to Appian Documentation and Insights into Weaknesses in Appian's Platform

Zou's presentations suggested that Appian struggled with "scalability"—the ability to handle large, complex projects. Pega's head of sales concluded that Appian's "weaknesses are glaring and big." Pega's product manager for social features was "not impressed" with Appian's social features, while noting its marketing was "impress[ive]." Pega also identified significant weaknesses in Appian's mobile capabilities. Upon learning about the "internal workings" of Appian's platform from Zou, Petronio announced, "we should never lose to Appian." Prior to Zou's work for Pega, Pega's marketing materials had addressed various Appian weaknesses. However, Pega updated and bolstered these materials to reflect its competitor's shortcomings based on information Zou provided.

Appian asserted Pega's knowledge of these platform foibles constituted additional trade secrets related to the "sensitive structural limitations of Appian's platform previously unknown to Pega[.]" Appellee's Br. at 14. Most of the purported secrets were Appian product deficiencies that Appian did not want potential customers to consider when making purchasing decisions.<sup>2</sup> Appian ultimately categorized these "weakness" trade secrets as problems involving:

1. Concurrent Development and Locking of Process Model
2. Specific Reporting Tools and Chart Types Available
3. Web Services Returned Only the Process ID
4. Specifics on Unified Management Tools Available
5. Star Schema/Reporting on External Data
6. Configuration and Customization of Checkpointing

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<sup>2</sup> At the same time, similar information was available through reviews, internet videos, and basic customer observation and comparison. Relatedly, when asked whether Appian's business partner, Serco, was required to have prospective customers sign non-disclosure agreements after receiving demonstrations, Appian's witness Dr. Cole stated, "I don't believe they do, but they do have restrictions," including "careful[] supervis[ion]."

## 7. Topology Specifics, Including Information from Experimentation

This is *verbatim* how Appian described the weaknesses to the jury in closing argument.

Finally, Appian asserted that, through Zou, Pega obtained Appian's documentation which included private information that enabled Pega to further exploit its knowledge of Appian's platform. For example, Zou gave Pega confidential portions of Appian materials, including a document entitled "High Availability and Disaster Recovery Configurations." This document contained descriptions of Appian's software. Zou also provided Pega documentation related to Appian's mobile and social capabilities. Zou further accessed Appian's user manual through Appian Forum and provided this information to Pega. With respect to Appian's "weaknesses," Pega used the information it gained from Appian's documents to create marketing materials that attacked Appian.

### V. How Secret was the Information Pega Obtained?

Appian contended that the information Pega received was "confidential" and closely guarded. Appian's evidence demonstrated that many features of its BPM platform were protected from widespread public consumption. For example, Appian stored its software and related documentation on Appian Forum, a password protected website accessible by authorized users including Appian employees and business partners. To access Appian Forum, a prospective user had to comply with Appian's terms of use, which incorporated individual license agreements that contained some confidentiality provisions. As one witness explained, Appian "never made [its] software publicly available without license terms."

Appian asserted that any third-party companies or partners accessing its software and documentation "had licensing agreements in place" and "any individuals that were



accessing . . . Appian Forum” had to agree to the “terms of use.” Appian’s “terms of use” on its Forum stated, in part, as follows:

**Use of Software**

You may access and download certain software . . . . Any Software You download or access through the Site is the copyrighted work of Appian . . . . Use of the Software is subject to the terms of the . . . software license agreement between You and Appian which governs Your use of the Software and which triggered Your receipt of a username and password to access the Site. To the extent you do not have a . . . license agreement with Appian for the Software, you are prohibited from downloading, accessing or using the Software without Appian’s express prior written consent.

At the same time, Appian was involved in sales—and it encouraged its sales representatives to share information about its platform. It urged these representatives or “resellers”—who worked on commission—to demonstrate the platform to potential buyers without significant restrictions.<sup>3</sup> Appian did not limit “the number of people who could be shown the documentation” or view demonstrations provided by its resellers.

Appian also granted latitude in its agreements with its business partners, authorizing them to “market, promote and demonstrate the Appian software to prospective customers.” Business Partner Agreement at §§ 1.1, 2.2.1; *see also* Value-Added Service Provider Agreement. Serco was just one of many of Appian’s business partners. The Business Partner Agreement provides the business partner “with a nonexclusive, nontransferable license to use, copy and display Appian’s published marketing materials associated with the Appian Software, and to incorporate

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<sup>3</sup> Appian delegated discretion to these resellers to demonstrate features of its platform and to display documentation to prospective customers. It permitted resellers to decide what was reasonable to disclose, while actively encouraging resellers to promote the benefits of the product. Appian diminishes the breadth of this discretion by retaining the right to enforce disclosure restrictions. Appian confirmed it had no way of tracking usage of its software by its business partners: “We had no automated mechanism for introspecting and auditing installations . . . by companies like Serco.” Appian further acknowledged it gave discretion to its partners to decide who could have access to Appian’s software.

the Marketing Materials into Business Partner’s promotional and marketing literature . . . .” In addition to granting business partners the ability to demonstrate Appian’s software for prospective customers, with certain limitations, the agreement provides that a business partner can “[e]nhance, modify and/or combine the Appian software with other software or code to develop prototypes to be demonstrated to prospective customers.” The business partner agreement contained a confidentiality provision, but it did not mention any trade secrets. *See* Business Partner Agreement at § 6.1 (listing software as confidential).

Potential customers, who received demos from Appian partners like Serco, could share descriptions, screenshots, and videos of the demos. Further, potential customers, who received demos from Appian’s business partners, were not required to sign non-disclosure agreements. Similarly, Appian offered free trials to prospective buyers. These prospective buyers were not required to sign restrictive non-disclosure agreements either (but were subject to “click-through” terms of service). Nonetheless, Appian asserted that it could impose careful supervision over prospective customers and business partners.

#### VI. Serco’s Restrictions on Zou

Notably, Zou was not an Appian employee; he was employed by Serco, a government contractor. Zou had access to Appian’s platform and user manuals through his work at Serco, which was a business partner of Appian’s. Zou did not have access to Appian’s source code. In 2012, Zou, as a condition of employment with Serco, signed an “Employee Proprietary and Confidential Information Agreement.” As part of his contract with Serco, Zou was precluded

from sharing confidential information that he learned through his work. Appian claimed “all [its] developers” were governed by “[s]imilar agreements” as Zou’s.<sup>4</sup> Appellee’s Br. at 6.

## VII. Disputed Rulings at Trial

### A. The Trial Court Grants Appian’s Motion *in Limine* Excluding Evidence of the Number of People with Access to its Software as “Irrelevant”

Appian filed a motion *in limine* to exclude evidence of the number of people with access to its software. Appian argued, and the trial court ruled, that the number of people with access to Appian’s trade secrets was “not relevant at all” to the question of whether the software was sufficiently protected to be a trade secret. The court gave the jury a specific instruction that provided, “[t]he numbers of users of the Appian Platform and Appian Forum licenses are not relevant to any issue in this case, and any evidence as to those numbers should be disregarded.” In explaining its decision, the trial court stated, “Pegasystems cannot offer mere numbers as a way of showing that the trade secret—that these are not Appian’s trade secrets . . . . Pegasystems can certainly put on evidence concerning the security that Appian attached to its licensees and

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<sup>4</sup> The question of whether Zou’s agreement to protect Serco’s confidential information extends to Appian is a point debated by the parties. Zou’s confidentiality agreement with Serco included the following provisions related to confidentiality:

- “‘Confidential Information’ means any and all information disclosed or made available to the Employee or known by the Employee as a direct or indirect consequence of or through his or her employment by Serco and not generally known in the industry in which Serco is or may become engaged during the course of Employee’s employment, and which is non-public information of commercial value to Serco, and/or any information related to Serco’s business, employees, customers, products, processes . . . and trade secrets.”
- “Employee agrees not to use or disclose to anyone or any entity, other than as necessary and appropriate in further of Serco’s business activities, any Confidential Information, either during or after employment by Serco.”
- “Employee agrees that all Confidential Information used or generated by him or her in connection with employment for Serco is the sole property of Serco.”

require of its licensees . . . but it cannot just offer sheer numbers as a way to show that Appian was not maintaining the secrecy of its alleged trade secrets.”

After the trial court granted Appian’s motion *in limine* prohibiting evidence of the number of people with access to its platform, Pega proffered the following evidence, which it argued was relevant to whether Appian took reasonable measures to protect its trade secrets and whether the trade secrets were generally known:

- From 2012 through 2016, over 12,500 individuals were granted access to Appian Forum.
- Appian did not track the number of “value added service providers” it had.<sup>5</sup>
- Over 44,000 people had access to Appian Forum between 2012 and 2021.
- Appian entertained 12,000 free-trial recipients between 2017 and 2021.

B. The Trial Court Prevented Pega From Demonstrating its Software to the Jury to Show that it Had Not Stolen Disputed Features of Appian’s Platform

Before trial, Pega timely disclosed, in an exhibit list, that it intended to introduce versions of its software as evidence, including versions 6.3 and 7.1. Per the exhibit list, Pega stated that it would present its software evidence on a “Pega Laptop” that it described as a “physical object.” During discovery, Pega provided Appian with a laptop containing its software for Appian to review. Notably, despite numerous objections to the exhibit list generally, Appian did not object to Pega’s exhibit list entries providing that it intended to present its software evidence to the jury.

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<sup>5</sup> The Value Added Service Provider Agreement enabled companies (or service providers) to “provide value-added intellectual property on top of the Appian platform.” The agreement allowed service providers to “market, promote and demonstrate” Appian’s software to “prospective End Users[.]” *See* Value Added Service Agreement at § 2.2.1. The agreement also allowed service providers to “enhance, modify and/or combine the Appian software with other software . . . to develop prototypes to be demonstrated to prospective End Users . . . .” Service providers “retain[ed] exclusive ownership and control of the resulting enhancement . . . .”

In fact, during the trial, Appian itself presented evidence of Pega's BPM platform software on a different computer than that used in discovery.

At trial, Pega sought to present its software to illustrate that many of the features Appian claimed Pega had "stolen" pre-existed Pega's contact with Zou or were developed wholly independently of his demonstrations. However, when Pega sought to introduce this software evidence at trial, on a computer that was not the same laptop on which it had transmitted a copy of the software during discovery, Appian objected because the evidence was on a different computer than used in discovery. Pega explained that the original laptop, which transported the software for discovery purposes, was simply a medium for transferring its evidence to Appian. The original, transport laptop was now inoperable and could not run the software at trial; thus, Pega argued it should be allowed to present its software evidence via another medium such as a different laptop so long as it could authenticate the software. Appian had already introduced the software on a different laptop during its case in chief. Yet Appian argued that Pega's evidence was inadmissible unless Pega used the exact same laptop on which it transmitted a copy of the software to Appian during discovery. The trial court agreed.

The trial court suggested that using a different computer might raise doubts about the software's authenticity, calling for "a trial within a trial to authenticate." Pega was prepared to authenticate the software through Stephen Bixby—the person who led development of the software at Pega. Bixby would have testified that the software introduced at trial was "the exact same thing" Pega produced to Appian during discovery. The trial court, however, refused to permit Pega to attempt to authenticate the software:

The fact that this upcoming witness may be able to authenticate what's on there, we're not doing that. We're not having a trial within a trial to authenticate that. That's something that should have been dealt with pre-trial during discovery.

I'm not going to—this is essentially what you're asking me to do is to conduct a discovery proceeding here to determine whether the information on the software is the same as other software, and I'm simply not going to do that. That should have been done during discovery pre-trial.

The court permitted Pega witnesses to testify that various features were not copied from Appian. However, the jury was not allowed to view Pega's software evidence.

C. The Damages Instruction Relating to Proximate Cause

One of the central disputes at the instructions phase of the trial concerned the appropriate proximate cause instruction in the unjust enrichment context under VUTSA. Over Pega's objection, the trial court granted Instruction 14:

If you find that plaintiff Appian has proved by greater weight of the evidence its claim for misappropriation of trade secrets against defendant Pegasystems, you must find your verdict for Appian and decide the issue of damages as to Pegasystems. You may award the amount of unjust enrichment caused by misappropriation.

For unjust enrichment, Appian is entitled to recover Pegasystems' net profits. Appian has the burden of establishing by greater weight of the evidence Pegasystems' sales; Pegasystems has the burden of establishing by greater weight of the evidence any portion of the sales not attributable to the trade secret or trade secrets and any expenses to be deducted in determining net profits.

Thus, the court instructed the jury that Appian could prove its damages simply by establishing "Pegasystems' sales" during the relevant time frame. Upon Appian proving Pega's total sales, the burden would shift to Pega to prove damages (sales) were unrelated to its wrongdoing. Accordingly, Appian produced evidence that Pega's sales for the relevant time period were in the billions of dollars. Consistent with Instruction 14, Appian stated in closing argument that "the burden is on [Pega]. If they want to show you some of those sales were innocent, right, because it's about some other feature than ours, they have to show that[,]" and

further, “remember the shifting burdens, it’s their burden to show you any sales they made were innocent.”

D. The Trial Court Excluded Critical Damages Evidence Based on an Interrogatory Answer

Instruction 14 allowed Appian to rely on Pega’s total sales to establish its damages and shifted the burden to Pega to prove which sales were not tainted. Pega was then prohibited from introducing significant evidence regarding its “total sales” based on a discovery response.

Appian propounded the following interrogatory to Pega in discovery seeking information relating to revenues tied to *versions* of Pega’s BPM *software*:

Interrogatory No. 18: Identify all *revenues* received by Pegasystems for each fiscal year from 2012 through 2021 relating to *Pega 6.3, Pega 7.0* and any subsequent *version* broken out by year and *version* of the software; and identify the costs and expenses Pegasystems incurred in order to realize those revenues.

Pega responded:

Answer: Pegasystems does not record or report revenue, or any associated costs and expenses incurred by Pegasystems, *based on the “version” of the product sold* (e.g., Pega 6.3, Pega 7.0). There is no mechanism or process by which Pegasystems is able to determine these revenue, cost and expense amounts. As a result, Pegasystems’ financial results (including total revenue and all associated costs and expenses) for each applicable fiscal year as reported to the SEC in Pegasystems’ annual Form 10-K filings and quarterly Form 10-Q filings are attached as Schedule 3.

(Objections omitted; emphases added). The trial court viewed this response as a declaration that Pega “can’t breakdown [its] revenue based on lines of business.” Thus, it ruled that Pega could not present evidence that much of its revenue came from products with which Appian did not even compete.

Pega asserted that the fact that it did not track revenue by *version* of its BPM software did not mean that Pega did not track revenue by other products or lines of business. In fact, Pega

submitted an expert report in discovery breaking down its revenues from other business sources. However, the trial court ruled that Pega had “essentially given up” any such defense to damages with its response to Interrogatory 18.

As a result, the trial court excluded this “other lines of business” damages evidence and Pega made a proffer of what its evidence would have been. According to the proffer, Pega’s Chief Executive Officer Allen Trefler would have testified that Pega sold products that did not compete with Appian; specifically “more than 50 percent of Pega’s revenue is derived from customers for these other products” that do not compete with Appian. Trefler also would have testified that Pega offers features unrelated to Appian’s trade secrets. Pega’s Chief Technology Officer Don Schuerman would have testified that Pega had customers who “bought things that Appian didn’t sell.” Schuerman was barred from testifying about 25 products unique to Pega that increased its sales and that were distinct from its BPM platform. Further, Simon Platt, who created an expert damages report for Pega, would have testified that Appian’s damages should be significantly reduced to account for sales driven by Pega’s unique products that “were not available from Appian.” Platt would have provided that the associated revenue from these sales was attributable to Pega’s own innovation rather than as a result of misappropriating Appian’s trade secrets. Finally, in challenging the testimony of Appian’s damages expert, James Malackowski, Pega was prevented from demonstrating that the expert’s damages figure included Pega sales unrelated to Pega’s BPM platform.

#### VIII. The Verdict

The jury returned a verdict in Appian’s favor, finding that Pega and Zou misappropriated Appian’s trade secrets, in violation of VUTSA, and awarding damages against Pega in the amount of \$2,036,860,045. The jury also rendered judgment against Zou in the amount of



\$5,000.<sup>6</sup> The trial court entered a written order of judgment in Appian’s favor against Pega, awarding the damages verdict, plus attorney fees, costs, and interest. The trial court denied Pega’s motions to strike the evidence and to set aside the verdict. The court also denied Pega’s request for a new trial or remittitur. This appeal followed.

## ANALYSIS

### I. The Trial Court Did Not Err in Denying Pega’s Motions to Strike and to Set Aside the Verdict

#### A. Standard of Review

“When ruling on a motion to strike a plaintiff’s evidence, a trial court ‘is required to accept as true all evidence favorable to a plaintiff and any reasonable inferences that may be drawn from such evidence.’” *TB Venture, LLC v. Arlington Cnty.*, 280 Va. 558, 562 (2010) (quoting *James v. City of Falls Church*, 280 Va. 31, 38 (2010)). “The trial court is not to judge the weight and credibility of the evidence, and may not reject any inference from the evidence favorable to the plaintiff unless it would defy logic and common sense.” *Id.* at 562-63 (quoting *Austin v. Shoney’s, Inc.*, 254 Va. 134, 138 (1997)). “That same standard is applicable to [appellate] review of the decision of the trial court granting the motion to strike.” *Baysden v. Roche*, 264 Va. 23, 26 (2002).

Pega asks this Court to enter judgment on its behalf as a matter of law on the ground that Appian failed to prove the existence of its trade secrets. Specifically, Pega argues (1) “[n]one of Appian’s purported secrets were trade secrets as a matter of law because Appian exposed them

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<sup>6</sup> The jury also found in Appian’s favor on its computer fraud claim, in violation of the VCCA, and awarded damages in the amount of \$1. Pega has not appealed the VCCA verdict. The court entered a suspension of judgment pending the appeal. Similarly, Zou has not appealed the judgment against him and is not a party to this appeal.

without requiring confidentiality,” Appellant’s Br. at 19, and (2) “Appian did not identify key trade secrets with the requisite particularity.” *Id.* at 26.

The purpose of VUTSA is “to protect the owner of a trade secret from another’s misuse of that secret.” *Collelo v. Geographic Servs.*, 283 Va. 56, 68 (2012) (quoting *MicroStrategy Inc. v. Li*, 268 Va. 249, 263 (2004)). “To state a trade secret claim, a plaintiff must allege sufficient facts to establish (1) the existence of a trade secret, and (2) its misappropriation by the defendant.” *Preferred Sys. Sols., Inc. v. GP Consulting, LLC*, 284 Va. 382, 405 (2012). Our Supreme Court has stated that “whether a trade secret exists,” and “whether a trade secret has been misappropriated” are generally fact questions for the factfinder. *See MicroStrategy Inc.*, 268 Va. at 264-65; *see also Decision Insights, Inc. v. Sentia Grp., Inc.*, 311 F. App’x 586, 592 (4th Cir. 2009) (“Whether or not a trade secret exists is a ‘fact-intensive question to be resolved at trial.’” (quoting *Hoechst Diafoil Co. v. Nan Ya Plastics Corp.*, 174 F.3d 411, 419 (4th Cir. 1999))).

#### B. Identifying Trade Secrets and Misappropriation

Under Virginia law, a “trade secret” is “information, including but not limited to, a formula, pattern, compilation, program, device, method, technique, or process,” that “[d]erives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use” and “[i]s the subject of efforts that are reasonable under the circumstances to maintain its secrecy.” Code § 59.1-336; *see also Dionne v. Southeast Foam Converting & Packaging, Inc.*, 240 Va. 297, 302 (1990).

Under VUTSA, “[m]isappropriation” requires:

1. Acquisition of a trade secret of another by a person who knows or has reason to know that the trade secret was acquired by improper means; or

2. Disclosure or use of a trade secret of another without express or implied consent by a person who
  - a. Used improper means to acquire knowledge of the trade secret; or
  - b. At the time of disclosure or use, knew or had reason to know that his knowledge of the trade secret was
    - (1) Derived from or through a person who had utilized improper means to acquire it;
    - (2) Acquired under circumstances giving rise to a duty to maintain its secrecy or limit its use;
    - (3) Derived from or through a person who owed a duty to the person seeking relief to maintain its secrecy or limit its use; or
    - (4) Acquired by accident or mistake.

Code § 59.1-336. “Improper means” includes theft, bribery, misrepresentation, use of a computer network without authority, breach of a duty or inducement of a breach of a duty to maintain secrecy, or espionage through electronic or other means. *Id.*; *see* Kent Sinclair, 1 Virginia Remedies § 29-1 (2023) (noting “the Act’s definition of improper means is broad to the point of being sweeping”).

“The crucial characteristic of a trade secret is secrecy rather than novelty.” *Dionne*, 240 Va. at 302. For example, a list of contacts may have little novelty but still may be a trade secret. *See, e.g., MicroStrategy, Inc. v. Bus. Objects, S.A.*, 331 F. Supp. 2d 396, 416 (E.D. Va. 2004) (finding “under the right set of [factual] circumstances” customer lists, pricing information, marketing and sales techniques, and information about products can be considered trade secrets), *aff’d*, 429 F.3d 1344 (Fed Cir. 2005). Further, secrecy need not be absolute: “the owner of a trade secret may, without losing protection, disclose it to a licensee, an employee, or a stranger, if the disclosure is made in confidence, express or implied.” *Dionne*, 240 Va. at 302; *see also Trandes Corp. v. Guy F. Atkinson Co.*, 996 F.2d 655, 664 (4th Cir. 1993) (“Absolute secrecy is not essential. It is enough that [plaintiff] made it difficult for others to acquire copies of the . . . software through proper means” (internal citations and quotations omitted))).

“Depending on the facts of a particular case, software components, as parts of a computer ‘program,’ may be trade secrets covered by the Act.” *MicroStrategy Inc.*, 268 Va. at 263.

Pega asserts the jury verdict should be reversed because, as a matter of law, there was insufficient evidence to find that Pega misappropriated information that qualified as trade secrets. It claims that the information Zou accessed was not secret, but generic knowledge that was unprotected as it floated amidst thousands of users and various internet discussions and displays.<sup>7</sup> Pega argues that Appian’s alleged trade secrets lost legal protection because they were “generally known,” “readily ascertainable,” and no reasonable efforts were taken to maintain their secrecy. As a result, Pega asks this Court to enter judgment on its behalf. Similarly, Pega claims the trial court erred in denying Pega’s motion to strike and motion to set aside the verdict on the grounds that Appian failed to “identif[y] its alleged trade secrets with sufficient particularity.” We address each argument in turn.

C. Appian did not Fail, as a Matter of Law, to Show the Misappropriated Information Qualified as Trade Secrets

Not every piece of information a business might wish to keep from its competitors is a trade secret. If a party seeks to avail itself of trade secret protections, it must make reasonable efforts under the circumstances to keep its information secret. Code § 59.1-336. If a company chooses to release or publicize the information, it cannot later wield a trade secret club against competitors who gain access to the information. *See MicroStrategy Inc.*, 268 Va. at 262 (“[T]he owner of a trade secret is not entitled to prevent others from using public information to replicate his product, nor may the owner prevent others from making similar products which are not

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<sup>7</sup> A trade secret can exist initially, but lose its status when the process or design becomes generally known or independently derived by others over time. *See Synopsys, Inc. v. Risk Based Sec., Inc.*, 70 F.4th 759, 772 (4th Cir. 2023) (“The trade secret’s economic value depreciates or is eliminated altogether upon its loss of secrecy[.]” (quoting *Oakwood Labs. LLC v. Thanoo*, 999 F.3d 892, 913 (3d Cir. 2021))).

derived from the trade secret.” (quoting *Am. Can Co. v. Mansukhani*, 742 F.2d 314, 329 (7th Cir. 1984))).

There is an inherent tension between a company’s goal of keeping its product’s secret features hidden, while also promoting the product’s innovative attributes to boost sales. To help businesses navigate this uncertain landscape, the law imposes certain requirements of proof on a party asserting a trade secret claim: (1) each trade secret must derive independent economic value from not being “generally known” nor “readily ascertainable by proper means”; and (2) the plaintiff must make reasonable efforts to maintain the secrecy of the information at issue. Code § 59.1-336. Thus, generally “[i]f an individual discloses his trade secret to others who are under no obligations to protect the confidentiality of the information . . . his property right is extinguished.” *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1002 (1984).

1. Pega’s Claims that the Trade Secrets were “Generally Known” or Left Unprotected

Pega asserts that Appian lost trade secret protection because it “exposed” its secrets “without requiring confidentiality.” Appellant’s Br. at 19. For example, Pega claims that Appian delegated to independent resellers complete discretion to disclose its software. Pega also points to Appian’s agreements with its resellers as proof that strict confidentiality measures were not in place and that trade secret protection, accordingly, was not preserved. *See* Business Partner Agreement; Value-Added Service Provider Agreement.

Relatedly, Pega argues that Appian shared its secrets with countless independent developers and end users without taking reasonable measures to guard its secrets. Pega claims that “[j]udgment is required for the separate reason that Appian exposed its alleged secrets to thousands of independent app developers . . . without imposing the required confidentiality obligation.” Appellant’s Br. at 23. For example, Pega asserts: “[t]here were over 6000 people

with access to the alleged trade secrets through Appian Forum alone when Zou provided his demonstrations . . . .”<sup>8</sup>

The problem with Pega’s analysis is that, as our Supreme Court stated in *MicroStrategy Inc.*, “whether a trade secret exists” and “whether certain information constitutes a trade secret” are generally questions of fact. 268 Va. at 264-65. Under VUTSA, a trade secret is information that: (1) derives economic value from being neither generally known nor readily ascertainable, and (2) is the subject of reasonable efforts to maintain its secrecy. Code § 59.1-336. And secrecy need not be absolute. *See Dionne*, 240 Va. at 302. Certainly, here, a jury question was presented where the reasonableness of Appian’s efforts was hotly contested—and Appian provided considerable evidence that it took careful steps to safeguard its secrets and that the information was neither “generally known” nor readily ascertainable.

2. The Record Contains Ample Evidence that the Contested Information was not Generally Known nor Readily Ascertainable—and that Appian Took Reasonable Steps to Protect its Trade Secrets

Appian’s evidence included extensive expert testimony regarding Appian’s measures to protect its trade secrets, including through employing “terms of use and license agreements,” restricting “access to documentation,” and using “firewalls.” Appian’s expert, Dr. Cole, also described Appian’s use of “multifactor authentication,” “encryption . . . [,] user authentication, [and] password change requirements.” Ultimately, Dr. Cole opined that the steps Appian took to protect its trade secrets were reasonable under the circumstances and entirely consistent with industry standards. Courts consistently have recognized such measures as reasonable under

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<sup>8</sup> Pega acknowledges that Appian used “terms of use,” which were imposed on developers. Pega argues that Appian’s “terms of use” are insufficient to protect its trade secrets because many of the “terms of use” provisions contained no confidentiality restrictions. Pega acknowledges that the agreement between Zou and his employer, Serco, did in fact contain “some confidentiality provisions.” Appellant’s Br. at 25. But it also points out that the language does not mention Appian, nor identify what information constitutes Appian’s trade secrets.

comparable circumstances. *See* Sinclair, 1 Virginia Remedies, *supra*, § 29-1 (listing reasonable efforts to protect trade secrets).

Moreover, while Pega suggested that resellers could freely disclose the targeted information to prospective buyers, the lengthy record is devoid of any evidence of such wholesale disclosures taking place. As Appian observes, evidence from Pega's own witnesses spoke volumes as to the difficulty Pega had getting its hands on Appian's product. One Pega executive, Ben Baril, told a colleague: "Appian is very guarded about their technology so some of this information is impossible to come by without access to a system." Given Pega's access problem, when Petronio utilized a search firm to identify a developer to share the desired information, he advised the recruiter that "access to the Appian BPM tool is a must" and "make sure they aren't loyal to Appian . . . ." Ultimately, the evidence, when viewed in best light to Appian, reveals that Pega used a "spy" to obtain access to Appian's software and confidential "documentation."

The trial court here correctly determined that Appian provided sufficient evidence to survive Pega's motions to strike and to set aside the verdict. Whether Appian established that its information constituted a trade secret was a question of fact for the jury. The voluminous record here demonstrates numerous, earnest ways in which Appian sought to protect its information; similarly, when viewed in best light to Appian, the record shows that the trade secrets were not generally known nor readily ascertainable. Accordingly, we cannot say, as a matter of law, that Appian failed to prove the existence of any trade secrets.

#### D. Pega's "Particularity" Argument

Pega next asserts that Appian failed to identify its secrets with sufficient particularity "to allow the finder of fact to distinguish that which is legitimately a trade secret from other

information that is simply confidential but not a trade secret, or is publicly available information.” *MicroStrategy Inc.*, 331 F. Supp. 2d at 418.

Pega suggests that a heightened “particularity” requirement should be read into Code § 59.1-336. But, as the Utah Supreme Court has opined: “[I]f a ‘particularity’ requirement beyond what is present in the statute is to be required in trade secret cases, it is for the legislature to implement.” *USA Power, LLC v. PacifiCorp*, 372 P.3d 629, 649 n.44 (Utah 2016).

Otherwise, a plaintiff need only “defin[e] its purported trade secret in a manner that would allow the factfinder to determine if it met the statutory requirements.” *Id.* at 649-50. Virginia’s General Assembly has implemented no “particularity” requirement here.

Nonetheless, this debate is somewhat semantic—because Appian is still required to plead and present its case under Virginia law with enough clarity that Pega is adequately informed of what it is defending. *See Ted Lansing Supply Co. v. Royal Aluminum & Constr. Corp.*, 221 Va. 1139, 1141 (1981). In *Dionne*, our Supreme Court noted that “the proponent must bear the burden of proving a trade-secret claim.” 240 Va. at 303 n.2; *see also Preferred Sys. Sols.*, 284 Va. at 407 (stating plaintiff’s trade secret claim must provide sufficient facts informing defendant of the nature and character of the claim asserted); Restatement (Third) of Unfair Competition § 39 cmt. d (explaining “[a] person claiming rights in a trade secret bears the burden of defining the information for which protection is sought with sufficient definiteness to permit a court to apply the criteria for protection . . . and to determine the fact of an appropriation”).

The need for such clarity is paramount in the trade secret arena because the scope of a trade secret may be quite broad, while at the same time there is no requirement that the holder must file with an administrative body either a written description or an example of the material to be protected, in contrast to patent and copyright law, respectively. *See* 35 U.S.C. §§ 111-112; 17 U.S.C. § 411. Only the plaintiff knows what it considers to be secret—and the defendant cannot



harness a defense without gaining a meaningful description of the violation. *See Inteliclear, LLC v. ETC Glob. Holdings, Inc.*, 978 F.3d 653, 658 (9th Cir. 2020) (to “prove ownership of a trade secret, plaintiffs ‘must identify the trade secrets and carry the burden of showing they exist’” (quoting *MAI Sys. Corp. v. Peak Comput., Inc.*, 991 F.2d 511, 522 (9th Cir. 1993))). Similarly, the factfinder needs to know the alleged secrets’ precise contours so it can determine whether the information was generally known and reasonably protected, as well as to assess its worth. *See Trandes Corp.*, 996 F.2d at 661 (a plaintiff must “describe the subject matter of its alleged trade secrets in sufficient detail to establish each element of a trade secret”).

While we decline to impose any “heightened” particularity standard that is not found in VUTSA, we do adhere to the admonition that Appian was required to identify its claims in a manner that informed the defendant of the character of the claims asserted. *See Preferred Sys. Sols.*, 284 Va. at 407; *MicroStrategy, Inc.*, 331 F. Supp. 2d at 418. We believe, on this record, Appian’s evidence sufficiently identified its secrets to survive Pega’s motions to strike and to set aside the verdict.

1. The “Architecture and Design” Trade Secrets Were Sufficiently Delineated to Survive a Motion to Strike and to Set Aside the Verdict on this Record

Appian alleged that Pega misappropriated five “architecture and design” trade secrets: i.e., information Pega lifted from Appian’s platform to bolster its own product. These design secrets were Appian innovations dealing with Smart Services, Custom Data Types, Ease-of-Editing Functionality, Out-of-the-Box Ability to Deploy Applications to Mobile, and Out-of-the-Box Integrated Social View of Worklist and Tasks. We will address each feature in turn—and in each case Appian’s expert, Dr. Marshall, provided testimony establishing the contours of the secret.

(a) Smart Services

Appian's Smart Services feature enabled software developers to build applications more easily by making available a pre-coded tool "shape" to perform a given task. Dr. Marshall testified that Pega "did not have Smart Services" in Versions 6.2 and 6.3 of its software. He further testified that although "[t]here was information that these services existed," information about "how they worked, how [they] were used was not publicly available. That was privileged information." According to Dr. Marshall, Pega focused on this feature in its sessions with Zou, "asking a number of questions about how Smart Services work in the context of building an application[.]"

Ultimately, according to Dr. Marshall, Pega added a Smart Services feature similar to Appian's to its own platform. Dr. Marshall testified that Pega's improvement related to Smart Services was "released in September 2013" and "there [was] a new category that ha[d] been added to the flow editor, which is the Pega equivalent of what we've just seen called smart shapes. These smart shapes are a subset of the Smart Services offered by Appian." This improvement, according to Dr. Marshall, "greatly enhance[d] [Pega's] ease of use," "greatly reduce[d] the need for training," "reduced the number of errors that developers ma[de]," "increase[d] the number of people who can use the [Pega] platform," and "increase[ed] the productivity of those people." In Pega's marketing publication, "Pega 7: Why Upgrade?" Pega touted this new feature as a reason for customers to purchase the latest version of its software.

(b) Custom Data Types and Ease-of-Editing

Appian's Custom Data Types (CDTs) were a means of improving "human understanding of data" in a project. According to Marshall, Pega had a "different mechanism" called "data classes" which was "difficult for developers to understand." Dr. Marshall testified that Pega made improvements to its platform by adding custom data types that mimicked Appian's CDTs.

He further testified that “[t]hese changes significantly simplify and accelerate the data modeling process in the Pega platform.” In its marketing materials, including its “Why Upgrade?” publication, Pega highlighted its new CDT-like feature that would “make[] it easier and faster for developers to know how to use the data and modify the application.”

Appian’s Ease-of-Editing Functionality feature allowed developers to transition from a simulated end-user environment to an editing environment without having to go through a complex series of navigations. Zou also disclosed this feature to Pega. According to Marshall, Pega’s “editing process” did not have an equivalent feature, and Appian alleged that Pega copied this feature to improve its own platform. Dr. Marshall opined that Pega’s changes to its editing features were the result of Zou’s demonstrations of the platform for Pega’s product management team. He further testified these changes were significant because they enabled Pega’s platform to be used by “a much broader constituency of users,” and allowed “business analysts, less technical people to be able to accomplish far more.”

(c) Out-of-the-Box Features

According to Appian’s evidence, Pega also co-opted Appian’s “out-of-the-box” mobile capabilities. Appian’s model did not require any coding to deliver applications to mobile devices, while “Pega had a very basic capability that was not out of the box” and “[d]idn’t do very much.” Marshall suggested that Pega was floundering in this arena while Appian’s mobile capability “was already delivering the ability to take your applications . . . and deliver them to mobile devices as well as the desktop . . . .” Ultimately, Pega added out-of-the-box ability to deploy applications to mobile devices in Version 7.1. Per Dr. Marshall: “this improvement increased developer efficiency and eliminated the need to create separate versions of an application for a phone, tablet, or desktop.”

Appian’s final “architecture and design” trade secret related to its “Out-of-the-Box Integrated Social View of Worklist and Tasks.” This feature allowed for better social interaction among users working on a project. Again, according to Marshall, prior to meeting with Zou, Pega did not have a comparable feature, as its social capability was “extremely basic.” After Zou conducted training videos on social interactions among users, Pega subsequently made an improvement to this feature. In its “Why Upgrade?” publication, Pega listed its new social capabilities as a “new and improved feature[]” that “enhance[d] the value of . . . Pega applications,” and “gives users the tools to chat easily with colleagues[,] . . . advance a process or resolve a case directly from their conversation feeds, and even incorporate conversations from external social media networks.”

Appian’s expert identified contours of each of these “Design and Architecture” trade secrets. Marshall’s testimony spanned nearly three days and over 800 transcript pages. Appian sufficiently laid out these trade secrets, letting the jury know what Pega was accused of misappropriating.

## 2. Identifying “Documentation” Secrets and Weaknesses in Appian’s Product

In addition to identifying its “Architecture and Design” trade secrets, Appian asserted additional trade secrets were misappropriated based on “sensitive structural limitations of Appian’s platform previously unknown to Pega[.]” These secrets essentially boiled down to serious weaknesses in Appian’s BPM platform that competitors could exploit. Again, VUTSA’s definition of a trade secret encompasses information that derives independent economic value from not being known or readily ascertainable by competitors who “can obtain economic value for its disclosure or use.” Code § 59.1-336. Appian’s asserted trade secrets in this regard relate to Pega obtaining Appian’s “written documentation” that included private information as well as

Pega's ability to identify and exploit weaknesses in Appian's software once armed with Zou's demonstrations and Appian's documentation.<sup>9</sup>

Indeed, Pega initiated a program dubbed "Project Crush" where it analyzed Appian's strengths and weaknesses, and determined that Pega's software had many significant advantages over Appian's. Buttressed by this knowledge, Pega created or updated marketing materials attacking Appian based on these vulnerabilities. Each of the so-called "weakness" trade secrets identified by Appian was the subject of a Pega marketing foray. *Supra* at 7-8. Pega marketing materials addressing these weaknesses were presented to the jury as exhibits.

On this record, the trial court did not err in denying Pega's motions to strike and to set aside the verdict as a matter of law. Having rejected Pega's position that it is entitled to judgment as a matter of law, we next turn to Pega's claims that a series of evidentiary errors and instruction missteps below necessitate a retrial. Here, we agree with Pega.

## II. The Trial Court Erred by Giving Instruction 14 Which Failed to Place the Burden of Proving Proximate Causation on Appian

### A. Standard of Review

The sole purpose of appellate review of jury instructions is "to see that the law has been clearly stated and that the instructions cover all issues which the evidence fairly raises." *Dorman v. State Indus., Inc.*, 292 Va. 111, 125 (2016) (quoting *Cain v. Lee*, 290 Va. 129, 134 (2015)).

"We review a trial court's decisions in giving and denying requested jury instructions for abuse of discretion." *Conley v. Commonwealth*, 74 Va. App. 658, 675 (2022). "Whether a proffered

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<sup>9</sup> For example, Zou gave Pega confidential portions of certain Appian documents including one entitled "High Availability and Disaster Recovery Configurations," which contained descriptions of Appian's software. Zou also gave Pega a portion of Appian's "Tempo documentation," and additional documentation relating to its mobile and social capabilities. Zou further accessed Appian's user manual through Appian Forum and provided this information to Pega.

jury instruction accurately states the law, however, is reviewed de novo.” *Holmes v. Commonwealth*, 76 Va. App. 34, 53 (2022). “Questions relating to burden of proof, including the standard of proof and which party bears the burden to meet it, are questions of law reviewed de novo.” *La Bella Dona Skin Care, Inc. v. Belle Femme Enters., LLC*, 294 Va. 243, 257 (2017) (quoting *Ballagh v. Fauber Enters.*, 290 Va. 120, 124 (2015)).

B. VUTSA and Virginia Precedent Require Plaintiffs to Prove Proximate Cause

Remedies based on unjust enrichment require a defendant to disgorge its gain resulting from a wrong. *Schmidt v. Household Fin. Corp.*, 276 Va. 108, 116 (2008).<sup>10</sup> The damages Appian sought against Pega were grounded in unjust enrichment. VUTSA requires the complainant to prove that “unjust enrichment” damages were “caused by misappropriation.” Code § 59.1-338(A). Yet, the trial court’s instructions, here, relieved Appian of its burden of proving that the alleged misappropriation *caused* Pega to win any sale. The trial court rejected Pega’s requests for instructions requiring Appian to prove that “Pega’s wrongful conduct was the proximate cause of Appian’s damages.” Instead, the court instructed the jury to apply a burden-shifting approach under which, upon proving a misappropriation of a trade secret, Appian’s only further burden was to “establish[] by . . . greater weight of the evidence Pegasystems’ sales.” (Emphasis added).

The result was a presumption that Appian’s trade secrets were the but-for cause of all of Pega’s sales—including product lines that did not use any information associated with Appian’s claimed trade secrets. Under this hotly contested framework, once Appian proved Pega’s total sales revenue (which was billions during the relevant time frame), the burden shifted to Pega to

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<sup>10</sup> VUTSA expressly states that it “displaces conflicting tort, restitutionary, and other law of this Commonwealth providing civil remedies for misappropriation of a trade secret.” See *Babcock & Wilcox Co. v. Areva NP, Inc.*, 292 Va. 165, 205 n.51 (2016) (quoting Code § 59.1-341(A)).

prove what portion of these sales were not attributable to the trade secrets. Pega contended that this damages rubric was impermissible on multiple levels: (1) it failed to place the burden of proving proximate cause on Appian, (2) it utilized burden shifting concepts that the Supreme Court of Virginia has rejected, and (3) even if burden shifting were appropriate in the unjust enrichment arena, the instruction utilized here, which was modeled after principles enunciated by the Restatement of Unfair Competition, improperly applied the Restatement framework. We agree with Pega on all fronts.

1. Instruction 14

Appian argued to the trial court that burden shifting was appropriate under the Restatement (Third) of Unfair Competition in the situation where a victim of misappropriation has relied upon unjust enrichment damages under VUTSA because the wrongdoer has more knowledge of its own sales than the victim. Based on this logic, Appian championed a burden-shifting framework which placed the onus on Pega, after Appian demonstrated misappropriation, to prove *all* of its sales were not tainted. This instruction followed:

If you find that plaintiff Appian has proved by greater weight of the evidence its claim for misappropriation of trade secrets against defendant Pegasystems, you must find your verdict for Appian and decide the issue of damages as to Pegasystems. You may award the amount of unjust enrichment caused by misappropriation.

For unjust enrichment, Appian is entitled to recover Pegasystems' net profits. Appian has the burden of establishing by greater weight of the evidence Pegasystems' sales; Pegasystems has the burden of establishing by greater weight of the evidence any portion of the sales not attributable to the trade secret or trade secrets and any expenses to be deducted in determining net profits.

Instruction 14.

Per the instruction, the court advised the jury that Appian could prove its damages simply by establishing "Pegasystems' sales." This framework impermissibly "shifted the burden" to

Pega to prove sales were not related to the wrongdoing and relieved Appian of its burden to prove proximate cause for the misappropriation. Put another way, for damages purposes, Appian only had to establish Pega's enrichment—it did not have to prove “unjust” enrichment. Moreover, by permitting Appian to use *all* of Pega's sales as damages, the instruction removed any causation nexus between the sales and the misappropriation.

## 2. VUTSA's Express Language Forecloses Appian's Theory

“Statutory interpretation is a question of law which we review *de novo*, and we determine the legislative intent from the words used in the statute, applying the plain meaning of the words unless they are ambiguous or would lead to an absurd result.” *Wright v. Commonwealth*, 278 Va. 754, 759 (2009). When a statute “is plain and unambiguous, [courts] are bound by th[at] plain meaning.” *Jones v. Commonwealth*, 296 Va. 412, 415 (2018) (quoting *Alston v. Commonwealth*, 274 Va. 759, 769 (2007)). A court “must presume that the General Assembly chose, with care, the words that appear in a statute, and must apply the statute in a manner faithful to that choice.” *Id.* (quoting *Johnson v. Commonwealth*, 292 Va. 738, 742 (2016)). “Once the legislature has acted, the role of the judiciary ‘is the narrow one of determining what [the legislature] meant by the words it used in the statute.’” *Dionne*, 240 Va. at 304 (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 318 (1980)).

VUTSA's plain language places the burden of proving unjust enrichment damages caused by misappropriation on the complainant:

Damages can include both the actual loss *caused by misappropriation* and the unjust enrichment *caused by misappropriation* that is not taken into account in computing actual loss. *If a complainant is unable to prove* a greater amount of damages by other methods of measurement, the damages caused by misappropriation can be measured exclusively by imposition of liability for a reasonable royalty for a misappropriator's unauthorized disclosure or use of a trade secret.



Code § 59.1-338(A) (emphases added). First, under the statute’s plain language, only damages “caused by misappropriation” are recoverable.

Moreover, the second sentence of the provision makes clear that it is the *complainant*—Appian—that has the burden to “prove” unjust enrichment damages.<sup>11</sup> It is also notable that the key statutory language “[i]f a complainant is unable to prove” is unique to VUTSA. While forty-eight other states have enacted the Uniform Trade Secrets Act (UTSA), the model uniform act does not speak in terms of the complainant “proving” damages.<sup>12</sup> Virginia expressly codified this language clarifying that the burden to “prove” damages is on the complainant. Where a legislative body deviates from a model, uniform act to add language, we effectuate this “deliberate and intentional” choice. *Commonwealth, Dep’t of Taxation v. Champion Int’l Corp.*, 220 Va. 981, 992 (1980); *see Cornell v. Benedict*, 301 Va. 342, 350 (2022) (“Our canons of statutory construction presume that the General Assembly’s decision” not to adopt some of the statute’s definitions, while accepting others, “represents a conscious decision with deliberate implications.”). Thus, VUTSA’s express language militates against relieving Appian of its burden of proving proximate cause.

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<sup>11</sup> Construing the burden is straightforward. The first sentence authorizes damages in the form of actual loss and/or unjust enrichment caused by misappropriation. The second sentence sets forth when a plaintiff may pursue a reasonable royalty. In doing so, the second sentence refers to “other methods of measurement”—which includes the methods mentioned in the first sentence: actual loss and unjust enrichment. Code § 59.1-338(A). Thus, a reasonable royalty is available only if *a complainant is unable to prove* a greater amount of actual loss, unjust enrichment or other damages caused by misappropriation. Notably, the availability of the royalty recovery hinges on the *complainant’s* inability to *prove* higher unjust enrichment damages; this framework confirms the complainant has the burden to prove unjust enrichment caused by misappropriation in the first instance.

<sup>12</sup> In discussing when a royalty remedy is available, the corresponding sentence in section 3(a) of the UTSA begins in relevant part: “In lieu of damages measured by any other methods . . . .” Virginia replaced this wording with: “If a complainant is unable to prove a greater amount of damages by other methods of measurement . . . .” *Supra* at 32.

### 3. Virginia Precedent Requires that Appian Bear the Burden of Proving Proximate Cause

Even if VUTSA did not contain this clarifying language, Virginia law generally places the burden on plaintiffs “in any case” to “prove with reasonable certainty the amount of [their] damages and the cause from which they resulted.” *Hale v. Fawcett*, 214 Va. 583, 585-86 (1974). Establishing proximate cause requires a plaintiff to prove that defendant’s unlawful conduct produced the damages in a “natural and continuous sequence” and that it was a but-for cause “without which that event would not have occurred.” *Ford Motor Co. v. Boomer*, 285 Va. 141, 150 (2013); *see also Saks Fifth Ave., Inc. v. James, Ltd.*, 272 Va. 177, 189 (2006) (plaintiff bears burden of proving its damages were proximately caused by defendant’s wrongful conduct). This requirement also applies in the trade secret arena.

Our Supreme Court has stated that to establish lost profits a plaintiff has “the burden of proving with reasonable certainty the amount of damages and the cause from which they resulted; speculation and conjecture cannot form the basis of the recovery.” *Banks v. Mario Indus.*, 274 Va. 438, 455 (2007) (quoting *Saks Fifth Ave., Inc.*, 272 Va. at 188). A plaintiff must establish both a causal connection between defendant’s wrongful conduct and the damages claimed—and prove the amount of damages with reasonable certainty using a proper method and factual foundation for calculating such damages. *See Saks Fifth Ave., Inc.*, 272 Va. at 188-89. Professor Sinclair’s treatise on remedies also notes that this causation requirement should be applied to trade secret claims, including claims for unjust enrichment damages. *See Sinclair*, 1 Virginia Remedies, *supra*, § 29-3[A]; *see also Saks Fifth Ave., Inc.*, 272 Va. at 190 (Plaintiffs must “show the necessary factor of proximate causation.”).

Given the plain language of the Act and the foregoing case law on causation and damages principles, Instruction 14 was erroneous in requiring Appian to prove only misappropriation plus

Pega's total sales to meet its burden in proving damages. Appian should have been required to carry the burden of proving that the misappropriation *caused* the damages—and to prove its damages and their cause with reasonable certainty.<sup>13</sup> *Banks*, 274 Va. at 455.

C. Virginia has Rejected the Burden-Shifting Framework Adopted by the Trial Court—and even if it had not, the Instruction Granted by the Trial Court Misconstrues the Restatement Approach

In addition to relieving Appian of its obligation of proving proximate cause, the trial court's Instruction 14 openly applies a burden-shifting framework. Our Supreme Court has explicitly addressed the issue of burden-shifting under VUTSA: “The plain language of the Act does not provide any burden-shifting requirement. As we observed in *Dionne*, ‘the proponent must bear the burden of proving a trade-secret claim.’ This burden does not shift, even when a plaintiff has presented a prima facie case.” *MicroStrategy Inc.*, 268 Va. at 265 (quoting *Dionne*, 240 Va. at 303 n.2).

Appian argues that *MicroStrategy* is not controlling here because it was discussing burden-shifting in the context of the misappropriation element. However, the Court in

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<sup>13</sup> Appian observes that the instructions permit the jury to find “the amount of unjust enrichment caused by misappropriation.” However, we agree with Pega that saying a jury may “find something is not the same as saying Appian has the burden of proving it. Only one sentence in the instructions addresses Appian's burden: . . . ‘Appian has the burden of establishing by greater weight of the evidence Pegasystems' sales.’” Reply Br. at 13. Even if we did not hold that this instruction is erroneous, under Virginia law, the uncertainty spawned by this framework would warrant reversal based on confusion. See *Riverside Hosp., Inc. v. Johnson*, 272 Va. 518, 536 (2006) (“[W]here an erroneous instruction conflicts with an instruction that correctly states the law, the verdict must be set aside because it is impossible to determine which instruction was the basis for the jury's decision.”); *Gabbard v. Knight*, 202 Va. 40, 47 (1960) (finding that giving conflicting and inconsistent instructions is error, unless it plainly appears from the record that the jury could not have been misled by them); see also *ADA Motors, Inc. v. Butler*, 432 P.3d 445, 451 (Wash. Ct. App. 2018) (finding trial court erred by granting instruction that only required plaintiff to establish defendant's sales because such instruction contained potential for confusion or uncertainty). “No instruction should be given that incorrectly states the applicable law or which would be confusing or misleading to the jury.” *Kennemore v. Commonwealth*, 50 Va. App. 703, 712 (2007) (quoting *Mouberry v. Commonwealth*, 39 Va. App. 576, 581-82 (2003)).

*MicroStrategy* did not qualify or limit its finding that VUTSA does not permit any burden-shifting. While the Court made this ruling in the context of the misappropriation element, VUTSA contains no burden-shifting requirement as to damages either; indeed, as discussed above, the statutory language in Code § 59.1-338(A) places the burden of proof for damages squarely on the complainant.

1. A Proper Reading of the Restatement Reveals that the Complainant Bears the Burden of Proving Proximate Cause

Even if it were appropriate under Virginia law to employ burden-shifting and to invoke the approach adopted by the Restatement (Third) of Unfair Competition, the instruction advanced by Appian wholly misconstrued the Restatement framework. Jurisdictions that allow burden-shifting require plaintiffs to prove more than misappropriation plus total sales. These jurisdictions still require the *plaintiff* to prove “whether or not the sales are attributable to the trade secret[s]”—what some commentators call “sales causation.” *See, e.g., ADA Motors, Inc. v. Butler*, 432 P.3d 445, 449-51 (Wash. Ct. App. 2018); *Syntel Sterlin Best Shores Mauritius Ltd. v. Trizetto Grp., Inc.*, 68 F.4th 792, 810 (2d Cir. 2023) (finding Restatement requires plaintiff to establish “defendant’s profits on sales attributable to the use of the trade secret”).

Under the Restatement formula, *after* the plaintiff has established sales causation, the burden shifts to defendants for analysis of subsequent considerations including: (1) deducting expenses from revenue to yield profits; and (2) what is often called “apportionment” which is the exercise of segregating the portion of revenue from any particular sale that is attributable to the misappropriated information from the portion that is “not attributable to the trade secret[s].”<sup>14</sup> *ADA Motors, Inc.*, 432 P.3d at 450-51.

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<sup>14</sup> Apportionment attempts to identify the value of the copied feature from the value attributable to the defendants’ own contributions. *ADA Motors*, 432 P.3d at 450-51; accord William O. Kerr & Richard B. Troxel, *Calculating Intellectual Property Damages* §§ 7:2, 7:4

These steps—apportionment and profit calculation—help isolate the defendant’s unjust gains from its just ones. *See* William O. Kerr & Richard B. Troxel, *Calculating Intellectual Property Damages* § 7:4 (2018 ed.); *Collelo*, 283 Va. at 84 (McClanahan, J., concurring and dissenting in part) (explaining that plaintiffs must “provid[e] a factual basis upon which a jury could discern between [defendants’] just and unjust enrichment”). And, again, the Restatement shifts the burden to defendant to prove these adjustments to the damage calculation—deducting expenses, apportionment, and isolating “just” profits—only after plaintiffs prove the first step: the share of sales that were *caused by the misappropriation*. In short, nothing in the Restatement methodology relieved Appian of its obligation to prove causation in the first instance. This approach is consistent with the Restatement comments and uniform practice of the states that have adopted the Restatement framework. *See ADA Motors, Inc.*, 432 P.3d at 451 (“The plaintiff has the initial burden of proving sales attributable to the trade secret.”); *Iconics, Inc. v. Massaro*, 266 F. Supp. 3d 461, 467 (D. Mass. 2017) (“[i]n order to establish defendants’ unjust profits, plaintiffs must ‘do more initially than toss up an undifferentiated gross revenue number; the revenue stream must bear a legally significant relationship to the infringement’ (citations

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(2018 ed.). For example, if a defendant made a wonderful, groundbreaking innovation, but then misappropriated one minor editing function from a competitor to enhance the creation, the competitor would not usually recover all profits from the innovation. *See* Restatement § 45, cmt. f: “[I]f the trade secret accounts for only a portion of the profits earned on the defendant’s sales, such as when the trade secret relates to a single component of a product marketable without the secret, an award to the plaintiff of a defendant’s entire profit may be unjust.”

omitted)).<sup>15</sup> The Restatement certainly does not authorize a plaintiff to sidestep its burden of proof as to proximate cause between sales and the misappropriation.<sup>16</sup>

2. The Trial Court Misplaced Reliance on Comment f in the Restatement of Unfair Competition § 45 and on *Petters v. Williamson & Assocs., Inc.*, 210 P.3d 1048 (Wash. Ct. App. 2009), to Justify Instruction 14; Neither the Restatement nor the Washington Case Law Support Instruction 14

The trial court granted Instruction 14 based on a misreading of comment f of the Restatement of Unfair Competition § 45 and a case from Washington state that utilized the instruction at issue in another context. Ultimately, Instruction 14 was inconsistent with the very authorities Appian invoked—the Restatement and Washington law.

Comment f, set out below, actually confirms that plaintiffs bear the burden to show proximate cause (or sales causation).<sup>17</sup> The comment first defines the outer limits of recoverable

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<sup>15</sup> *Taylor v. Meirick*, 712 F.2d 1112, 1122 (7th Cir. 1983) (“[I]f General Motors were to steal your copyright and put it in a sales brochure, you could not just put a copy of General Motors’ corporate income tax return in the record and rest your case for an award of infringer’s profits.”); *Inteum Co. v. Nat’l Univ. of Sing.*, 371 F. Supp. 3d 864, 884-85 (W.D. Wash. 2019) (providing the plaintiff bears the initial burden of establishing the defendant’s profits, and then the defendant subsequently bears the burden of establishing which portion of those profits is not attributable to the trade secret and any expenses that should be deducted).

<sup>16</sup> The Restatement makes clear that unjust enrichment is not simply a deep pocket mechanism for collecting sales profits unconnected to wrongdoing. “Allegations that the defendant is a wrongdoer, and that the defendant’s business is profitable, do not state a claim in unjust enrichment.” Restatement (Third) of Restitution and Unjust Enrichment § 51, cmt. I (2011); accord Restatement (First) of Torts § 747, cmt. c (1934) (“[T]he defendant is liable not for the entire profits of his business but only for the profits earned by means of his tortious conduct.”).

<sup>17</sup> In pertinent part, comment f states:

Relief measured by defendant’s gain. The traditional form of restitutionary relief in an action for the appropriation of a trade secret is an accounting of the defendant’s profits on sales *attributable to the use of the trade secret*. The general rules governing accountings of profits are applicable in trade secret actions. The plaintiff is entitled to recover the defendant’s net profits. *The plaintiff has the burden of establishing the defendant’s sales*; the defendant has the burden of establishing any portion of

unjust enrichment damages: plaintiffs can recover a defendant’s “*profits on sales attributable to the use of the trade secret.*” Restatement (Third) of Unfair Competition § 45, cmt. f (1995) (emphasis added). The comment then uses the language Appian emphasized in Instruction 14—identifying a plaintiff’s burden as “establishing the defendant’s sales.” *Id.* This mid-paragraph proposition, however, assumes what has been previously stated in the comment—that plaintiff must *first* identify sales attributable to the improper use of the trade secret. Thus, when this sentence speaks of identifying defendants’ “sales,” it takes for granted that this figure will be a subset of relevant damages—i.e., sales attributable to the use of the trade secret.<sup>18</sup>

The trial court, however, applied the term “sales” to all Pega’s sales—not just sales attributable to the misappropriation of the trade secret. To support its reading of comment f, the trial court adopted a novel interpretation of the law of Washington state and purported to follow *Petters*, 210 P.3d at 1054. *Petters* involved the misappropriation of the design of an undersea drill. Notably, *Petters* did *not* absolve plaintiffs of the initial burden of proving sales causation; it addressed the defendant’s *apportionment* burden following the Restatement’s burden-shifting template. *Id.* Critically, several years later, in *ADA Motors*, the Washington Court of Appeals clarified and emphasized that *Petters* should *not* be read to relieve a plaintiff of its burden of proving proximate cause. The *ADA Motors* court flatly rejected an instruction nearly identical to the one issued here: “Plaintiff has the initial burden of proving defendants’ sales.” *See* 432 P.3d at 451 (emphasis omitted). The *ADA Motors* court held the instruction to be error—even under

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the sales not attributable to the trade secret and any expenses to be deducted in determining net profits.

Restatement (Third) of Unfair Competition § 45, cmt. f (1995) (emphases added).

<sup>18</sup> Comment f then shifts the burden to defendants to winnow damages via other factors such as profit calculation and apportionment; for example, showing the value of features that the defendant contributed to the disputed sale.

*Petters*—because it could “be read to allow the plaintiff to satisfy its burden with gross sales data, *whether or not the sales are attributable to the trade secret.*” *Id.* (emphasis added). That is exactly what happened here.

The *ADA Motors* court explained that a proper instruction must impose on plaintiffs the burden of proving not just any sales, but sales “attributable to the trade secret.”<sup>19</sup> *Id.*; accord *Inteum Co.*, 371 F. Supp. 3d at 884-85.<sup>20</sup>

Thus, Instruction 14 contravenes Virginia case law, VUTSA’s express language, and the Restatement’s own burden-shifting framework. We hold that the granting of Instruction 14 was reversible error. Accordingly, we remand for a new trial in which the jury is instructed that the complainant bears the burden of proving proximate cause between the misappropriation and any unjust enrichment damages. *See Saks Fifth Ave., Inc.*, 272 Va. at 190.<sup>21</sup>

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<sup>19</sup> Here, the trial court acknowledged that Instruction 14 was inconsistent with Washington law under *ADA Motors*: “I see that and I disagree with [*ADA Motors*] conclusion . . . I think this is the wrong standard” under Virginia law. In doing so, it adopted *Petters* while rejecting a subsequent—and controlling—holding of the same court.

<sup>20</sup> Finally, from a policy perspective, chaos would ensue in commercial litigation settings if we adopted the premise that the burden for a plaintiff seeking unjust enrichment for any misappropriation of a trade secret in Virginia is simply showing all sales made by the defendant. Here, Instruction 14 bluntly informed the jury that Appian could establish damages merely by showing that Pega earned \$6 billion in sales revenue during the relevant time frame. That is certainly what Appian argued to the jury, noting that “the burdens of proof . . . are critical” and repeatedly focusing on Instruction 14: “We just got to show all the money that flowed in, the 6 billion plus from their customers, right? That’s what we have to show.” If this instruction were correct, billions of dollars in “total sales” commonly would be in play in corporate trade secret cases involving unjust enrichment—regardless of whether a single, minor misappropriation were asserted or a hundred serious ones. Trade secret litigation routinely would devolve into a “bet the company” gamble unfettered by proximate cause burdens.

<sup>21</sup> We recognize that this error is central to damage issues; however, errors addressing liability follow which require a new trial on VUTSA liability issues as well.



### III. The Trial Court Erroneously Excluded Evidence Relevant to Damages and Causation Based on a Skewed Reading of an Interrogatory Response

After Instruction 14 improperly shifted the burden to Pega to disprove damages, the trial court then hampered Pega from meeting that burden by precluding Pega from presenting evidence, or conducting cross-examination, to demonstrate that much of Pega's total sales revenue was attributable to products with which Appian did not compete and that had "nothing to do with" the misappropriation. This evidence, highlighted in detail earlier, *supra* at 16, included testimony that "more than 50 percent of Pega's revenue is derived from customers" buying products not in competition with Appian and that Pega had many customers who "bought things that Appian didn't sell."

Pega's efforts to *disprove* such total sales, under the flawed instruction, were short-circuited based upon a dispute involving an interrogatory. The interrogatory sought information about Pega *revenues* derived from different *versions* of its *software*:

Interrogatory No. 18: Identify all revenues received by Pegasystems for each fiscal year from 2012 through 2021 relating to Pega 6.3, Pega 7.0 and any subsequent version broken out by year and version of the software; and identify the costs and expenses Pegasystems incurred in order to realize those revenues.

Answer: Pegasystems does not record or report revenue, or any associated costs and expenses incurred by Pegasystems, based on the "version" of the product sold (e.g., Pega 6.3, Pega 7.0). There is no mechanism or process by which Pegasystems is able to determine these revenue, cost and expense amounts. As a result, Pegasystems' financial results (including total revenue and all associated costs and expenses) for each applicable fiscal year as reported to the SEC in Pegasystems' annual Form 10-K filings and quarterly Form 10-Q filings are attached as Schedule 3.

R. 47525-26 (objections omitted). While Pega disclaimed revenue records for *versions* of its software in this answer—the trial court interpreted the response to disclaim records for all of its *products* or other *lines of business*: "[Y]ou've essentially given up by answering an

interrogatory that you can't breakdown the damages, you can't breakdown your revenue based on lines of business.”

The trial court's reading of the response misses the distinction between different *products* and different “*versions*” of the same product. The interrogatory asked about “*versions*” of a specific product: Pega's software. Reporting that Pega does not track revenue by software versions is not tantamount to asserting that Pega sells no other products or that Pega does not track revenue by product or by lines of business. This is particularly true where long before trial Pega's damages expert, Platt, submitted a report breaking out revenue attributable to various products.

A trial court has the authority to exclude evidence when, for example, a party makes a blunt disavowal of “overcharge damages” and then shows up at trial seeking to prove such damages. *See Little v. Cooke*, 274 Va. 697, 717-18 (2007). Similarly, if a party asserts in discovery it has no witnesses on whether the traffic light was green or red—and that it conducted no tests on its car's brakes—the trial court can limit the litigant from providing witnesses at trial who claim the light was green, *Martin & Martin v. Bradley Enters.*, 256 Va. 288, 292 (1998); it can also bar undisclosed test reports that reveal the brakes were working perfectly. *See John Crane, Inc. v. Jones*, 271 Va. 581, 593 (2007) (in an expert report context). The logic behind this authority is (1) to aid in disclosure of “all relevant and material evidence before trial in order that the trial may be an effective method for arriving at the truth” and (2) to prevent ambush at trial. *Cooke*, 274 Va. at 717-18.

The above examples of clear discovery misstatements are straightforward and stark. And litigants who provide misleading or false answers in discovery run the risk of harsh consequences at trial. But, here, Pega's discovery response was appropriate, under the circumstances, and the proponent did not object or seek clarification of the response prior to trial.

Appian framed its interrogatory to ask about “versions” of software rather than product lines. Pega answered the interrogatory as it was posed. The interrogatory sought revenues “relating to *Pega 6.3, Pega 7.0* and any subsequent version broken out by year and version of the *software*.” R. 47525 (emphases added). The interrogatory request by its express language did not ask Pega to break down revenue based on other product or business lines—rather it focused on “versions” of software. There was no ambush by Pega—or even surprise—as Appian received breakdowns of other product lines in discovery.

If Appian felt the interrogatory answer was unclear or incomplete, it was permitted to seek clarification through a pre-trial motion to compel and, further, a motion seeking sanctions for any failure to comply. Rule 4:12.<sup>22</sup> These options, too, are consistent with the objectives stated in *Cooke* of employing methods designed to arrive “at the truth” and to prevent trial by ambush. *Id.* What happened at trial with respect to Interrogatory 18 defeated both of these goals.

While a trial court wields considerable discretion in deciding evidentiary matters, discretion does “not mean that the [trial] court may do whatever pleases it. The phrase [abuse of discretion] means instead that the court has a range of choice, and that its decision will not be disturbed as long as it stays within that range and is not influenced by any mistake of law.” *Landrum v. Chippenham Johnston-Willis Hosps., Inc.*, 282 Va. 346, 352 (2011) (quoting *Kern v. TXO Prod. Corp.*, 738 F.2d 968, 970 (8th Cir. 1984)).

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<sup>22</sup> If Appian saw a possible inconsistency between Pega’s interrogatory answer and its evidence at trial, then its options for relief included objecting or seeking clarification pre-trial, or introducing the response as evidence at trial and asking the jury to reject Pega’s “new position” as untrue. *See TransiLift Equip., Ltd. v. Cunningham*, 234 Va. 84, 93 (1987) (“Resolution of any inconsistencies and discrepancies is peculiarly within the province of the jury.”); *see also Gentry v. Toyota Motor Corp.*, 252 Va. 30, 34 n.2 (1996) (“Discovery depositions and answers to interrogatories generally are not conclusively binding upon a party.”).

An abuse of discretion . . . can occur in three principal ways: when a relevant factor that should have been given significant weight is not considered; when an irrelevant or improper factor is considered and given significant weight; and when all proper factors, and no improper ones, are considered, but the court, in weighing those factors, commits a clear error of judgment.

*Id.* (quoting *Kern*, 738 F.2d at 970).

We do not see any justifiable basis for the trial court’s decision to bar admission of evidence of Pega’s massive revenue from products which had nothing to do with any alleged misappropriation based on the interrogatory response. *See Lawlor v. Commonwealth*, 285 Va. 187, 213-14 (2013); *Landrum*, 282 Va. at 352. Here, the trial court demonstrated an error in judgment in concluding that Pega’s response to this interrogatory somehow foreclosed the availability of evidence of sales of other product lines.

Appian now posits two cases in an attempt to justify the exclusion of this evidence as a recourse for “discovery abuses.” But both cases involve exclusion of evidence as a sanction for violation of a court order. *See Spaid v. Spaid*, No. 0021-22-4, slip op. at 10-11 (Va. Ct. App. Oct. 25, 2022) (affirming discovery sanction “after the circuit court ordered” compliance); *Moore v. Moore*, No. 0314-20-4, slip op. at 22 (Va. Ct. App. Oct. 27, 2020) (“[W]ife violated the scheduling order.”). Appian did not seek sanctions or assert noncompliance with a court order regarding the interrogatory below. The trial court did not exclude Pega’s damages evidence as a sanction pursuant to Rule 4:12; thus, Appian’s reliance on the two, unpublished cases is unpersuasive.<sup>23</sup>

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<sup>23</sup> Notably, even if a sanction had been imposed—and it was not—sanction analysis must encompass some notion of proportionality. *See Emerald Point, LLC v. Hawkins*, 294 Va. 544, 558-59 (2017) (in a spoliation context, “[t]o allow such a severe sanction as a matter of course when a party has only negligently destroyed evidence is neither just nor proportionate” (quoting *Brookshire Bros., Ltd v. Aldridge*, 438 S.W.3d 9, 24 (Tex. 2014))); *see also United States v. Rhynes*, 218 F.3d 310, 321 (4th Cir. 2000) (en banc) (“[S]anction analysis must encompass proportionality, and sanctions as extreme as witness exclusion must be proportional to the

The trial court’s ruling to exclude Pega’s damages evidence was particularly consequential given the burden-shifting instruction on damages; we cannot say the wrongful exclusion of this evidence based on the interrogatory response constitutes harmless error, given the type of evidence excluded and the ultimate award in excess of two billion dollars. *See Egan v. Butler*, 290 Va. 62, 69 (2015) (“In a civil case, the erroneous exclusion of evidence is reversible error when the record fails to show plainly that the excluded evidence could not have affected the verdict.” (quoting *Barkley v. Wallace*, 267 Va. 369, 374 (2004))). Indeed, the exclusion of this damages evidence—in tandem with Instruction 14’s emphasis on Pega’s total sales—exponentially increased the likelihood of a runaway damages verdict that had no correlation to proximate cause.

IV. The Trial Court Erred in Excluding Pega’s Software Evidence on the Ground It Was Not on the Original Laptop Used in Discovery and in Denying Pega the Opportunity to Authenticate It Under Rule of Evidence 2:901

“Generally, we review a trial court’s decision to admit or exclude evidence using an abuse of discretion standard and, on appeal, will not disturb a trial court’s decision to admit evidence absent a finding of abuse of that discretion.” *Warren v. Commonwealth*, 76 Va. App. 788, 802 (2023) (quoting *Avent*, 279 Va. at 197). “The abuse-of-discretion standard includes review to determine that the discretion was not guided by erroneous legal conclusions.” *Id.* (quoting *Coffman v. Commonwealth*, 67 Va. App. 163, 166-67 (2017)).

“The proponent of the evidence bears the burden of establishing by a preponderance of the evidence, the facts necessary to support its admissibility.” *Bell v. Commonwealth*, 49 Va. App. 570, 576 (2007). “The requirement of authentication or identification as a condition

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offense.”). Here, the exclusion of evidence of hundreds of millions of dollars in damages based on a strained reading of a discovery response would lie beyond the pale of proportionality.

precedent to admissibility is satisfied by evidence sufficient to support a finding that the thing in question is what its proponent claims.” Va. R. Evid. 2:901.

“In general, electronic documents or records that are merely stored in a computer raise no computer-specific authentication issues. If a computer processes data rather than merely storing it, authentication issues may arise.” *Midkiff v. Commonwealth*, 54 Va. App. 323, 337 (2009) (citations omitted), *aff’d*, 280 Va. 216 (2010). “When a computer is used to create a data compilation, how much information will be required about data input and processing to authenticate the output will depend on the nature and completeness of the data, the complexity of the manipulation, and the routineness of the operation.” *Id.* (quoting *McCormick on Evidence* § 227 (Kenneth S. Broun et al. eds., 6th ed. 2006)); *see generally* Charles E. Friend & Kent Sinclair, *The Law of Evidence in Virginia* § 17-1 (8th ed.).<sup>24</sup>

#### A. The Discovery and Trial History of the Excluded Software Evidence

Appian served a discovery request asking Pega to produce relevant “versions” of its platform so Appian could analyze it and determine whether Pega made improvements based on Appian’s trade secrets. Pega complied with the discovery request and provided its software to Appian via a laptop computer. Prior to trial, Pega twice timely disclosed that it intended to introduce “versions” of its software that both pre-dated and post-dated Zou’s tutorials. The exhibit list had entries entitled, “Pega Laptop Containing Version 6.3 and subversion (Physical Object)” and “Pega Laptop Containing Version 7.1 and subversions (Physical Object).” Appian

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<sup>24</sup> A “computer decodes electronic records, converts them into a format understood by users and either prints them or displays them on a terminal. A person who can verify that the business records are authentic can present the evidence by testifying about what he saw displayed or by presenting a printed copy of the display.” *Lee v. Commonwealth*, 28 Va. App. 571, 577 (1998); *see also United States v. Ahlstrom*, 530 F. App’x 232, 239 (4th Cir. 2013) (noting that any concerns about the reliability of machine-generated information are addressed through the process of authentication, which is generally satisfied by evidence describing the process or system used to produce the result and showing it produces an accurate result).

did not object either time. Indeed, Appian conceded when arguing this issue that its discovery request sought Pega’s BPM platform—not an old laptop.

The original laptop was, in Pega’s words, “a mechanism of getting the software” to Appian. Moreover, Appian was fully aware of the laptop’s transmission function; upon receiving Pega’s software, Appian moved the software onto another medium to view it and concluded the laptop was “unusable” for other purposes. Again, Appian raised no objection. And during its case in chief, Appian showed the jury Pega’s software using a different laptop than the one it received during discovery. However, when Pega sought to do the same thing, Appian balked.

Specifically, Appian objected that, based on Pega’s discovery response, Pega could only present its software evidence if it used the original laptop from discovery. Pega argued the laptop was simply a means to produce its evidence, and the evidence at issue was its software. The trial court agreed with Appian and sustained the objection, excluding Pega from introducing its software evidence and any demonstrative images taken from it, stating “[y]our objection to the use of their—this new laptop is sustained.” The trial court observed that Pega was free to use the original, non-functional laptop used in discovery to show the software—but the discovery laptop was not able to show it.<sup>25</sup>

After initially being rebuffed, Pega moved again to admit its software evidence when presenting its case. Pega restated that Appian never objected to the exhibit list entries in question. Pega proffered that its witness, Bixby, who worked for Pega for nearly 20 years as a

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<sup>25</sup> The issue arose initially when Pega was cross-examining Appian’s expert and moved to admit the software evidence. Pega wanted to introduce its software to counter Appian’s expert, who alleged that Pega used Appian’s trade secrets to improve its platform. The trial court refused, finding “Pega produced the computer the way it is. If they’re not ready to go with it now, that’s on them . . . if we can’t start the computer up, then you’re going to have to do your cross without it.”

chief designer of software, “can testify about how that software is kept in the course of time and whether or not this [is] the same thing that was given to Dr. Marshall.” Pega argued that its software is a fungible product, and the software it would produce is the *exact same thing* as the software Pega gave to Appian during discovery. Pega asked the trial court to allow Bixby to attempt to authenticate the software evidence specifically as it related to his testimony “about his product that he developed, what it can do, what features it had.” Pega further explained that “it’s difficult for a witness to explain what that software looks like without showing something to the jury to help them understand it.”

Ultimately, the trial court ruled against Pega, stating “[t]hat computer is not coming into evidence one way or another. It is not the same computer that was provided.” The trial court found that Pega’s ability to authenticate the demonstratives via Bixby did not change anything: “The fact that this upcoming witness may be able to authenticate what’s on there, we’re not doing that. We’re not having a trial within a trial to authenticate that.”

In this case, we must determine whether the trial court abused its discretion when it ruled Pega could not introduce its software evidence at trial because the software was on a different laptop than the one used in discovery. Further, we must determine whether the trial court abused its discretion in refusing to give Pega an *opportunity* to authenticate its software on a different laptop pursuant to Rule 2:901.

#### **B. The Court Improperly Prevented Pega from Authenticating Its Software**

In a technical case where a multi-billion-dollar claim turned on whether and how Pega copied Appian’s functions, the trial court prevented Pega from displaying its software and any demonstrative images taken from it. This deprived Pega of evidence that could show that functions it was accused of stealing actually pre-dated Zou or differed from Appian’s. Pega told the court the software was “probably the most important exhibit in the case.”



The trial court’s basis for excluding Pega’s software was that the software was inadmissible unless it was contained on the same physical object on which it was produced to the opposing party in discovery. In so ruling, the court conflated the evidence at issue—software—with the method by which the evidence was to be transmitted in discovery (i.e., an electronic transfer link, an external hard drive, or a different laptop). Appian acknowledged its discovery request sought software—and Appian never lodged any pre-trial objection to what it received.

This Court has held, “electronic documents or records that are merely stored in a computer raise no computer-specific authentication issues.” *Midkiff*, 54 Va. App. at 337 (quotation marks omitted).<sup>26</sup> Thus, Pega was entitled to introduce a copy of its software as long as it was relevant, under Rule of Evidence 2:401, and authenticated, under Rule 2:901.<sup>27</sup> *See* Va. R. Evid. 2:402.

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<sup>26</sup> In support of its position that the software evidence was properly excluded, Appian cites two cases that acknowledge electronic evidence may be manipulated, and thus, Appian argues a higher standard should apply to authenticating electronic evidence. But neither case stands for the proposition that Appian suggests. *See United States v. Browne*, 834 F.3d 403, 412 (3d Cir. 2016) (while recognizing the unique nature of electronic evidence, the court nonetheless found that traditional authentication principles apply). Relatedly, in *Knowles v. Commonwealth*, No. 1814-97-3, slip op. at 9 (Va. Ct. App. Oct. 27, 1998), an unpublished opinion, we stated that “[a] computer record is peculiarly susceptible to tampering and to unidentifiable alterations by any person who has access to the computer.” In *Knowles*, however, the trial court excluded electronic evidence on the ground that “the computer professional” who was to offer authenticating testimony was not present to testify. By contrast, in this case, Pega’s witness was both qualified and present to authenticate the evidence. *See id.* at 8-9. Neither case Appian invokes stands for the proposition that a higher standard applies when authenticating electronic evidence in Virginia, nor does either case suggest that a refusal to permit Pega to authenticate its software evidence was appropriate here. Instead, both cases, while noting that electronic evidence may be susceptible to tampering in certain circumstances, suggest that traditional authentication principles apply even to electronic evidence.

<sup>27</sup> The requirement of authentication or identification as a condition precedent to admissibility is satisfied by evidence sufficient to support a finding that the thing in question is what its proponent claims. Va. R. Evid. 2:901.

For purposes of authentication, under Virginia’s “very modest” standard, Friend & Sinclair, *The Law of Evidence in Virginia, supra*, § 16-1, the question was whether Pega had evidence “sufficient for the trier of fact” to conclude Pega’s software was actually Pega’s software. *Walters v. Littleton*, 223 Va. 446, 451 (1982) (emphasis added). Pega was prepared to authenticate the software through the person, Stephen Bixby, who led development of the software that Pega sought to introduce and who also would have testified that it was “the exact same thing” Pega produced to Appian in discovery.

The trial court observed that allowing Pega to use a different computer to display the evidence might raise doubts about the software’s authenticity. However, the court then expressly prohibited Pega from authenticating it (“we’re not doing that”)—even though the court recognized that Pega’s witness, Bixby, “may be able to authenticate what’s on there.” And it prohibited Pega from using a different laptop to demonstrate the software after having already allowed Appian to show the software on a different laptop.<sup>28</sup>

A court abuses its discretion when it makes a mistake of law. *See Lawlor*, 285 Va. at 214 n.5. It abuses its discretion when it fails to consider a relevant factor that should have been given significant weight—or gives substantial weight to an immaterial factor. *Landrum*, 282 Va. at 352. A court also abuses its discretion “when it believes that the law requires something that it does not . . . .” *Lawlor*, 285 Va. at 213.

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<sup>28</sup> As this Court observed over 35 years ago, “the potentially limitless application of computer technology to evidentiary questions will continually require legal adaptation.” *Penny v. Commonwealth*, 6 Va. App. 494, 499 (1988). As artificial intelligence progresses, battles over the accuracy of computer images and manipulation of “deepfakes” can be expected to intensify. *See generally* Paul W. Grimm et al., *Artificial Intelligence as Evidence*, 19 Nw. J. Tech. & Intell. Prop. 9 (2021). No such issues were raised here. Basic authentication efforts were simply prohibited.

Here, the law did not require that Pega must play the software to the jury on the same laptop it provided in discovery. *Id.* If the exhibit were a voicemail or an officer’s body camera footage, would only the exact thumb drive submitted in discovery be admissible?<sup>29</sup> Moreover, the court did not mention any basis under either Rule 2:901 or 2:403 for refusing to allow authentication and excluding the evidence. It did state that the matter should have been resolved pre-trial—but, again, Appian never filed any objection to the list during discovery. Appian authored the timing of its objection. Here, there simply was no indication that basic authentication would have caused any unreasonable delay or hardship. Again, (1) Bixby was present and prepared to say the software was the same as tendered in discovery, (2) there was no specific claim of tampering or corruption, (3) Appian had already introduced the software to the jury *on its own laptop*, (4) authentication would not prevent Appian from challenging the software if it had a plausible basis for doing so, and (5) no objection had been lodged by Appian pre-trial in response to the discovery designation.

Appian cites no case prohibiting a party from introducing—let alone even attempting to authenticate—software evidence on the ground that the software resides on a medium different from the one used to transmit it in discovery. Nor does Appian explain why it was appropriate for the court to prohibit Pega from using the software on that basis when Appian’s expert displayed the software on a different medium earlier at trial. Ultimately, under these

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<sup>29</sup> Notably, introducing the authenticated evidence would not have deprived Appian of the opportunity to challenge it, if it had a basis for doing so. Appian would still be free to argue to the jury that the software was corrupted. *See Church v. Commonwealth*, 71 Va. App. 107, 122-23 (2019) (finding when threshold for proving admissibility has been met, any gaps in the evidence are relevant to the jury’s assessment of its weight rather than its admissibility).

circumstances, the trial court abused its discretion in denying Pega the opportunity to authenticate its software. *See Landrum*, 282 Va. at 352.<sup>30</sup>

C. Appian's Attempt to Defend the Trial Court's Exclusion of Pega's Software Fails

On appeal, Appian seeks to circumvent the trial court's actual rationale for exclusion, which was that the computer Pega brought to trial "was not 'the laptop [Pega] gave [Appian].'" Lacking support for the trial court's ruling, Appian attempts to recast the trial court's decision in various ways. First, Appian seeks to portray the trial court's order as a sanction based on a purported "finding" of "gamesmanship" in discovery. However, there is no such finding in the record. In fact, Appian sought no such sanction during discovery, and the trial court imposed none. Nor could it have: Appian never objected to, or tried to flesh out, Pega's discovery response.

Appian then recasts the ruling by suggesting that the "court merely applied Rule 2:901's authentication requirement." Appellee's Br. at 42. Again, the record offers Appian no solace. Prohibiting a party from even attempting to authenticate evidence is not tantamount to applying the authentication rule. Moreover, Appian does not contest Pega's proffer that Bixby had first-hand knowledge that the software was what Pega represented it to be and "the exact same thing" Pega produced in discovery. Mere speculation about tampering generally goes to the weight of the evidence, not its admissibility. *See McDaniel*, 73 Va. App. at 316; *Reedy v. Commonwealth*, 9 Va. App. 386, 391-92 (1990).

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<sup>30</sup> We do not suggest that concern regarding a drawn-out and unnecessary "trial within a trial" cannot be a proper basis for exclusion of evidence. At the same time, a trial within a trial is sometimes *mandated* by our precedent. *See Campbell v. Bettius*, 244 Va. 347, 352 (1992) (legal malpractice damages issues). On this record, however, there was no logical basis for prohibiting Pega to authenticate its software evidence.

Appian finally tries to minimize the impact of the ruling by suggesting that Pega witnesses were permitted to argue they did not copy Appian's software. Appian argues this was enough—and that any error in excluding the software was de minimis or harmless. We reject this analysis. Pega explained to the trial court that where software was concerned, demonstrative aids were vital. With the software, Pega claims it could have shown the jury that “the features in question in this case . . . either existed in Version 6.3, which predated Mr. Zou, or were developed entirely independently within Pega without any input from Appian.” Further, Appian's expert was given broad discretion to opine—and he opined liberally—that many things Pega saw on Appian's system were copied by Pega on a grand scale. The best way to disprove this testimony was by showing the jury that each function either predated Zou or worked differently from Appian's, or both.

The trial record further confirms the importance of this evidence. Virginia courts have noted on multiple occasions that a litigant's emphasis on certain evidence in closing argument provides insight into whether an error in admitting or excluding evidence is harmless. *See Keese v. Donigan*, 259 Va. 157, 162 (2000) (identifying prejudice from “emphasi[s] . . . in [a] closing argument”); *see also Hodges v. Commonwealth*, 272 Va. 418, 437 (2006) (noting frequent emphasis on erroneous evidence in closing argument); *Durant v. Commonwealth*, 7 Va. App. 454, 461 (1988) (prosecution emphasis on issue in closing argument weakens harmless error claim). Here, Appian repeatedly attacked Pega for its lack of *software* evidence in arguing to the jury. For example, Appian urged the jury in closing argument to reject the testimony of Pega's witnesses who denied that Pega copied Appian's trade secrets; Appian argued that Pega asked the jury simply to “take [its] word for it,” with no corroborating evidence. It further exploited Pega's lack of software evidence, telling the jury: “Show me, where it is? They

haven't *shown you* a thing . . . . *That's how you tell, you look at the platform.*" (Emphasis added).

Prohibiting Pega from introducing its software was not harmless error. *See Food Lion v. Melton*, 250 Va. 144, 153 (1995) (exclusion of evidence not harmless). The error significantly hampered Pega's liability defense, and we cannot say it did not affect the verdict. *Barkley*, 267 Va. at 374. Thus, the error necessitates reversal of the judgment.<sup>31</sup>

V. The Trial Court Erred in Instructing the Jury that the Number of People with Access to Appian's Secrets was "Not Relevant" and Abused Its Discretion in Excluding Relevant Evidence on the Ground It Was "Irrelevant"

Because this case will be remanded for a new trial, we must consider an additional issue that is likely to arise on retrial. *Velocity Express Mid-Atlantic v. Hugen*, 266 Va. 188, 203 (2003); *Emerald Point, LLC v. Hawkins*, 294 Va. 544, 555 (2017). The question is whether it is appropriate for the trial court to instruct the jury—as it did in Instruction 13-1—that the number of users of Appian's platform is "not relevant to any issue in this case" and to exclude related evidence.

A. Standard of Review

Evidentiary rulings are reviewed for an abuse of discretion. *Galloway v. Northampton Cnty.*, 299 Va. 558, 563 (2021). In evaluating whether a trial court abused its discretion, we do not substitute our judgment for that of the trial court. Instead, we consider whether the record fairly supports the trial court's action. *See Carter v. Commonwealth*, 293 Va. 537, 543 (2017). "A [circuit] court by definition abuses its discretion when it makes an error of law . . . . The abuse-of-discretion standard includes review to determine that the discretion was not guided by

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<sup>31</sup> While a retrial is required on liability and damages under VUTSA, Pega has not appealed the judgment on the VCCA claim and it stands.

erroneous legal conclusions.” *Porter v. Commonwealth*, 276 Va. 203, 260 (2008) (quoting *Koon v. United States*, 518 U.S. 81, 100 (1996)).

In Virginia, “[a]ll relevant evidence is admissible, except as otherwise provided by . . . statute, Rules of the Supreme Court of Virginia, or other evidentiary principles.” Va. R. Evid. 2:402(a). “‘Relevant evidence’ means evidence having any tendency to make the existence of any fact in issue more probable or less probable than it would be without the evidence.” Va. R. Evid. 2:401. Evidence is relevant if it has any logical tendency to prove an issue in a case, and relevant evidence may be excluded only if the prejudicial effect of the evidence outweighs its probative value. See *John Crane, Inc.*, 274 Va. at 590; *Jones v. Commonwealth*, 50 Va. App. 437, 446 (2007). Here, the trial court did not apply balancing considerations; it held that the “numbers” evidence was irrelevant, excluded it, and instructed the jury accordingly. Whether an instruction accurately states the law is reviewed de novo. *Holmes*, 76 Va. App. at 53.<sup>32</sup>

B. Evidence of the Number of People with Access to the Secrets is Not Irrelevant

The trial court granted Appian’s motion *in limine* to exclude evidence of the number of people with access to Appian’s platform. The trial court ruled that the number of people with access to Appian’s platform was “not relevant at all.” The court gave the jury an instruction that

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<sup>32</sup> Instruction 13-1 stated:

The numbers of users of the Appian platform and Appian Forum licensees are not relevant to any issue in this case, and any evidence as to those numbers should be disregarded.

provided, “[t]he numbers of users of the Appian platform . . . are not relevant to any issue in this case.”<sup>33</sup>

Pega then proffered a swath of evidence that demonstrated that thousands of people had access to the alleged trade secrets, *supra* at 12, with varying degrees of restrictions. For example, various users were under different agreements, including licensing agreements, terms of use for Appian Forum, additional terms of use, the Value-Added Service Provider Agreement, the Business Partner Agreement, and the Cloud Trial and Evaluation Clickwrap Agreement, all of which required shifting amounts of protection. These agreements, moreover, did not identify—or put users on notice of—the trade secrets at issue in this case.

Appian’s own expert lent some support to Pega’s theory. At trial, Dr. Cole testified that prospective customers that received free demos were not required to sign non-disclosure agreements. He also confirmed that prospective customers, who received free demos, could share descriptions, screenshots, and videos. Dr. Cole suggested that free trial users had access to Appian’s trade secrets but were bound by terms of service, despite not having to sign non-disclosure agreements. Appian put faith in the proposition that free users and others carefully reviewed the legal restrictions buried behind the click screen. Pega had less faith in this mechanism.

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<sup>33</sup> In explaining its decision, the trial court stated,

Pegasystems cannot offer mere numbers as a way of showing that the trade secret – that these are not Appian’s trade secrets . . . . Pegasystems can certainly put on evidence concerning the security that Appian attached to its licensees and require of its licensees . . . but it cannot just offer sheer numbers as a way to show that Appian was not maintaining the secrecy of its alleged trade secrets.

The suggestion that mere numbers *alone* cannot defeat a trade secret claim, however, does not mean that evidence that thousands of users had access to Appian’s trade secrets is irrelevant.



We do not disagree with the trial court’s basic premise that the number of people who can see the secret is not *dispositive* of whether the information is protected or generally known. This is especially true where the information is zealously shielded. *See Bd. of Trade of Chi. v. Christie Grain & Stock Co.*, 198 U.S. 236, 250-51 (1905) (finding holder of trade secret does not lose rights by communicating secrets to others if done confidentially pursuant to a contract); *see also MicroStrategy Inc.*, 268 Va. at 262 (a trade secret owner does not lose protection “by disclosing the secret to a licensee, an employee, or others” so long as the disclosure is made in “confidence”). For example, *millions* of people can enjoy a restaurant chain’s fried chicken, but the recipe, if closely guarded, can still be a trade secret.<sup>34</sup>

Pega’s argument is that, while not dispositive, the number of people with access to Appian’s trade secrets is relevant because it goes to multiple issues in the case—specifically, whether Appian took reasonable efforts in protecting its secrets and whether such secrets were generally known and readily ascertainable. *See* Code § 59.1-336. Indeed, courts have consistently held that “the extent to which the information is known outside of [one’s] business” is a “factor[] to be considered in determining whether given information is one’s trade secret.” *SI Handling Sys., Inc. v. Heisley*, 753 F.2d 1244, 1256 (3d Cir. 1985) (quoting Restatement

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<sup>34</sup> The fact that some or all of the components of the trade secret are well-known does not preclude protection for a secret combination, compilation, or integration of the individual elements. Hence, even if all of the information is publicly available, a unique combination of that information, which adds value to the information, also may qualify as a trade secret.

*Penalty Kick Mgmt. v. Coca Cola Co.*, 318 F.3d 1284, 1291 (11th Cir. 2003) (internal citations omitted); *see also Decision Insights, Inc. v. Sentia Grp., Inc.*, 416 F. App’x 324, 329 (4th Cir. 2011) (recognizing “a trade secret may be composed of publicly-available information if the method by which that information is compiled is not generally known”).

(First) of Torts § 757, cmt. b (1939)). The Restatement of Torts lists the following factors as instructive:

(1) the extent to which the information is known outside of his business; (2) the extent to which it is known by employees and others involved in his business; (3) the extent of measures taken by him to guard the secrecy of the information; (4) the value of the information to him and to his competitors; (5) the amount of effort or money expended by him in developing the information; (6) the ease or difficulty with which the information could be properly acquired or duplicated by others.

See Restatement of Torts, § 757, cmt. b; *Pauwels v. Deloitte LLP*, 83 F.4th 171, 181 n.2 (2d Cir. 2023) (applying Restatement factors); *Allstate Ins. Co. v. Fougere*, 79 F.4th 172, 188 (1st Cir. 2023) (same).

Thus, while the number of people with access to information is not, in isolation, determinative of the information’s trade secret status—such evidence is hardly irrelevant. To the contrary, who is given access to such information, and in what numbers, are among the most important factors in assessing both whether the information was generally available and the reasonableness of efforts to maintain its secrecy. *Turret Labs USA, Inc. v. CargoSprint, LLC*, No. 21-952, 2022 U.S. App. LEXIS 6070, at \*5 (2d Cir. Mar. 9, 2022) (listing cases); see *MicroStrategy Inc.*, 268 Va. at 264 (inquiries “require[] an ad hoc evaluation of all the surrounding circumstances”).<sup>35</sup>

The bar for establishing that evidence is relevant is not high. See *McNeir v. Greer-Hale Chinchilla Ranch*, 194 Va. 623, 629 (1953) (“The criterion of relevancy is whether or not the evidence tends to cast any light upon the subject of the inquiry.”). Appian has not provided a single case where an instruction was given informing a jury that such “numbers” evidence is

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<sup>35</sup> Similarly, courts have observed that “the chance of a leak increases as the number of people having access to information increases.” *United Steelworkers of Am. v. Auchter*, 763 F.2d 728, 743 (3d Cir. 1985).

irrelevant. Instead, it has framed a different question: is it permissible for a factfinder to determine that confidentiality provisions are so clear as to preserve trade secrecy despite disclosure to numerous trusted people?<sup>36</sup> But that is a distinct inquiry, going to the merits of the claim, from the question we are reviewing: is the excluded evidence about thousands of people having access to Appian’s trade secrets irrelevant as a matter of law in the context of a trade secret claim?

Appian does not argue it was entitled to judgment below as a matter of law—it argues the factfinder’s verdict should be upheld. But, none of the cases cited by Appian *prohibit* a factfinder from making the trade secret determination based on many factors, including the number of people with access to the alleged secret. This is particularly true where, as here, the adequacy of confidentiality measures was hotly disputed. Pega proffered, for example, that thousands of free trial users and prospective customers of Appian had access to review the secrets and that Appian did not even keep track of how many “Value Added Service Provider Agreements” it had issued.

As noted above, Appian took many legitimate steps to protect its secrets—and a reasonable jury certainly could find its actions sufficient to afford its information trade secret

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<sup>36</sup> To be sure, there are cases that answer this question in the affirmative. *See SyncSort v. Innovative Routines, Int’l*, No. 04-3623, 2011 U.S. Dist. LEXIS 92321, at \*40 (D.N.J. Aug. 18, 2011) (“distribution . . . to many users” does “not necessarily negate trade secrecy,” as a matter of law, if the owner also took correspondingly reasonable measures to protect secrecy); *see Dionne*, 240 Va. at 297 (“The secrecy need not be absolute; the owner of a trade secret may, without losing protection, disclose it to a licensee, an employee, or a stranger, if the disclosure is made in confidence, express or implied.”). Similarly, courts have rejected trade secret claims based on the *limited* “number of people who had access”—however, even this confirms that the “numbers” evidence was considered. *See Oberfoell v. Kyte*, No. A17-0575, 2018 Minn. App. Unpub. LEXIS 74, at \*10 (Jan. 22, 2018). Ultimately, trade secret “number” issues come in varying shapes and sizes. For example, in *Dionne*, a family owned business was at issue and the actions of one actor with a confidentiality agreement were under review—by contrast, in a software case thousands of users may have access, with varying levels of restrictions, and the measures for controlling such restrictions may be hotly contested.

status. But, ultimately, in this case, that is a factual question; and here the trial court improperly removed a relevant factor from the jury's consideration. *MicroStrategy Inc.*, 268 Va. at 264-65 (whether a trade secret exists is generally a question of fact). This error denied Pega the opportunity to effectively argue that Appian forfeited its trade secret protection by broadly sharing the information with thousands.<sup>37</sup> On remand, an instruction telling jurors that such evidence is not relevant should not be granted.

### CONCLUSION

This complex trial ventured into uncharted legal waters and culminated in a multi-billion dollar damages award which we now reverse. We reject Pega's claim that Appian failed to establish misappropriation of any trade secret as a matter of law. However, we agree with Pega that the trial court erred in granting Instruction 14, which relieved Appian of its proper burden to prove causation between the alleged misappropriation and any damages. Moreover, while Jury Instruction 14 erroneously permitted Appian to rely on Pega's total "sales" to prove unjust enrichment damages, the trial court then improperly foreclosed Pega, based on Interrogatory 18, from showing that many of Pega's total sales were in areas in which Appian did not even compete with Pega.

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<sup>37</sup> Appian posits that the trial court actually excluded the numbers evidence based on other grounds: "confusion" concerns, application of Rule of Evidence 2:403(a)(i), or as a trial sanction. While Appian made these arguments to the trial court, ultimately the trial court excluded the evidence on relevancy grounds; the record does not support Appian's suggestion that the trial court's exclusion was on any ground other than relevancy. The trial court, upon considering case law from both sides, found the evidence that related to the number of people with access to Appian's trade secrets was simply irrelevant. "My view is that the numbers are not relevant at all, as I read the cases." In granting jury Instruction 13-1, the trial court stated, "I've re-reviewed the case law, and it's my view that the numbers are not, not relevant. The reason is pretty simple. The case law indicates what that would mean is that you got more successful selling your secret, you lose the secret. Certainly the law can't allow that."

Under the circumstances of this case, the trial court also abused its discretion by refusing to permit Pega to attempt to authenticate its software evidence and, as a consequence, by excluding Pega’s software—a principal means of demonstrating it did not steal secrets through Zou—on the basis that it was on a different laptop than provided in discovery. Finally, on remand, the trial court should refrain from instructing the jury that the number of people with access to Appian’s platform is “not relevant”—and, accordingly, should not exclude all related evidence of these numbers on that basis. We reverse the judgment as to the VUTSA claims and remand for a new trial consistent with this opinion.

*Affirmed in part, reversed in part, and remanded.*