Using a Cloze test to find the right terminology to describe an automation management tool

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Role: Senior Content Designer
Team: Automation Management
Company: HubSpot

Outline

1. Context
2. The problem
3. My approach
4. The Cloze test
5. Results
6. Recommendations
7. In the designs
8. Impact

Context

Context: The big picture

As a content designer at HubSpot, I worked with two teams who were shaping the way we talked about data quality in a customer's CRM.

With the relationships between these concepts becoming increasingly complex, I was able to **align these teams on terminology** and **increase the usage of an automation management feature by 174%**.

What's HubSpot?

HubSpot is a leading CRM platform that provides software and support to help businesses grow better. The platform includes marketing, sales, service, and website management products.

● Context: My role and partners

My role ⭐

Senior Content Designer in Operations Hub

Data Quality team 🤝

A team building tools and features to help customers make sure they have the most useful and usable data in their CRM.

Partners:
Senior Product Manager
Senior Product designer
Front-end Tech Lead

Automation Management team 🤝

A team building management features for the Workflows automation tool. Workflows are automations that can trigger marketing, sales, service, and operations processes across the platform. This tool is also a data ingestion point.

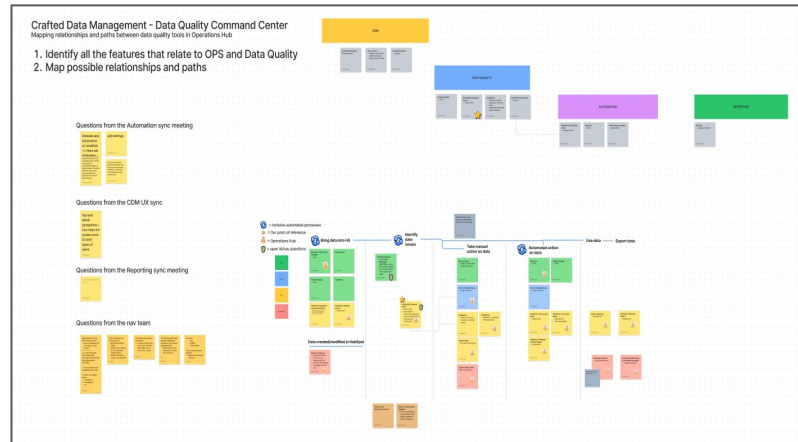*Partners:*
Senior Product Manager
Senior Product Designer
Front-end Tech Lead
Two back-end engineers

I'd already worked with the Data Quality team to build a new tool: a central dashboard where customers could monitor the quality of the data in their CRM.


I ran workshops with stakeholders across the company. In these conversations, I mapped out relationships between tools and the types of data they were passing to the data quality dashboard.

The problem

The problem: Many terms, similar concepts

The data quality dashboard brought together information from across the platform. It depended on definitions from other tools to describe when something was going wrong.

Each tool did this differently, using terms like issue, error, problem, and risk.
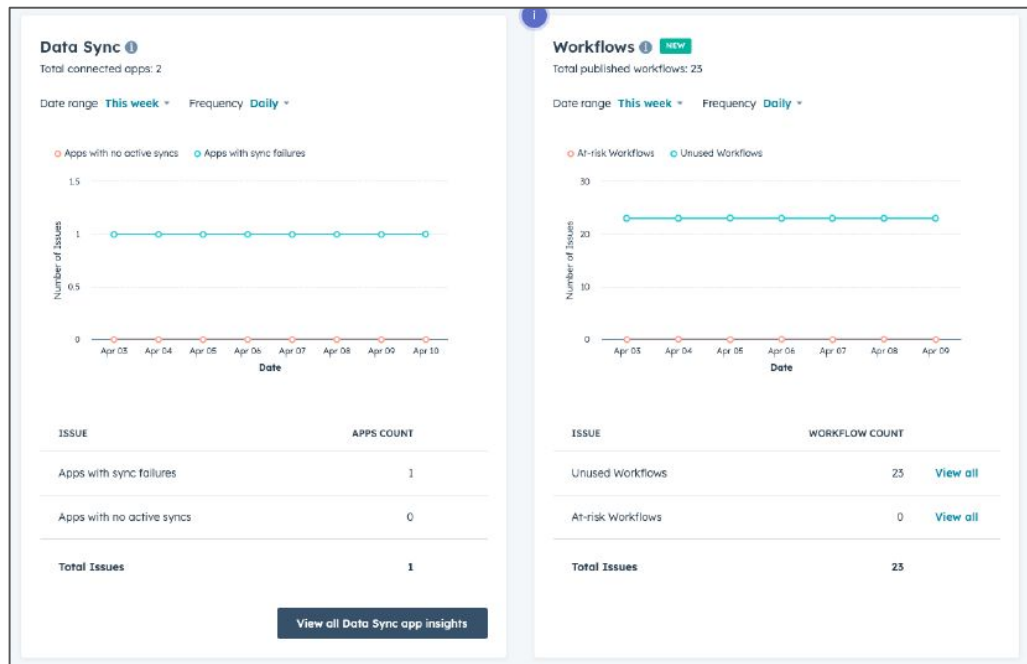
The problem: Downstream dependencies

The Automation Management team was building a feature that would send information to the data quality tool. They were introducing a **brand new** term to describe when something was going wrong in the workflows tool: "**risks**".

Something goes wrong in a automation. Your data is "at risk" of being polluted.
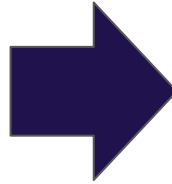
Information about what might be going wrong in the automation is surfaced in the data quality tool.

list of at-risk workflows

Workflows
At workflows

Create folder   Create workflow

Created in Workflows   Created in other tools   At-risk workflows   Unused workflows   Recently deleted

∨ **Rank and review 4 at-risk workflows** BETA

A workflow is at risk when it has at least one unique type of error and is on. Click each workflow to review details about its risks, and to decide if you want to ignore those risks. You can prioritize at-risk workflows by their most recent risk or by how many times they've been at risk.

Search for workflows   Current? Currently at-risk ∨   Type ∨   First or repeat ∨   Creator ∨   Team ∨   Table actions ∨

NAME	TYPE	FIRST OR REPEAT	RISK RECENCY	7-DAY ENROLLM...	
Demo Example • On	Contact Standard	First time at risk	Jul 29, 2022 9:06 PM PDT	10	
Thu Apr 21 2022 16:46:27 GMT+0900 • On	Contact Standard	Repeat	Jul 27, 2022 4:25 PM PDT	359	
Nine9 - Webinar Workflow • On	Contact Standard	Repeat	Jul 14, 2022 1:10 AM PDT	0	
Workflows	Drip test • On	Contact Standard	First time at risk	Jun 22, 2022 11:56 PM PDT	342	

In the workflows management space, an "At-risk workflows" tab. CTA asks user to "rank and review" the at-risk workflows.

If the workflow has previously been at risk

index of risks

Created in workflows > Demo Example
Demo Example ✎

Edit actions   Settings and notifications   More ∨

• On   At risk

When contacts submit the demo form, send a nurture email and a case study email. Create tasks if they book a demo.

TYPE	TOTAL ENROLLED	7-DAY ENROLLM...	OBJECTS ON HOLD	ACTIVE ENROLLED	LAST UPDATED	CREATED
Contact Standard	25	10	0	0	Jun 14, 2022 by Andrew Dungan	Jul 29, 2019 Unknown User

View connections

Performance   Risks   Log   Enrollment history

∨ **Rank and review 3 risks**

Click each risk to review its details. You can choose to ignore that risk indefinitely, for a period of time, or only until it repeats. While you are ignoring all risks to this workflow, it won't appear in list of at-risk workflows. It will reappear in the at-risk list again if a risk repeats after you've stopped ignoring it or if a new risk that you've never ignored before occurs.

Current? Current risks ∨   First or repeat ∨

Temporarily ignore all risks   Edit Notifications

RISK DESCRIPTION	FIRST OR REPEAT	IGNORING RISK?	RISK SETTINGS CHANGED	RISK RECENCY
Previously unsubscribed from this subscription type Unable to send the email	First time risk	No	No change date yet No user account made any change	Jul 29, 2022 11:56 PM PDT
The contact was not enrolled because it doesn't ha... Unable to send the email	First time risk	No	No change date yet No user account made any change	Jul 29, 2022 10:19 PM PDT
Email failed to send to 1 out of 2 recipients	First time risk	No	No change date yet No user account made any change	Jul 25, 2022 3:25 AM PDT

Multiple CTAs

❌ No clear way to remove the "risk" from the workflow

error list

Review or ignore this risk ✕

Deciding whether to ignore this risk

Ignoring a risk removes it from the list of current risks. If you have changed actions on the canvas that you believe should eliminate this risk, then change its setting to "ignoring temporarily". If it reoccurs, it'll reappear in the list immediately. If the risk is unimportant to you right now, then ignore it for a period of time. If it reoccurs, it'll only reappear in the list after that time period is over. If the risk is never important to you, then change its setting to "ignoring always".

This first time risk is current: Last logged: 2 days ago

Previously unsubscribed from this subscription type
Unable to send the email

This first time risk is current because one or more error log entries that match this risk have occurred.

Choose an option   ▾

Error log entries:

A risk is the summary of all matching error log entries, shown below, regardless of which action caused the error.

Since last ignored ▾   Date range: ☐ 7/27/2022   to ☐ N

Contacts: Select   ▾

Action	Contact	Timestamp
Send email (action 21) ⟋ ● Error — Email: HOT LEAD ⟋	Trent Ryan ⟋ trentryan@demospot.org	Jul 29, 2022 11:56 PM PDT Workflow revision: Jul 16, 2022 ⟋
Send email (action 21) ⟋ ● Error — Email: HOT LEAD ⟋	Adaline Weissenat ⟋ adalineweisenat@demospot.org	Jul 27, 2022 2:14 AM PDT Workflow revision: Jul 16, 2022 ⟋

A lot of copy, tough to scan

A risk = multiple error entries

Frame 223

Temporarily ignore all risks?   ✕

This action will make this workflow no longer at-risk. It may become at-risk again if any of these temporarily ingored risk repeats or if a new first time risks occurs.

Ignore   Cancel

Which reoccurred? The risk... or the error?

● The problem: Customer and business impact

The Automation Management team put their new **risks** management feature into a private beta, but there were some areas where it wasn't hitting targets.

Pain points for the customer 😓

Confused by the term "risks"

Unsure about what's on fire and what can wait

Data in their portal may be negatively impacted by "risks" that aren't caught at the right time

Impacts to the business 📉

Low usage metrics

Customers holding on to many workflows with "risks" that add a heavy maintenance load for our engineering teams

Heavy UX debt from different terminology

The problem: Feedback in the beta

💬 "My new CEO saw the "at-risk" tab with the red dot showing the number of at-risk workflows and thought that this was the number of workflows that were not working, *at all* . I felt like the CEO would have had a different reaction if a different word was used."

💬 " Does a risk mean that it's not working properly? Or, does it mean that it could just be more efficient?"

💬 "A "risk" is the wrong word for the situation. It's too alarming and that the objects shown were just "errors". A "risk" is more urgent than an error."

💬 "There's not a difference between a risk and an error. A risk is just a potential error, while an error has already happened."

The problem: Tight deadlines

Since Automation Management team was already in a private beta **we needed to get answers to our questions quickly**, while **minimizing disruption the customers who were using the feature**.

We had to get really clear on the scope of what we wanted to answer.

My approach

● **My approach: Breaking it down**

1. Build trust and illustrate the problem

2. Create a project plan and agree on scope

3. Run and analyze the test, then apply the results

My approach: Build trust

Both the product manager and product designer on Automation Management had little experience working with an embedded content designer.

It was crucial for me to work **clearly** and **collaboratively** with them so we could build trust.

I got up to speed quickly with Automation Management to find out what they had learned in discovery, design, and beta. We partnered on a timeline and approach to our questions that we all felt good about.

My approach: Illustrate the problem

I started by mapping the relationships between the terms in the new risks feature.

My hypothesis was that it might not be the individual terms that were confusing, but instead it was the relationship between the terms that customers didn't understand.

An at-risk workflow

Contains at least one

Risk

Contains at least one

Error

of a similar type
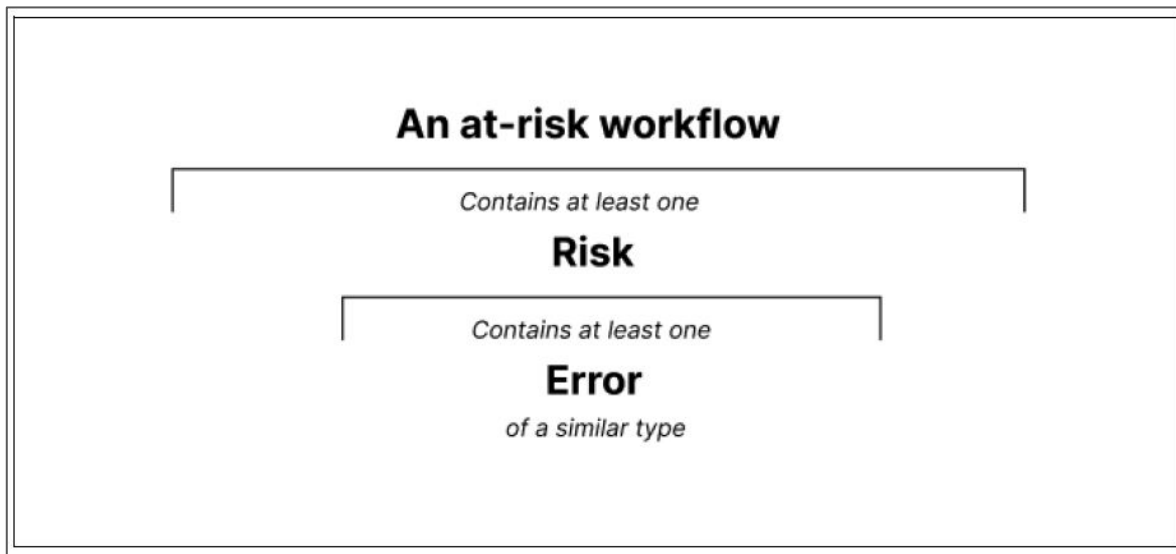
My approach: Limit the scope

There were other terms, including "issues", that customers would encounter moving through through the flow from the data quality tool to the "risks" management feature.

I kept my investigation limited, so we could avoid scope creep.

(Starting in the data quality tool)

(Moving through the flow into the "risks" feature)

Where I focused the Cloze test research

Data quality issues

↓

At-risk workflow

↓

Risks

↓
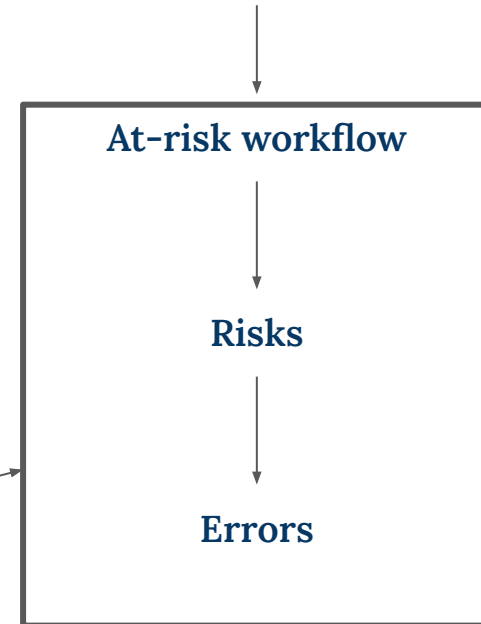
Errors

My approach: Create a project plan

Then, I put together a project doc where I outlined the questions we'd ask and how we'd find answers.

View the doc (PDF)

Overview

What we know:
We're in the process of introducing a new way of talking about errors in the workflows tool. Errors are a concept that's very common across software tools, but in workflows, we're introducing a new a hierarchy of "risks" and "errors".

An at-risk workflow

Contains at least one

Risk

Contains at least one

Error
of a similar type
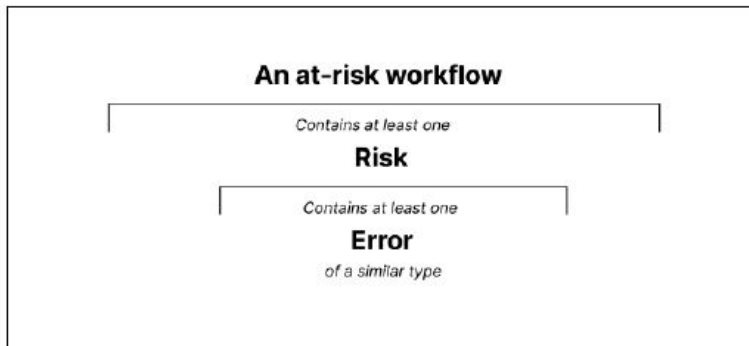
Figma file: Monitoring and managing workflows at-risk

What we want to learn:
Across moderated interviews with customers we've noticed a trend of them repeating the language now in the workflows tool back to us and saying they understand a concept, but in practice, they often have varied understandings and definitions of those terms. We want to confirm that the new language maps to potential and current customers' own mental models.

- Are we, overall, in alignment with how customers think about these terms, and is the content clear?
- Are there ways we can simplify how we talk about risks and errors?
- What are the terms that resonate the *most* with the way people think about error prevention and resolution? Where can we use our customers' own language?
- Are there any terms we're using that aren't helpful or clear?
- Where do we need to offer extra context or education to customers?

The Cloze test

The Cloze test: Overview

A Cloze test is an unmoderated study that measures **comprehension**.

It shows whether a target audience actually understands the material's meaning.

The test looks like a game of madlibs. Every "nth" word in a group of sentences is excluded.

The participant is asked to use context clues to try to answer with the correct word in each blank.

An automated process might be [at] risk when it has at [least] one unique type of [error].

The new At-risk [tab] replaces the Automations with errors tab. [You] can now see all the [risks] that have occurred over [time]. Also, view when and why [automation] has risks and temporarily [ignore] them until they repeat.

The full log of [errors] is still available on each [automation's] details page.

Ignoring a [risk] removes it from this automation's [list] of current risks for a [period] of time. At first, try to [temporarily] ignore this risk until it [repeats]. That way as soon as a new [error] occurs, it'll reappear on the list of risks. If [you've] discovered that this risk is [repeating] predictably, then you may want to [ignore] it for a longer period of time.

I used content that was already live in front of customers in the private beta.

The Cloze test: Added questions

I chose to supplement the Cloze test with an additional section of follow up questions because we wanted to know **why** participants answered the way they did in the Cloze test.

Read the text again and then answer the following questions.

An automated process might be at risk when it has at least one unique type of error.

The new At-risk tab replaces the Automations with errors tab that showed errors over the last seven days. You can now see all the risks that have occurred over time. Also, view when and why the ... y ignore them until they repeat.

... on each automation's details page.

... automation's list of current risks for a period of time. At first, try ... it repeats". That way, as soon as a new error occurs, it'll ... e discovered that this risk is repeating predictably, then you may ... of time.

Question #1
In your own words, summarize the information.

Question #2
Describe the difference between an error and a risk.

Question #3
What does it mean to ignore a risk?

The Cloze test: Running the test

I designed and ran the test in UserZoom.

- Replace every 5th to 7th word in the Cloze portion
- Max 12 days run time (including both business and weekend days)
- 50 participants
    - May or may not have experience with HubSpot
    - *Must* have experience in marketing automation or is a person in an operations role

Goal:

A 60% comprehension rate in the Cloze portion of the test.

This is standard. It's not a test to see if they can get every answer correct. It's about how many fall above or below this line. If a significant portion of participants score lower, it meant the content was very hard to understand.

Results

Results: Breaking down analysis

The test ran for eight days.

When it concluded, I reviewed each blank left open in the Cloze test for correct answer, but I also counted synonyms.

Key:		is a synonym		error vs. risk						
Question:		The new At-risk 1)_____ replaces the Automations with errors tab. 2)_____ can now see all the 3)_____ that have occurred over 4)_____ . Also, view when and why the 5)_____ has risks and temporarily 6)_____ them until they repeat. The full log of 7)_____ is still available on each 8)_____ details page.								
Answers:		tab	You	risks	time	automation	ignore	errors	automation's		
Participant #		1)	2)	3)	4)	5)	6)	7)	8)	UZ_ID
	1	feature	You	errors	time	system	flag	errors	Automations	C6287S577_48
	3	process	employees	information	timefram	system	repair	transactions	users	C6287S577_84
	4	section	Customers	errors	time	automation	pauses	errors	process's	C6287S577_88
	6	processes	users	errors	time	process	hide	errors	automation	C6287S577_128
	7	programs	management	issues	time	issue	contain	issues	events	C6287S577_137
	11	stage	platform	processes	time	proocess	turn off	errors	process	C6287S577_251
	13	data	you	errors	time	automation	reboots	data	core	C6287S577_281
	14	tab	You	errors	time	process	stop	proocessess	process	C6287S577_287
	15	software	you	errors	time	security	stop	errors	log	C6287S577_315
	18	process	you	errors	time	process	monitor	errors	process	C6287S577_364
	19	program	You	errors	time	program	fix	activities	program	C6287S577_399
	20	software	Users	error	time	Software	repeats	Errors	Specific	C6287S577_401
	21	Program	You	errors	time	Program	Fix	Errors	Automation	C6287S577_413
	24	software	code	errors	time	code	pauses	errors	code	C6287S577_471
	26	then	you	errors	time	software	hides	errors	risks	C6287S577_505
	27	will	It	stuff	automation	automatin	stuck	task	simple	C6287S577_515
	29	sometimes	w	errors	all	error	stop	errors	ones	C6287S577_538
	31	software	You	errors	time	software	pause	errors	error	C6287S577_565
	32	problem	Administrators	errors	time	program	solve	automations	softwares	C6287S577_575
	34	sofrware	we	errors	time	errors	halt	data	tab	C6287S577_650
	35	server	previous	errors	the years	company	bad	history	systems	C6287S577_725
	36	process	I	errors	time	automation	disable	errors	automation	C6287S577_728
	38	system	i	problems	days	issues	put	errors	full	C6287S577_758
	39	task	now	mistakes	process	programs	commands	info	individual	C6287S577_767
	40	process	that	processes	procedure	identify	copy	data	of	C6287S577_786
	41	issue	You	problems	time	automation	moves	this	tab	C6287S577_791
	42	model	That	erros	time	model	shut	errors	transaction	C6287S577_825
	44	program	and	errors	night	program	stop	errors	full	C6287S577_888
	45	tab	you	errors	time	app	clear	transactions	module	C6287S577_893
	46	prototype	AI	Errors	time	issues	disable	data	excel	C6287S577_894

30	20	16	0	25	16	11	16	5	Without synonyms	With synonyms
	66.7%	53.3%	0.0%	83.33%	53.33%	36.67%	53.33%	16.67%	22.91%	45.40%

These results were excluded because it was determined that the participant's answers were not reliable.

	5	app	It	It	errors	time	program	view	data	C6287S577_99
	2	will	might	will	ok	no	yes	maybe	yes	C6287S577_83
	8	NA	NA	NA	NA	NA	NA	NA	NA	C6287S577_148

Results: By the numbers

- Average accuracy was 24.83% without synonyms. Average accuracy including synonyms was 43.2%. **This means that the content in the risks management feature was very difficult for participants to understand.**

- Participants weren't able to easily differentiate between "errors" and "risks" based on the context clues in the content. They consistently used "error" when the answer was "risk". **Meaning, the relationship between the terms was *not* clear.**

- At the same time, many responded by defining an error as something that's **currently** going wrong and a risk as something that **could** go wrong. **Each of these terms communicates and defines varying tenses (present vs. future state) and senses of urgency.**

- **For questions where the answer was "ignore", they often used close terms that were more proactive.** They leaned more towards language that suggests either "fix the problem right now" or "take a closer look".

Read the full analysis (PDF)
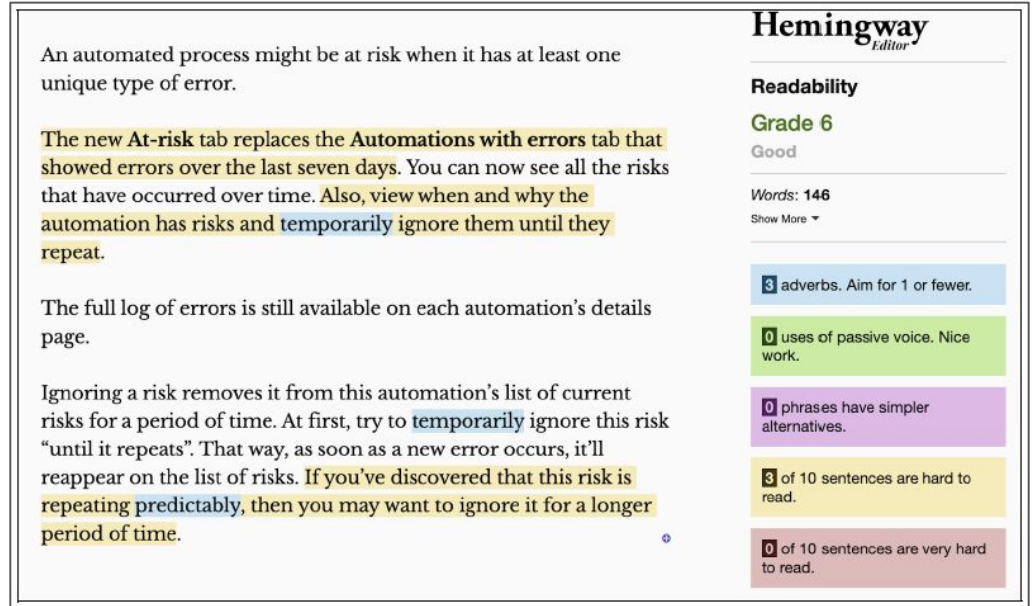
Recommendations

Recommendations: Simplify the language

I paired the results of the Cloze test with this view from the Hemingway app.

While the readability score was good (Grade 6), there were many sentences that were hard to read. These sentences overlapped with areas in the test where scores were lower.

I recommended that we simplify sentence structure across the experience.

The participants in the test were not able to understand the relationship between risks and errors as we were describing them in the product.

The word "risk" was also confusing. It didn't communicate the correct sense of urgency.

I recommended that we remove the term "risk" and simplify the hierarchy.

Data quality issues

↓

✕ **At-risk workflow**

↓

✕ **Risks (1 to many)**

↓

Errors (1 to many)

Recommendations: Align with customer expectations

What customers wanted was for us to highlight things that were going wrong and *let them decide how urgent it was.*

The core problem is we weren't setting the right **tone** with the language we were using.

Data quality issues

↓

?????

↓

Errors (1 to many)

Recommendations: Align with customer expectations

Because I reviewed the synonyms in the answers participants gave in the Cloze test, we didn't have to guess what terms communicated this in the right way.

"Issues" was one of the terms that came up consistently in their answers. And, this term aligned with terminology across the broader experience!

I recommended that we call the feature "workflows with issues".

Data quality issues

↓

✅ **Workflow with issues**

↓

Errors (1 to many)

Recommendations: The new model

An at-risk workflow

Contains at least one

Risk

Contains at least one

Error

of a similar type

A workflow has an

Issue

When it contains at least one

Error

of a similar type
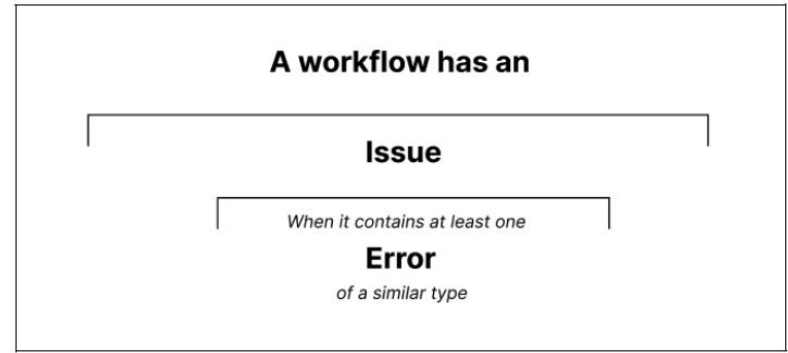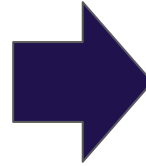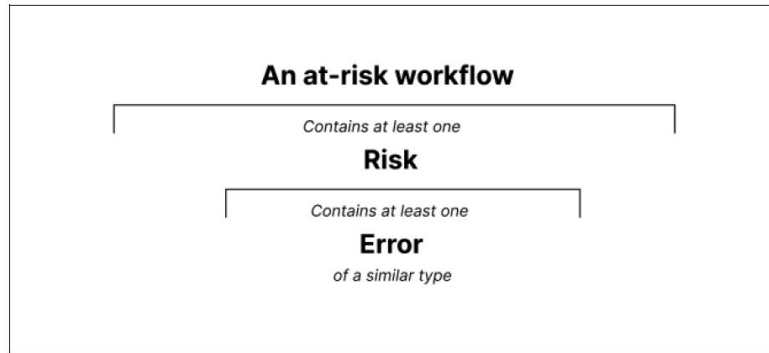
In the designs

After I presented these recommendations to the team, I created a new page in the Figma file and illustrated how the recommendations could look in the product.

The product designer and I had a co-design / peer writing session where we talked through the changes together.
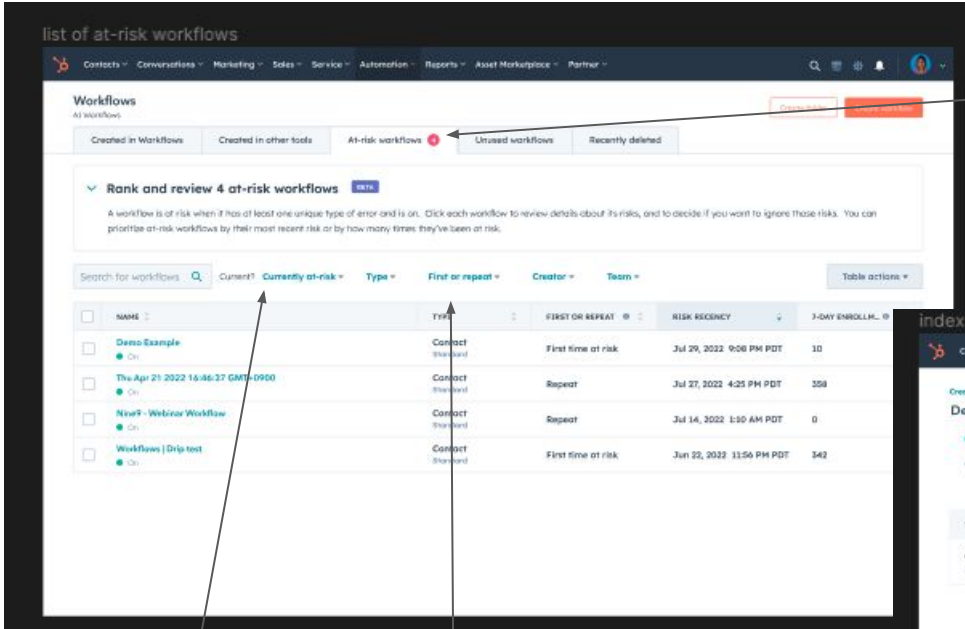
In the workflows management space, an "At-risk workflows" tab. CTA asks user to "rank and review" the at-risk workflows.

Bulk action is unclear
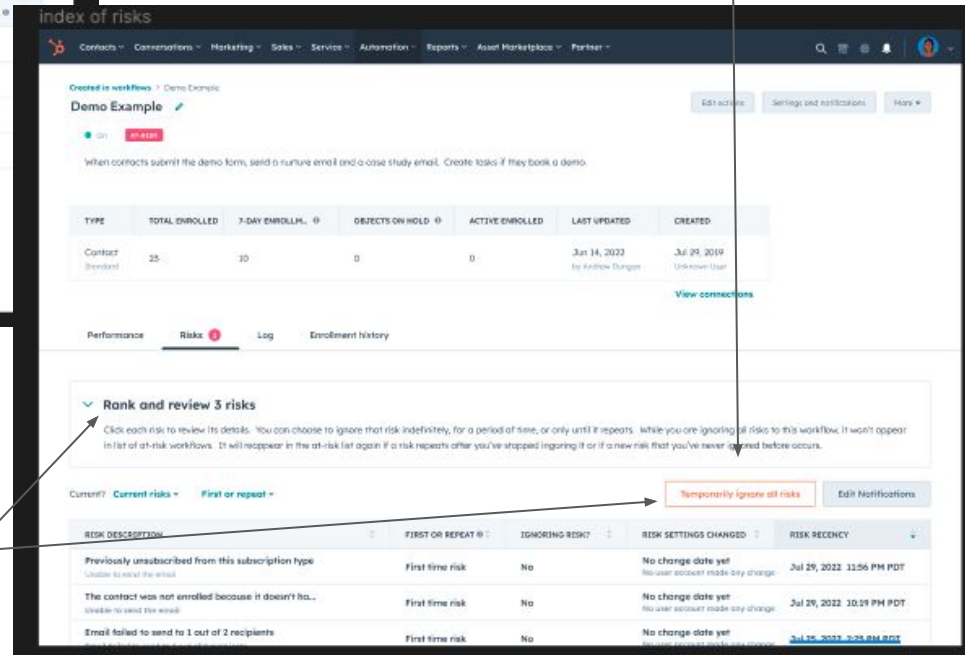
If the workflow has previously been at risk

Filter = Current?

Multiple CTAs

❌ No clear way to remove the "risk" from the workflow
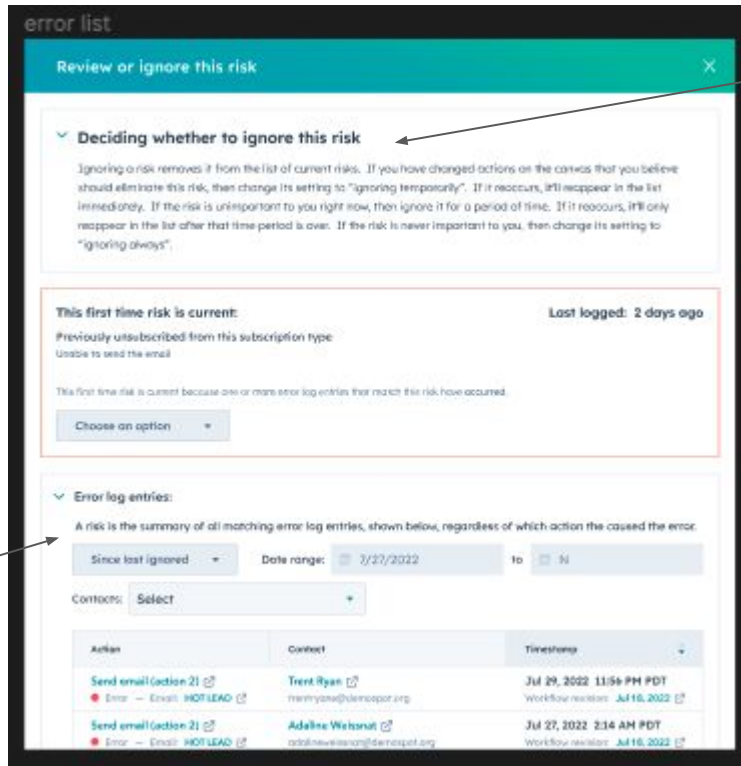
A lot of copy, tough to scan

A risk = multiple error entries

Which reoccurred? The risk... or the error?

New designs ✨
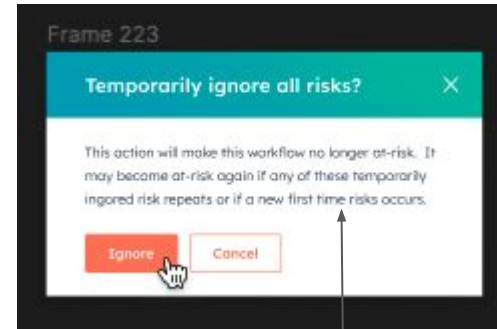
This side panel was part of a different workstream, but I removed the giant top of page CTA and added context here

At-risk workflows tab is renamed "Needs review"

Renamed "Risk recency" column

New filter shows issue status

Workflows

Edit Properties | Create workflow ▾

13 All workflows | Deleted | 1 Needs review ✕ | Unused | + Add view (4/50) ▾ | All views | 📁 Folders

Issue status Needs Review ▾ | On or Off (On) ▾ ✕ | Type ▾ | Creator ▾ | Teams ▾ | Tool created from ▾ | ⚙ Advanced filters (2) | 🔖 Save view

Review one workflow with issues.

These are workflows that have issues that you may want to fix or ignore.

Review the reasons each workflow needs review and when the issues occurred.

When all the issues are addressed, the workflow is removed from this view.

Search workflows 🔍

Actions ▾

	NAME	DESCRIPTION	OBJECT TYPE ⓘ	LAST ISSUE OCCURRED ON (EST) ⓘ	CURRENT ISSUES ⓘ
☐	Welcome new blog subscribers	--	Contact	January 5, 2024 6:46 AM	

‹ Prev 1 Next ›   25 per page ▾

Explore Operations Hub

Since review is the core CTA, we showed if it had been reviewed and when it was last reviewed

Simplified CTA and helper content

Changed "First or repeat" column to how many occurrences

The majority of the changes were front-end and could be implemented quickly.

Through our co-design sessions, the product designer and also discussed how we could make the previous "ignore only" action more proactive for customers in the full release.

Working with the product managers and back-end engineers, we were able to come up with a solution that worked for our timelines.

Review issue ✕

Email ⬈ **was not sent to contact because this is a non-marketing contact**

Last error: 3 days ago

Unable to send the email

First time issue: this issue has never been addressed before.

History at-a-glance

Needs review ▼

Cancel   Save

Select a status

˅ **How to address this issue**

There are three ways to address this issue:

Collapsible
help content

- **Mark as fixed:** If the issue reoccurs, it'll reappear as "needs review".
- **Remind me:** Get a reminder if the issue reoccurs after the date you choose. Use this choice if it's normal for this issue to occur periodically or you don't have time to fix this issue right now.
- **Ignore:** You won't see this issue again unless you change this setting.

˅ **Error log:**

This issue type groups all related errors regardless of which action in the workflow caused them.

Individual errors causing this issue.

All matching errors ▼   Date range: 🗓 MM/DD/YYYY   to 🗓 MM/DD/YYYY

Each error is an individual
Instance of the larger issue.

Contact: Select a contact ▼

ACTION ERROR ●	CONTACT	ERROR OCCURRED ON
2. Send email ⬈ **Customer Loyalty Survey (NPS)** ⬈	Adam Wilson (adam@securescho... Non-marketing contact ⓘ	Jan 5, 2024 6:46 AM EST Workflow revision: **Sep 28, 2023** ⬈
2. Send email ⬈		

Review issue ✕

Email ↗ **was not sent to contact because this is a non-marketing contact**   Last error: 3 days ago

Unable to send the email

First time issue: this issue has never been addressed before.

| Needs review ▾ |

Mark as fixed

Remind me after date

Remind me after period

Ignore

Cancel   Save

▾   sue

this issue:

reoccurs, it'll reappear as "needs review".

r if the issue reoccurs after the date you choose. Use this choice if it's normal for this
issue to occur periodically or you don't have time to fix this issue right now.

- **Ignore:** You won't see this issue again unless you change this setting.

▾ **Error log:**

This issue type groups all related errors regardless of which action in the workflow caused them.

| All matching errors ▾ | Date range: 📅 MM/DD/YYYY   to   📅 MM/DD/YYYY

Contact: Select a contact ▾

ACTION ERROR ●	CONTACT	ERROR OCCURRED ON
2. Send email ↗	Adam Wilson (adam@securescho...	Jan 5, 2024 6:46 AM EST
Customer Loyalty Survey (NPS) ↗	Non-marketing contact ⓘ	Workflow revision: **Sep 28, 2023** ↗
2. Send email ↗		

Customers can mark which issues have been fixed, or set a reminder for ones that are less of a concern.

The reminder would trigger a notification.

Impact

● Impact: Feedback from the team

"Her efforts led to **a remarkable 174% increase** in feature usage, and created successful upgrade paths influencing enterprise-level revenue.

Sarah's approach **seamlessly integrated quantitative and qualitative data** to shape UX strategy. Her holistic perspective, collaborative nature, and attention to detail made her a valuable team member. Beyond individual product experiences, she **crafted comprehensive content and UX strategies across product lines**."

- Senior Product Manager on the Automation Management team

● Impact: The highlights

📈 It's in the numbers. By renaming the "At-risk workflows" tab to "Needs review" **more customers were clicking the tab and engaging with the workflows with issues**. Usage of the review feature overall increased 174%.

🗣️ Qualitative feedback from customers improved. There was much **less confusion about the urgency** of issues.

🙌 **I stuck to our timelines**. The Cloze test gave us a *wealth* of information, but because it was unmoderated it also was hands-off. In the time that it was running, I was working on other tasks.

❓**We didn't have to guess on the right solution**. We were already in beta and any changes we made could have big impacts. This work set us up to confidently make the right move and fix problems now.

● Impact: The highlights

😊 We **helped the Data Quality team simplify their own UI** by slimming down the language hierarchy. We validated the use of "issues" terminology across the platform.

🤝 This work set the stage for a great relationship with the Automation Management team. By combining qualitative and quantitative approaches to content design, **I earned their trust**.

Thank you for your time!