Cyence Risk Analytics

A risk assessment tool for cyber underwriting

Background

Persona, application & project background

James

Cyber Underwriter

Age: 32
Employer: Insurer focusing on profitable cyber risks
Location: North America

Industry experience

Entry — Advanced

Data analysis & technical skills

Low — High

Time spent using Guidewire products

Low — High

I interact with:

Internal:
Underwriting Manager
Underwriting Assistants
Pricing Actuary

External:
Agents
Carrier/Insured company

Tools I use:

- Guidewire Cyence for Cyber
- Google Search
- Office Suite (Excel, Powerpoint, Word)
- Outlook or other email service
- Policy admin systems (like PolicyCenter)

"I identify, understand, measure, and evaluate highly complex risk and provide applicable terms and conditions to make profitable decisions for my company."

I instantly gain differentiating insights to identify emerging risks.	I obtain necessary data points to write a company and determine pricing efficiently.	I am able to quantify risk based on experience history and forecasting methods.

MY RESPONSIBILITIES AND DECISIONS...

Solicit new and renewal submissions:

- What information do I need to collect to complete the submission?

Determine appropriate pricing of complex risks:

- How should the company be priced? How do I justify the risk I write?

Analyze highly complex risks underwritten:

- How do I evaluate the quality, quantity, and profitability of risks I write?

Interact with Agents:

- How can I engage them around why information is needed?

I'M FRUSTRATED WHEN...

- I don't have enough information to determine a business' risk.
- I'm unable to locate and document risk evaluation data.
- Valuable time is spent on administrative tasks.
- I can't keep up with trends in the quickly evolving marketplace.
- It's hard to differentiate from competition based on pricing and offerings.

MY SUCCESS IS MEASURED BY...

- The number of profitable businesses written.
- Growth of the company portfolio.
- Quality of interactions with Agents and colleagues.
- Timeliness and accuracy.
- Compliance with guidelines.

DESIGNING FOR JAMES:

I need clear guidance on how to use the tool and I want to understand how it can improve my work efficiency. It's important that I be able to effectively integrate it within my risk evaluation process.
I want to leverage the power of the tool to understand a company's risk thoroughly. Standardized metrics with easy-to-understand visualizations can be very helpful.

Persona

Cyber Underwriter

Problems:

- I don't have enough information to determine a business risk.
- Risk evaluation is a time taking process due to administrative tasks.
- I struggle with gathering information about possible next action based on identified risk.

Needs:

- I need to understand a company's risk faster and efficiently.
- I need actionable items to make effective underwriting decisions.

About Cyence Risk Analytics

- Cyence for cyber is a risk analytics tools used by underwriters to evaluate a risk of a given business.
- The underwriters than use this information to make underwriting and pricing decision.
- It helps them to underwrite a risk with appropriate premium for insuring an online / digital business.

A typical underwriting workflow

Project Needs and Goals

NEEDS:

- Cyence is one of the Guidewire's acquisition product which had a different design language and had a lot of accessibility issues.
- Additionally, the product had range of risk analytics and insights which was hard to consume for our end users.

GOALS:

- Enable users to get the most important information about a business in a glance.
- Enable users to take actionable next steps based on their risk findings within application.
- New user experience along with meeting the AA accessibility standards.

Design Process

Phase - 1

Phase - 2

User Research

Insights, goals, and problems

UX Research

Research Insights:

- # of customer involved: **7**
- # of users: **10** (Underwriters and Underwriter leadership)
- Research set up: **1hr online zoom calls**

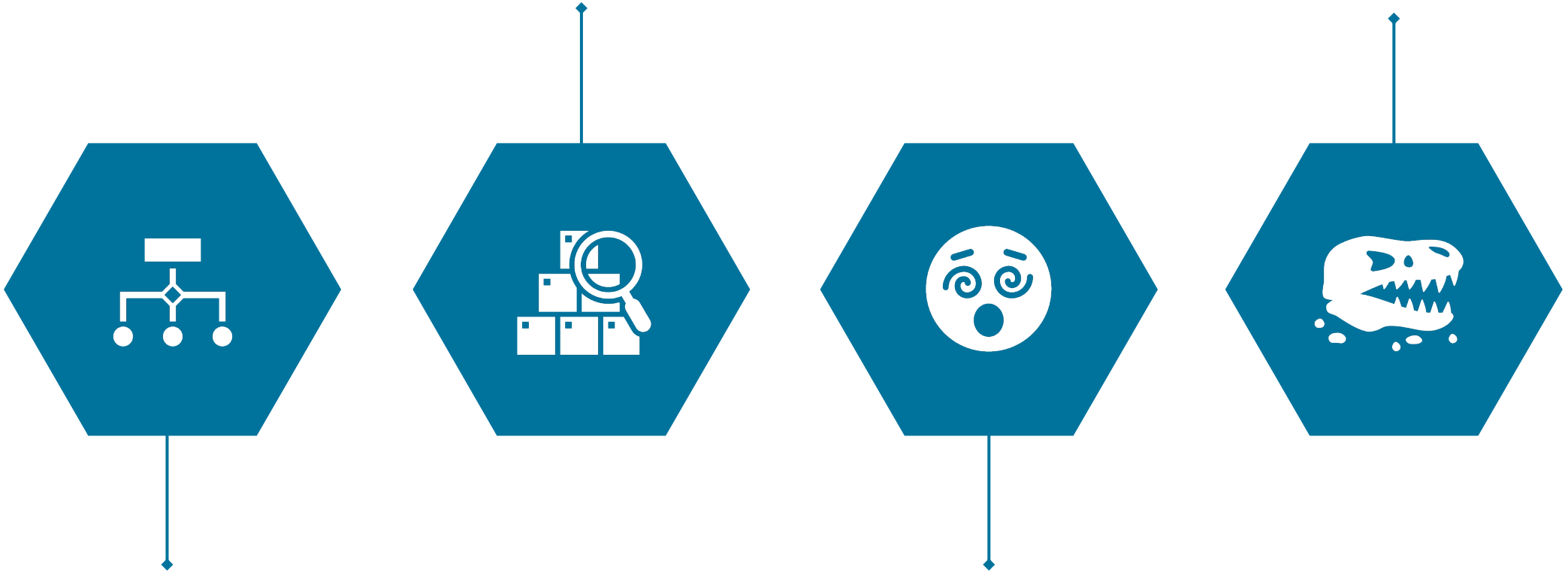
Research Goals:

- To understand the reason behind identified usage patterns.
- To understand how the users are currently using all the information within application.
- To identify problems and friction points users are facing while using our risk analytics tool.

4 key identified problems…

Hard to find impactful & most concerning information

Found the UX and printable report old and outdated.



Hard to understand the correlation between data

Don’t know what to do with certain information

Design

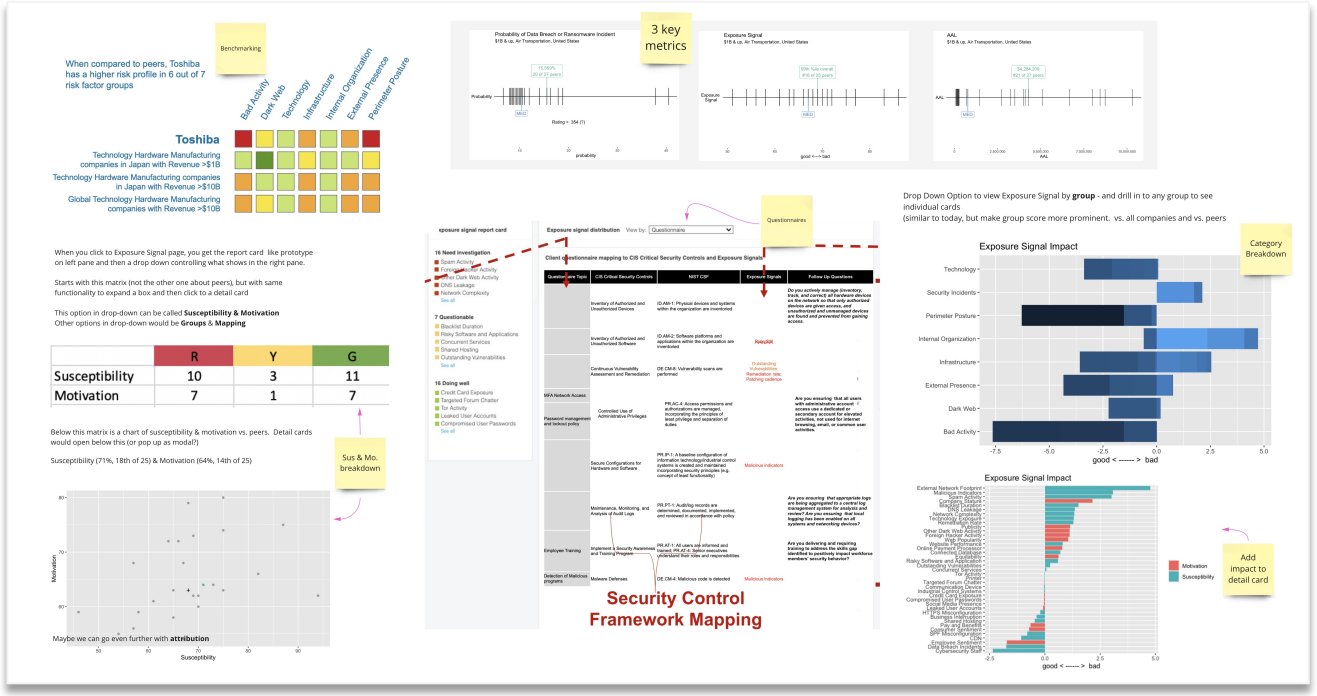
Old vs New User Experience

Proposed Solution

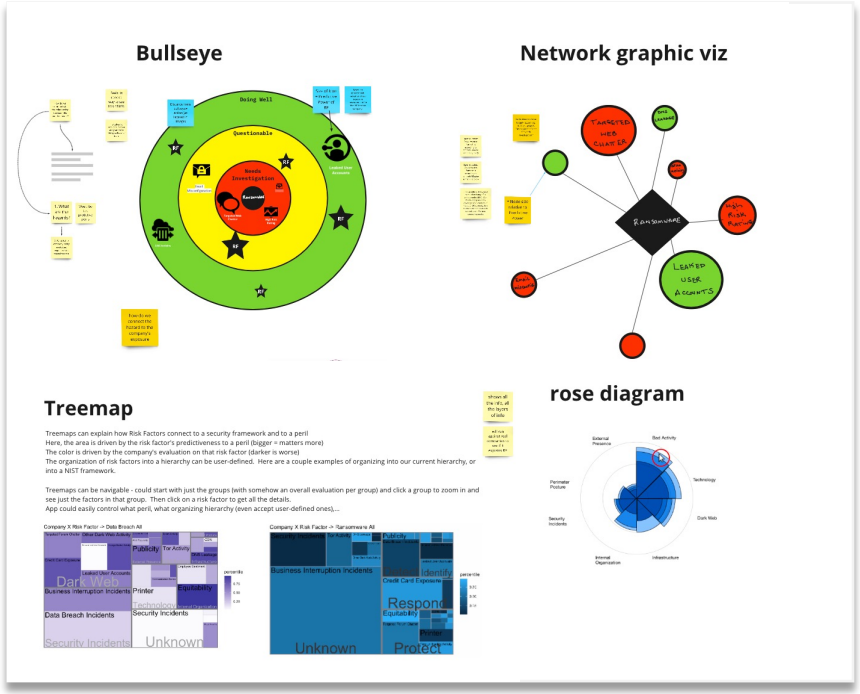
- Provide users a clear representation about the correlation of different data though out the UI.
- Provide a new overview page with most important information in order to increase productivity.
- Provide help text to users in order to understand the usage of information along with actionable steps which can them to move further in process.
- Provide users a new experience for the downloadable report format similar to new UI.

Ideation Board

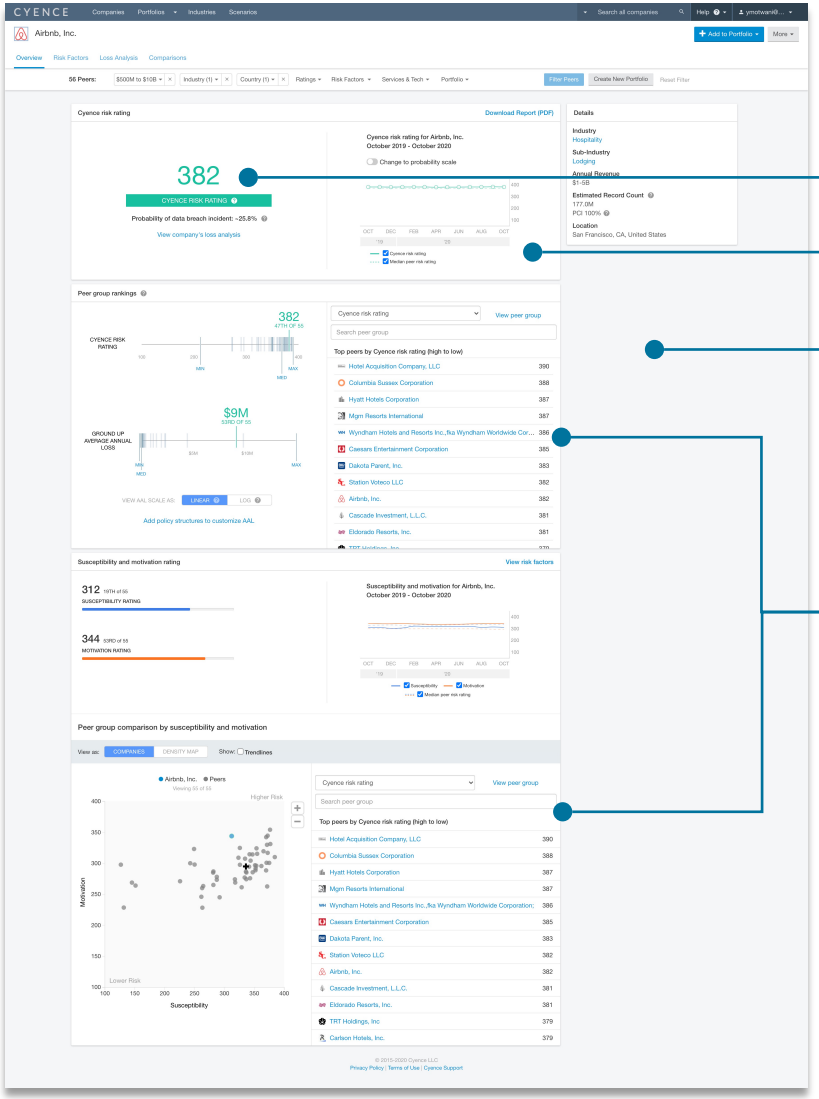
Ideas brainstorming



Data viz explorations



Problem with older UX



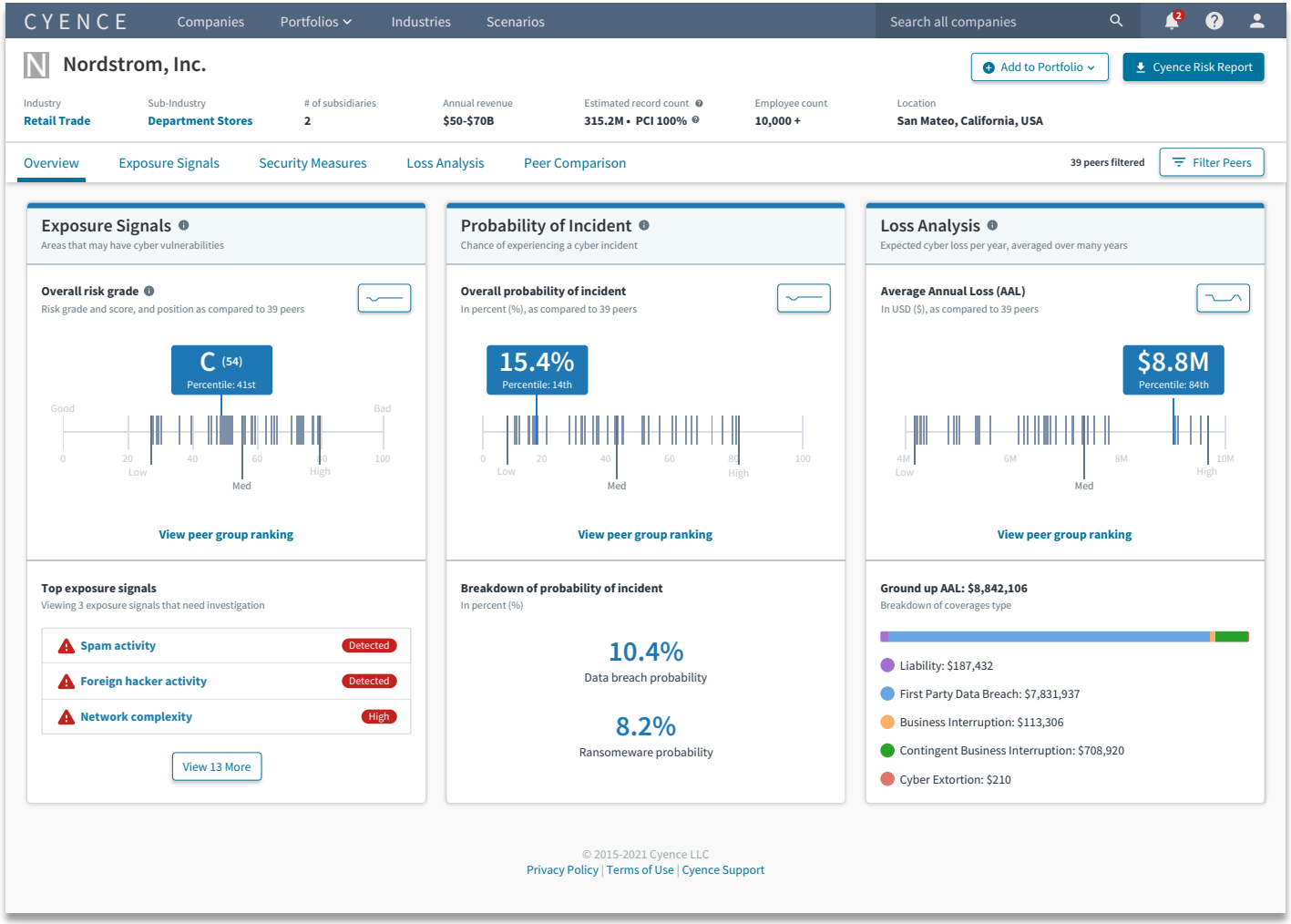
A primary metrics which is usually misunderstood by underwriters

Historical trend is a secondary information but highly emphasized

A lot of white space and unnecessary scrolling

Repeated information and list of ranking which is not used that often

Company Overview

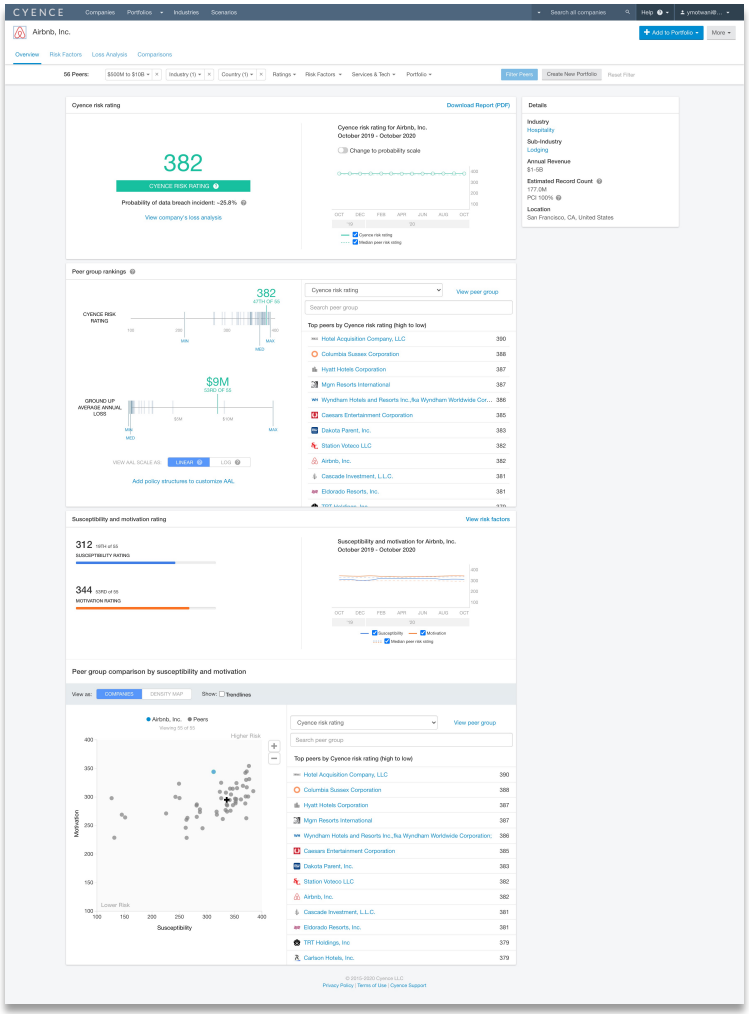


As part of the overview refresh, we introduced following improvements:

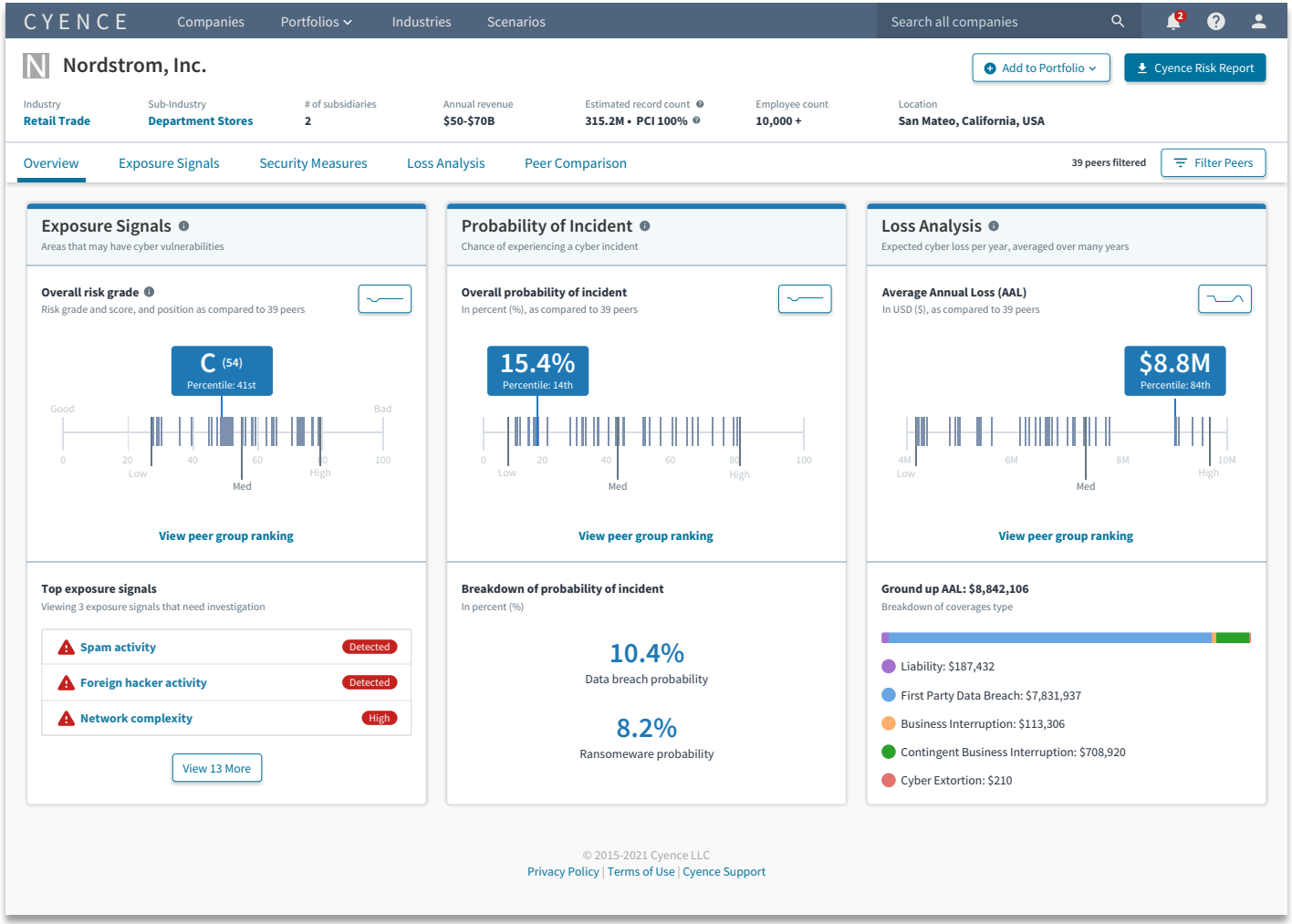
- New hierarchy of information to highlight the most important information up front.
- New 3 column layout to provide the distinction of 3 different data points to identify risk.
- New data points to replace some older ones and to provide further details on others.
- Sparkline graphs to show the history trendlines for those risk data points which helped UX to be more sleek and newer.

Company Overview – Old vs New UX

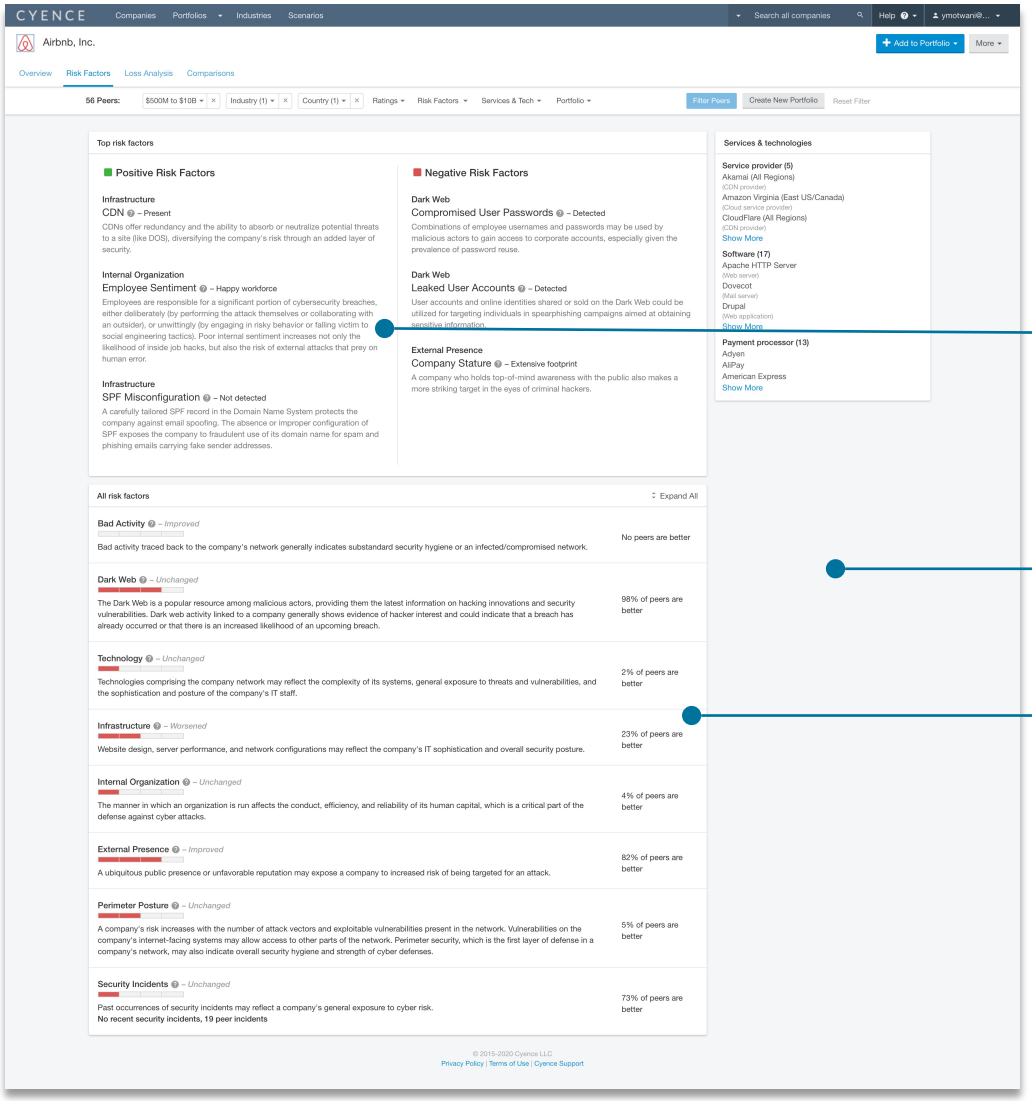
Old UX



New UX



Problem with older UX

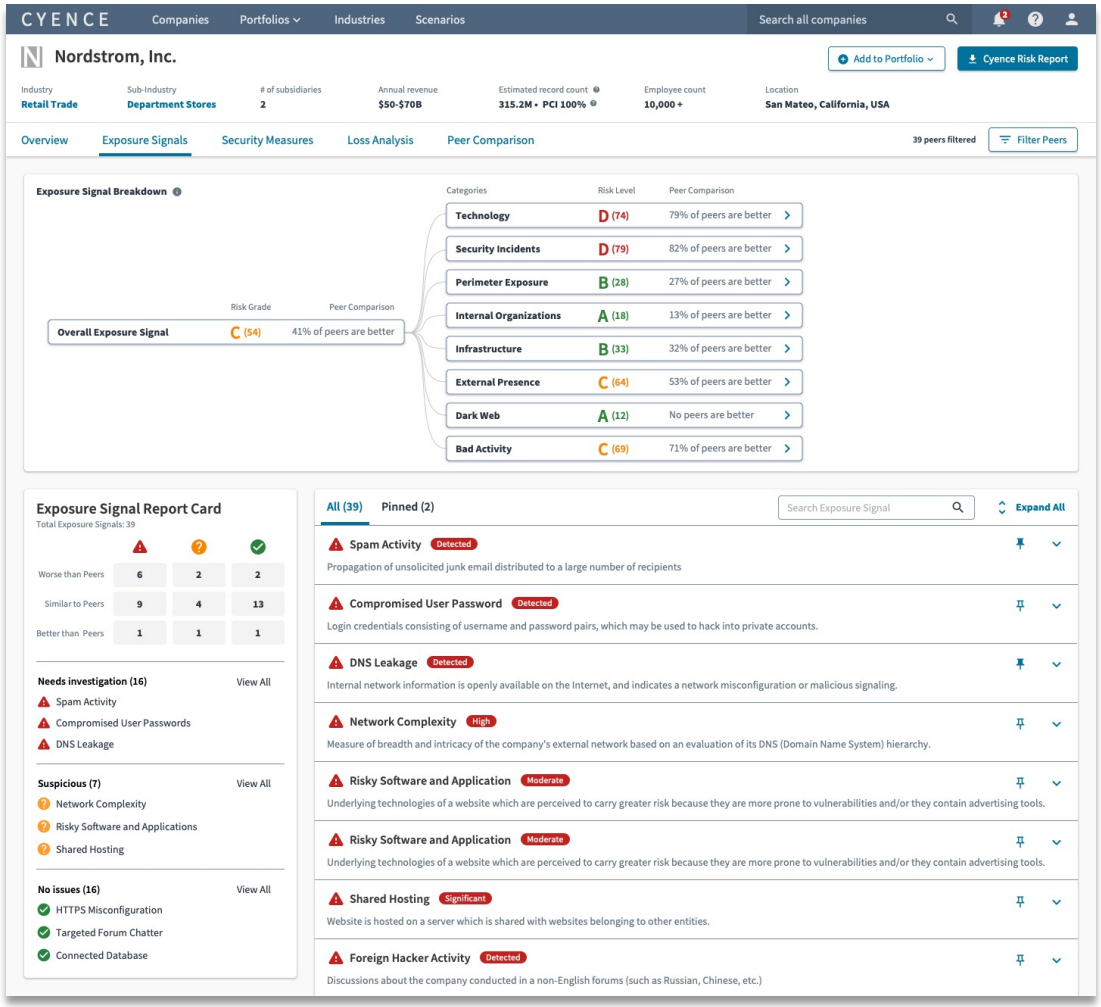


Underwriters didn't care about positive risk factors

A lot of white space and unnecessary scrolling

Showed high impact categories but not individual risk factors. Users didn't know how to find most concerning risk factor.

Exposure Signals (Risk Factors)

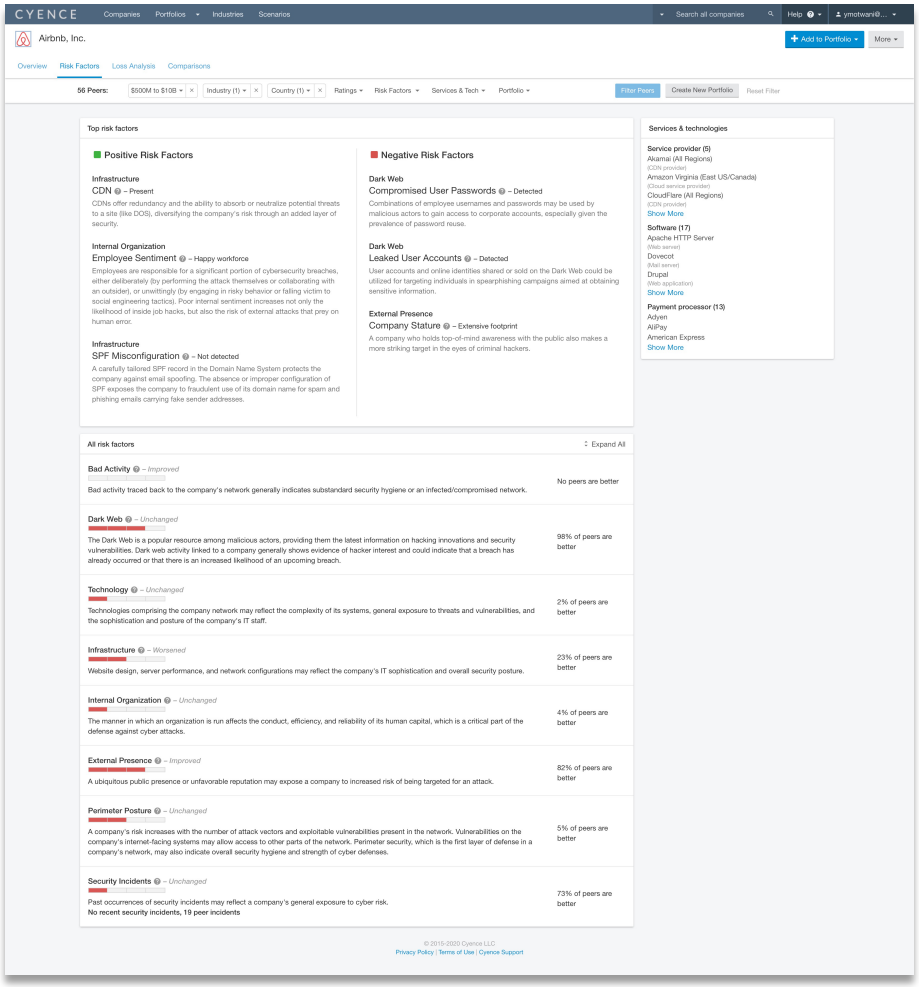


Exposure Signals is the most used page in the app, and as part of improvement we wanted to make this more effective and useful for our users by introducing:

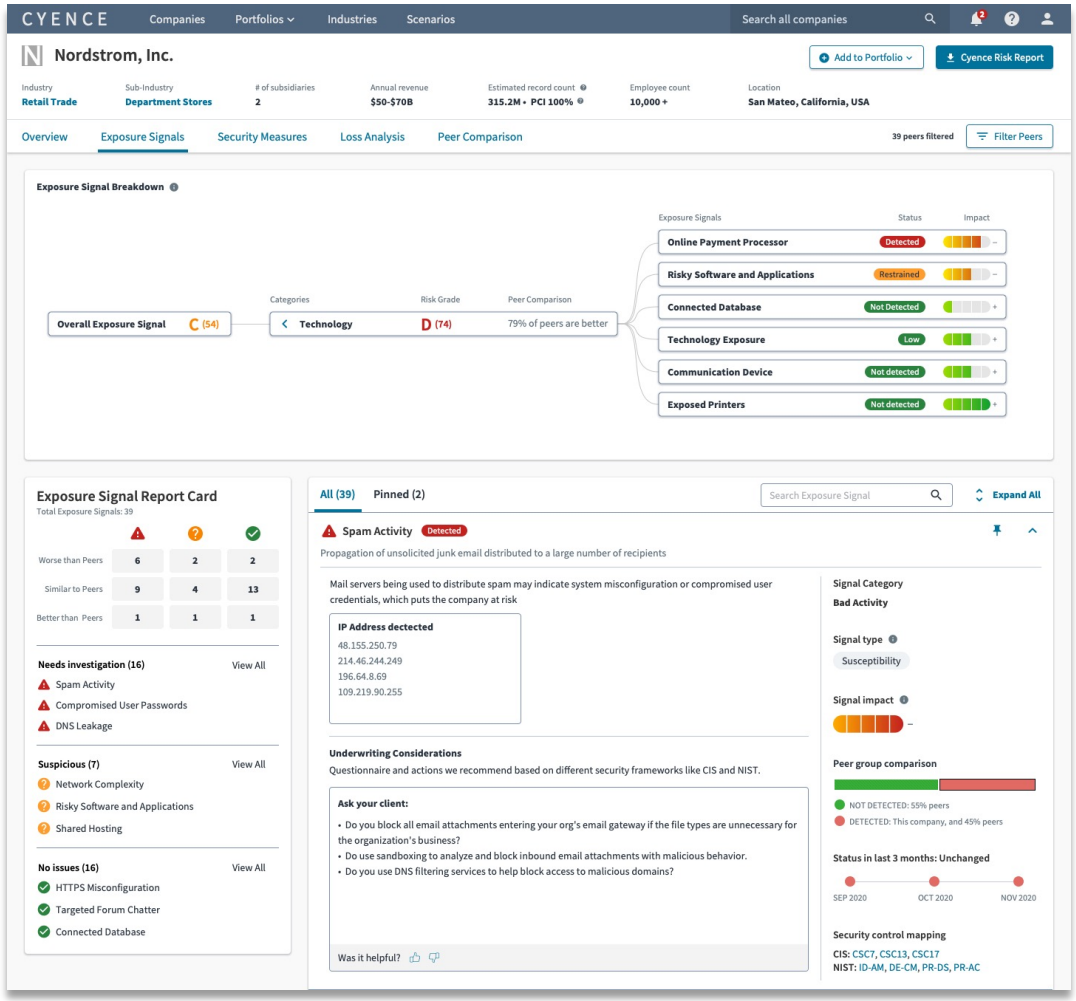
- The new prioritization was based on type of signal and severity. The prioritization criteria was changed and tested as part of this UX refresh.
- Report card, so the users can easily navigate through most concerning risks.
- A tree view for underwriters to identify the most vulnerable risk through grading and risk impact.
- Security Measures to provide our users a set of follow up questions they can ask to their customers to mitigate the risk.

Exposure Signals – Old vs New UX

Old UX

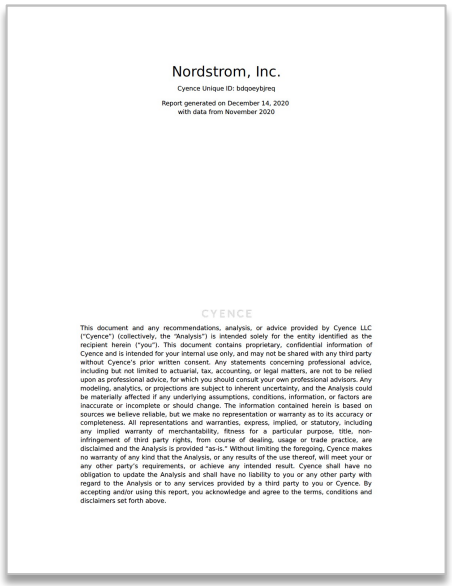


New UX



Downloadable Report

Old UX



Nordstrom, Inc.

Cyence Unique ID: bdqoeybjreg

Report generated on December 14, 2020
with data from November 2020

CYENCE

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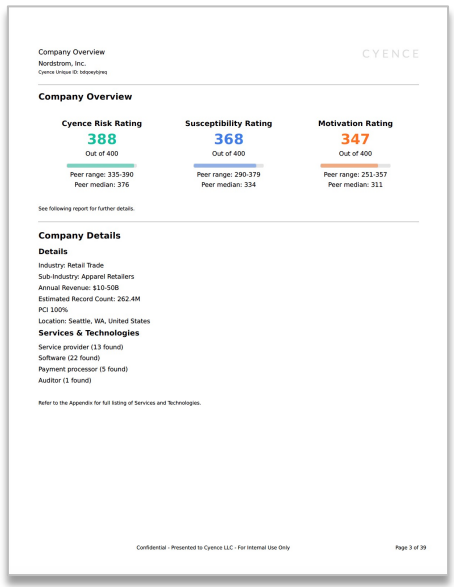


Company Overview
Nordstrom, Inc.
Cyence Unique ID: bdqoeybjreg

CYENCE

Company Overview

Cyence Risk Rating	Susceptibility Rating	Motivation Rating
388	368	347
Out of 400	Out of 400	Out of 400
Peer range: 335-390 Peer median: 376	Peer range: 290-379 Peer median: 334	Peer range: 251-357 Peer median: 311

See following report for further details.

Company Details

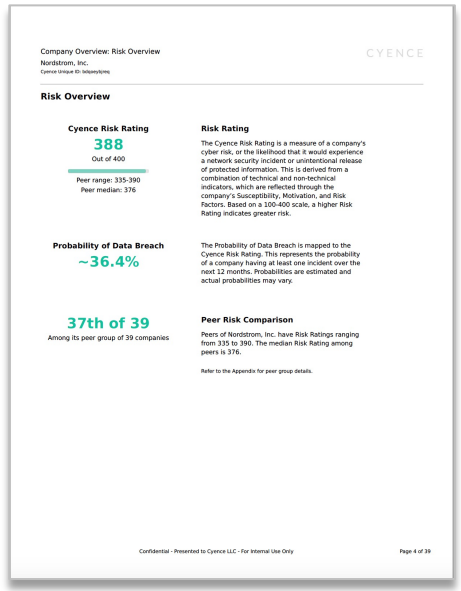
Details

Industry: Retail Trade
Sub-Industry: Apparel Retailers
Annual Revenue: $10-50B
Estimated Record Count: 262.4M
PCI 100%
Location: Seattle, WA, United States

Services & Technologies

Service provider (13 found)
Software (22 found)
Payment processor (5 found)
Auditor (1 found)

Refer to the Appendix for full listing of Services and Technologies.



Company Overview: Risk Overview
Nordstrom, Inc.
Cyence Unique ID: bdqoeybjreg

CYENCE

Risk Overview

Cyence Risk Rating
388
Out of 400
Peer range: 335-390
Peer median: 376

Risk Rating

The Cyence Risk Rating is a measure of a company's cyber risk, or the likelihood that it would experience a network security incident or unintentional release of protected information. This is derived from a combination of technical and non-technical indicators, which are reflected through the company's Susceptibility, Motivation, and Risk Factors. Based on a 100-400 scale, a higher Risk Rating indicates greater risk.

Probability of Data Breach
~36.4%

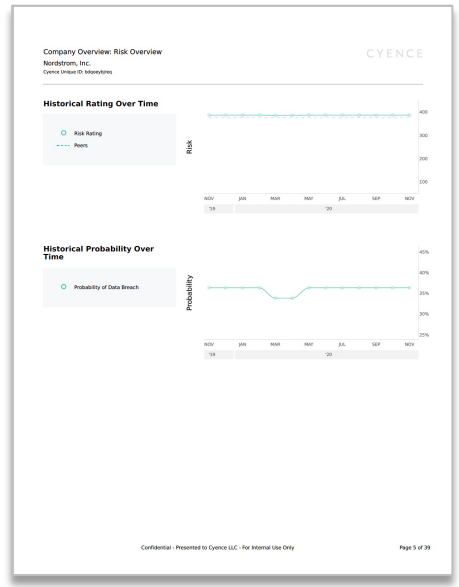
The Probability of Data Breach is mapped to the Cyence Risk Rating. This represents the probability of a company having at least one incident over the next 12 months. Probabilities are estimated and actual probabilities may vary.

37th of 39
Among its peer group of 39 companies

Peer Risk Comparison

Peers of Nordstrom, Inc. have Risk Ratings ranging from 335 to 390. The median Risk Rating among peers is 376.

Refer to the Appendix for peer group details.

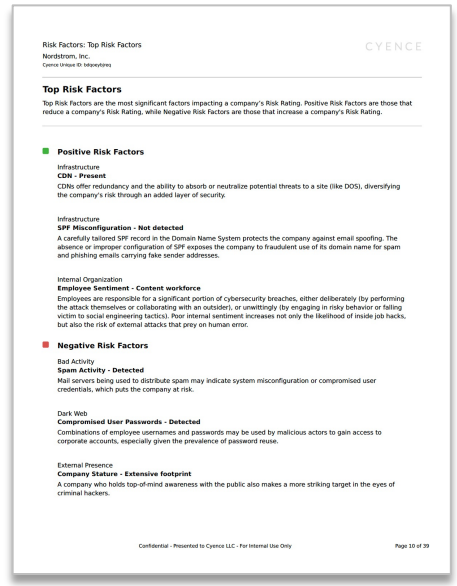


Company Overview: Risk Overview
Nordstrom, Inc.
Cyence Unique ID: bdqoeybjreg

CYENCE

Historical Rating Over Time

Historical Probability Over Time



Risk Factors: Top Risk Factors
Nordstrom, Inc.
Cyence Unique ID: bdqoeybjreg

CYENCE

Top Risk Factors

Top Risk Factors are the most significant factors impacting a company's Risk Rating. Positive Risk Factors are those that reduce a company's Risk Rating, while Negative Risk Factors are those that increase a company's Risk Rating.

Positive Risk Factors

Infrastructure
CDN - Present
CDNs offer redundancy and the ability to absorb or neutralize potential threats to a site (like DOS), diversifying the company's risk through an added layer of security.

Infrastructure
SPF Misconfiguration - Not detected
A carefully tailored SPF record in the Domain Name System protects the company against email spoofing. The absence or improper configuration of SPF exposes the company to fraudulent use of its domain name for spam and phishing emails carrying fake sender addresses.

Internal Organization
Employee Sentiment - Content workforce
Employees are responsible for a significant portion of cybersecurity breaches, either deliberately (by performing the attack themselves or collaborating with an outsider), or unwittingly (by engaging in risky behavior or falling victim to social engineering tactics). Poor internal sentiment increases not only the likelihood of inside job hacks, but also the risk of external attacks that prey on human error.

Negative Risk Factors

Bad Activity
Spam Activity - Detected
Mail servers being used to distribute spam may indicate system misconfiguration or compromised user credentials, which puts the company at risk.

Dark Web
Compromised User Passwords - Detected
Combinations of employee usernames and passwords may be used by malicious actors to gain access to corporate accounts, especially given the prevalence of password reuse.

External Presence
Company Stature - Extensive footprint
A company who holds top-of-mind awareness with the public also makes a more striking target in the eyes of criminal hackers.

Downloadable Report

New UX

GUIDEWIRE

Cyence Risk Report for

Care Wear, Inc.

Unique ID: bdqoeybjreq
Report generated on February 26, 2020
with data from November 2019

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Care Wear, Inc.

Company Overview

Industry: Retail Trade
Sub-Industry: Apparel Retailers
Annual Revenue: $10-50B
Estimated Record Count: 262.4M
PCI 100%
Location: Seattle, WA, United States

Risk Overview

Risk Rating

310 of 400
Based on 15.4% probability

51st Percentile
Peer range: 290-400
Peer median: 320

Change in history

Probability of Incident

15.4%
Probability in percent (%)

26th Percentile
Peer range: 12% - 49%
Peer median: 24%

Change in history

Average Annual Loss

$8.1m
Losses in USD ($)

72nd Percentile
Peer range: $3.1 - 9.4m
Peer median: $5.3m

Change in history

Top Exposure Signals

Based on peer comparison

Needs investigation

Spam activity	Propagation of unsolicited junk email distributed to a large number of recipients	Detected
Foreign hacker activity	Discussions about the company conducted in non-English forums (such as Russian, Chinese, etc.)	Detected
Network Complexity	Measure of breadth and intricacy of the company's external network based on an evaluation of its DNS (Domain Name System) hierarchy	High

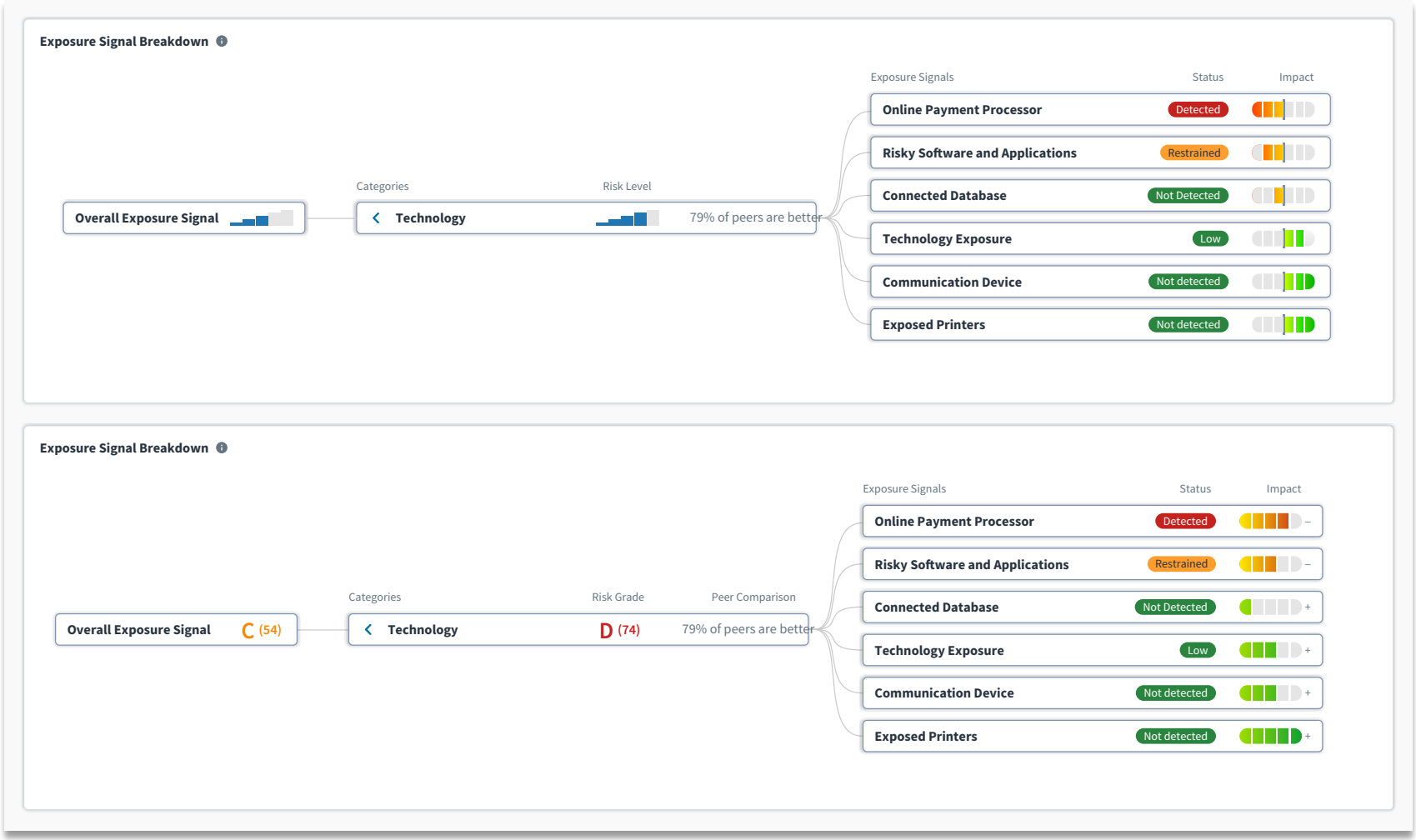
Suspicious

Network Complexity	Lorem Ipsum is simply dummy text of the printing and typesetting industry.	Detected
Risky Software and Applications	Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy.	Detected
Shared Hosting	Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s.	High

Usability Testing

Example of design reiteration

Risk Rating (Graph vs Grading)



We conducted A/B testing for deciding different data visualization and risk scaling system.

We ended up with Grading system because users were interested in granular differences of different risk level.

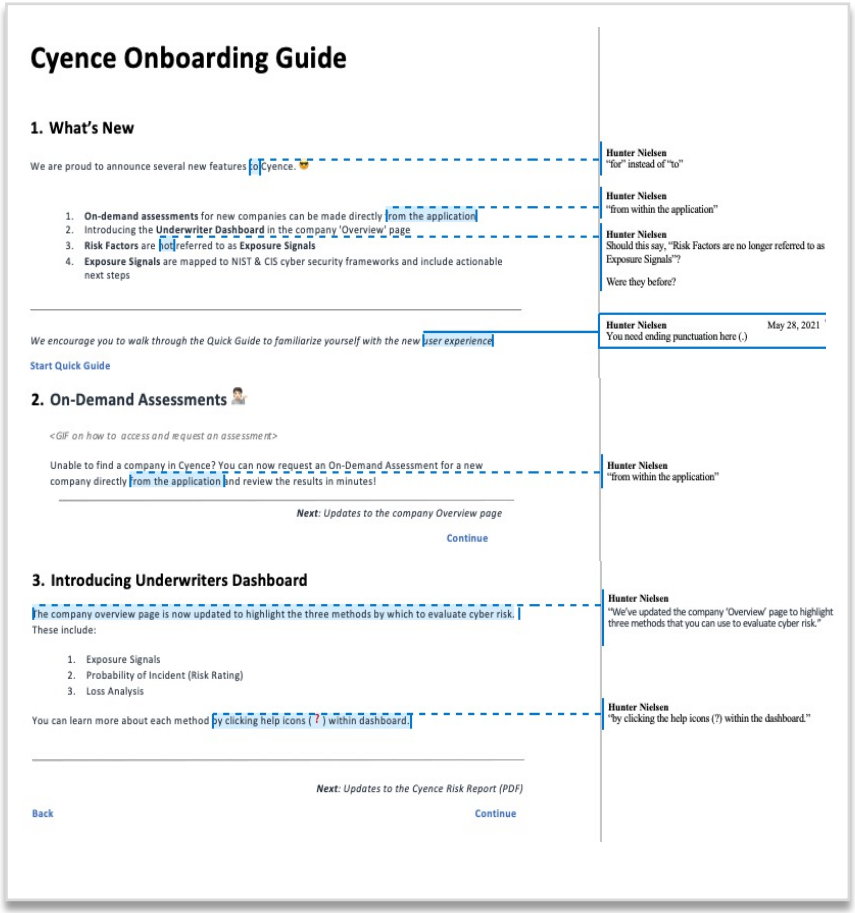
Onboarding Design

Onboarding guide and in app UI feedback

Onboarding Design Process

List features & define steps → Create & review content → Create & publish guide

Topics	Changes	Pendo Walkthrough
Overview page (3 column layout)	1. Top 3 exposure signals and security measures questionnaire snippet 2. Probability of incident ~~(including DD and RW breakdown)~~ along with Risk Rating. 3. Loss Analysis with AAL and Breakdown of coverages	Step 1: Highlevel 3 layout Step 2: New historical trend line
Exposure Signal page	1. Interactive Report Card ◦ View by peer comparison ◦ View by Sus/Mo. ◦ Top 3 exposure signals of High, Medium, Low type 2. Exposure signal detail changes ◦ Icons in addition to color for High, Medium, Low ◦ Updated UI view on closed card ◦ Past 3 month changes instead of 2 previously ◦ Security Measure questionnaire ◦ Security control mapping	Step 3: Report Card Step 4: In context security measures and control mapping.
Security Measures page	1. NIST/CIS Security Measures ◦ Common questionnaire for both frameworks ◦ Downloadable questionnaire ◦ Search for ESig withing Security Measures ◦ Default sorting of ESig from High-Low	Step 5: What is Security Measures? Step 6: Downloadable questionnaire.
Peer Comparison page	1. Sus/Mo *(previously in overview page)* in collapsed container 2. List of filtered peers 3. Company compare *(Same as before)*	Step 7: Moved Sus/Mo.



Cyence Onboarding Guide

1. What's New

We are proud to announce several new features to Cyence. 😎

1. **On-demand assessments** for new companies can be made directly from the application
2. Introducing the **Underwriter Dashboard** in the company 'Overview' page
3. **Risk Factors** are not referred to as **Exposure Signals**
4. **Exposure Signals** are mapped to NIST & CIS cyber security frameworks and include actionable next steps

We encourage you to walk through the Quick Guide to familiarize yourself with the new user experience.

Start Quick Guide

2. On-Demand Assessments

<GIF on how to access and request an assessment>

Unable to find a company in Cyence? You can now request an On-Demand Assessment for a new company directly from the application and review the results in minutes!

***Next:** Updates to the company Overview page*

Continue

3. Introducing Underwriters Dashboard

The company overview page is now updated to highlight the three methods by which to evaluate cyber risk. These include:

1. Exposure Signals
2. Probability of Incident (Risk Rating)
3. Loss Analysis

You can learn more about each method by clicking help icons (?) within dashboard.

***Next:** Updates to the Cyence Risk Report (PDF)*

Back Continue

Hunter Nielsen
"for" instead of "to"

Hunter Nielsen
"from within the application"

Hunter Nielsen
Should this say, "Risk Factors are no longer referred to as Exposure Signals"?

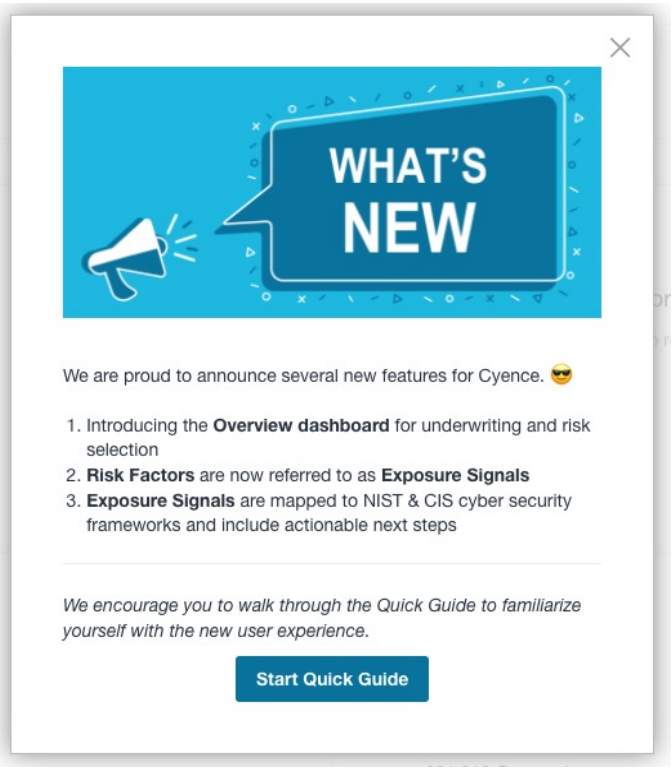
Were they before?

Hunter Nielsen May 28, 2021
You need ending punctuation here (.)

Hunter Nielsen
"from within the application"

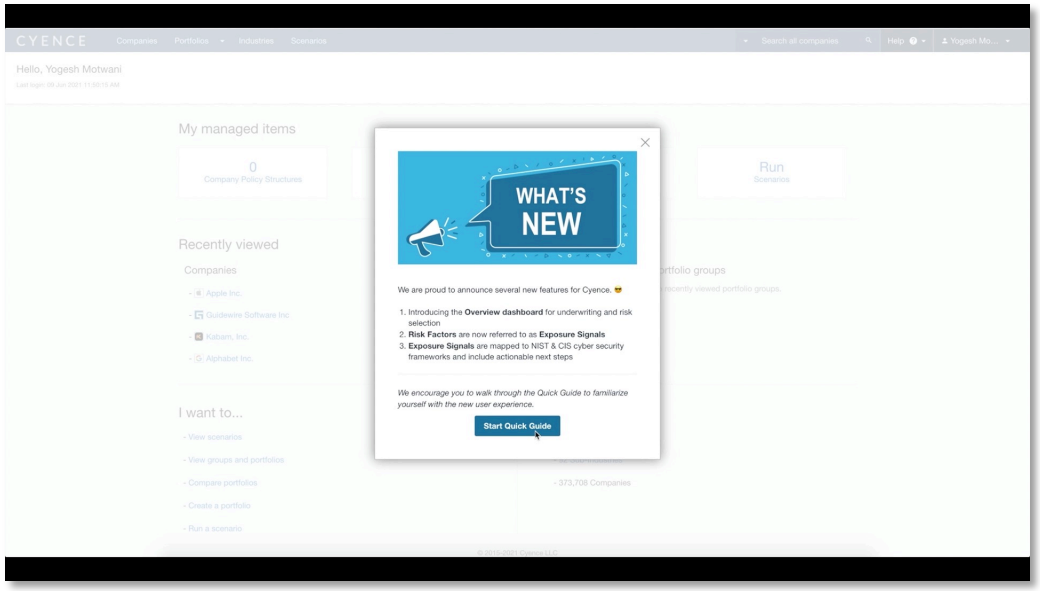
Hunter Nielsen
"We've updated the company 'Overview' page to highlight three methods that you can use to evaluate cyber risk."

Hunter Nielsen
"by clicking the help icons (?) within the dashboard."

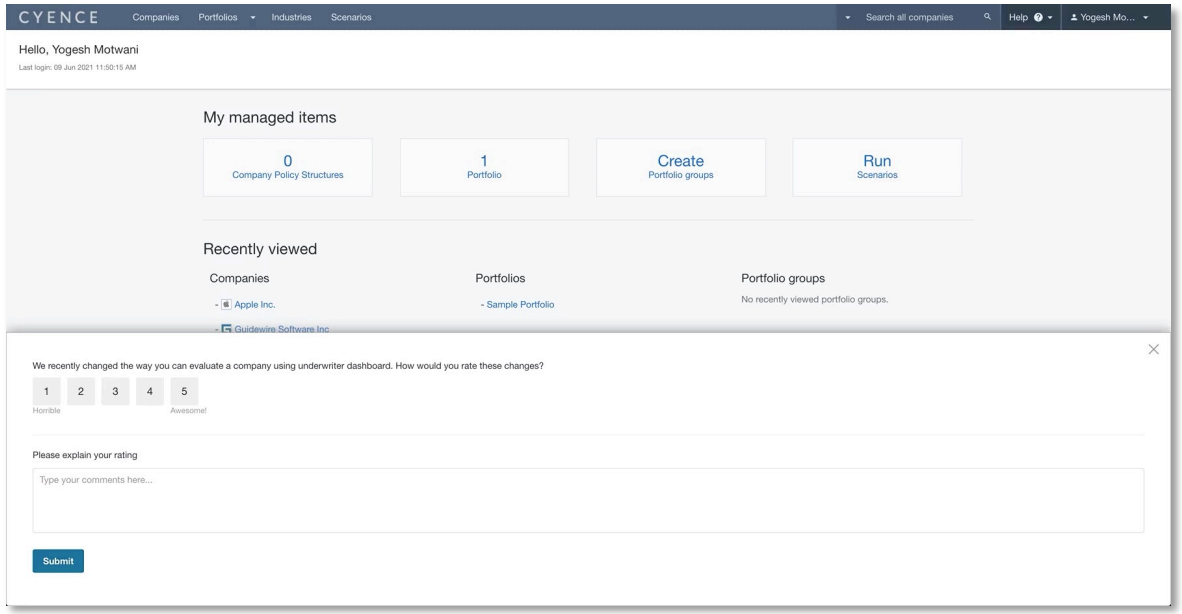


Onboarding Design Samples

Onboarding Guide



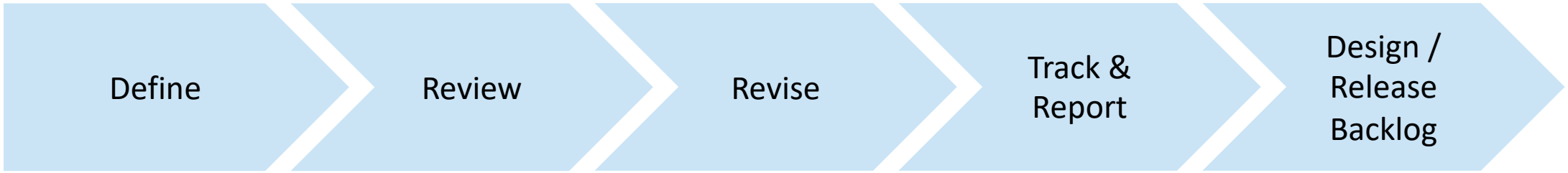
In app UI Feedback



Product Success Metrics

Process and key insights

Defining product success matrix



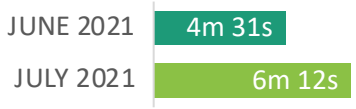
Some key insights

Month-over-month comparison

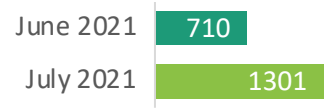
JUNE 2021 TO JULY 2021

Unique Companies Viewed

Average Time Spent on Company Overview page



Report Downloads



Thank You

Any questions?