

**"BETTER DATA
AND ALGORITHMS
ENABLE BETTER
DECISIONS!"**



**"BUT WHO MAKES
THE ACTUAL
DECISIONS?"**



**"WHO MAKES
THE ACTUAL
DECISIONS?"**



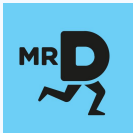
Agentic
architecture
to reduce
decision
paralysis.



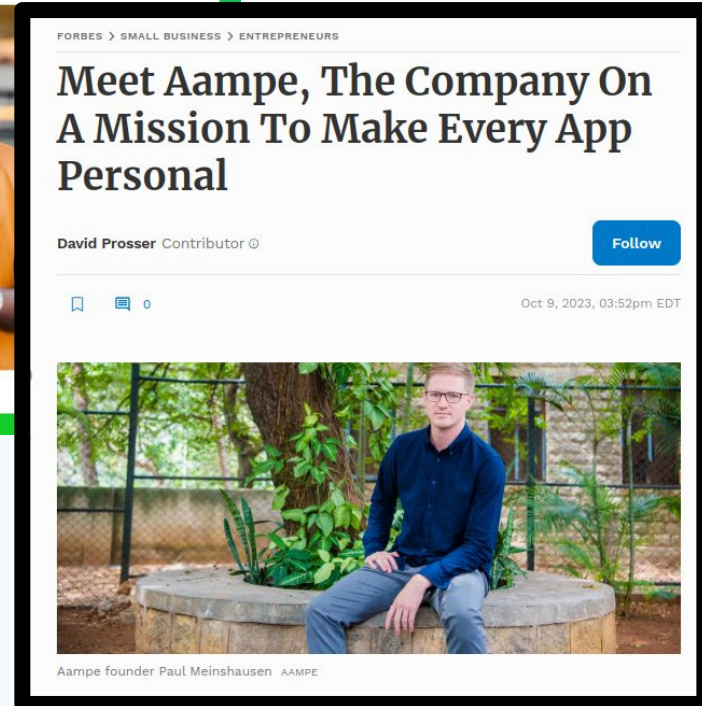
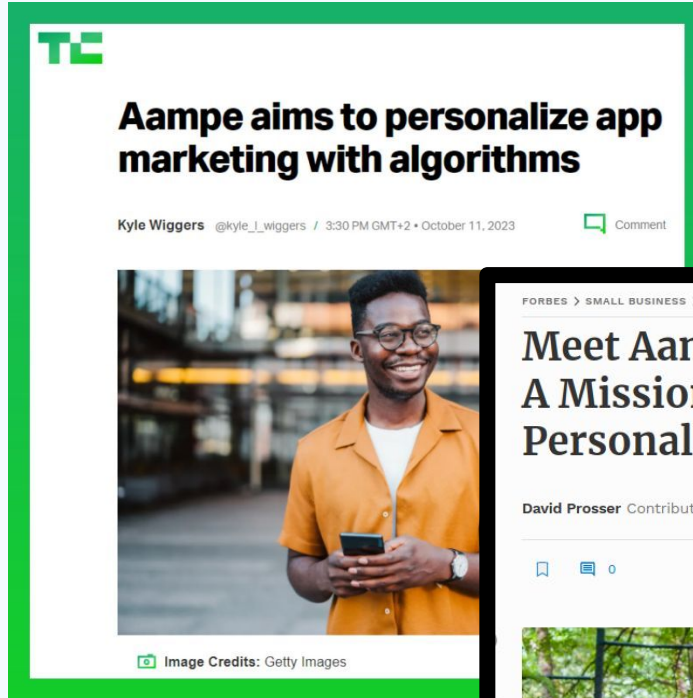
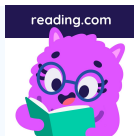
Backed by PeakXV
(formerly Sequoia SE Asia)
& Matrix Partners India



ZALORA



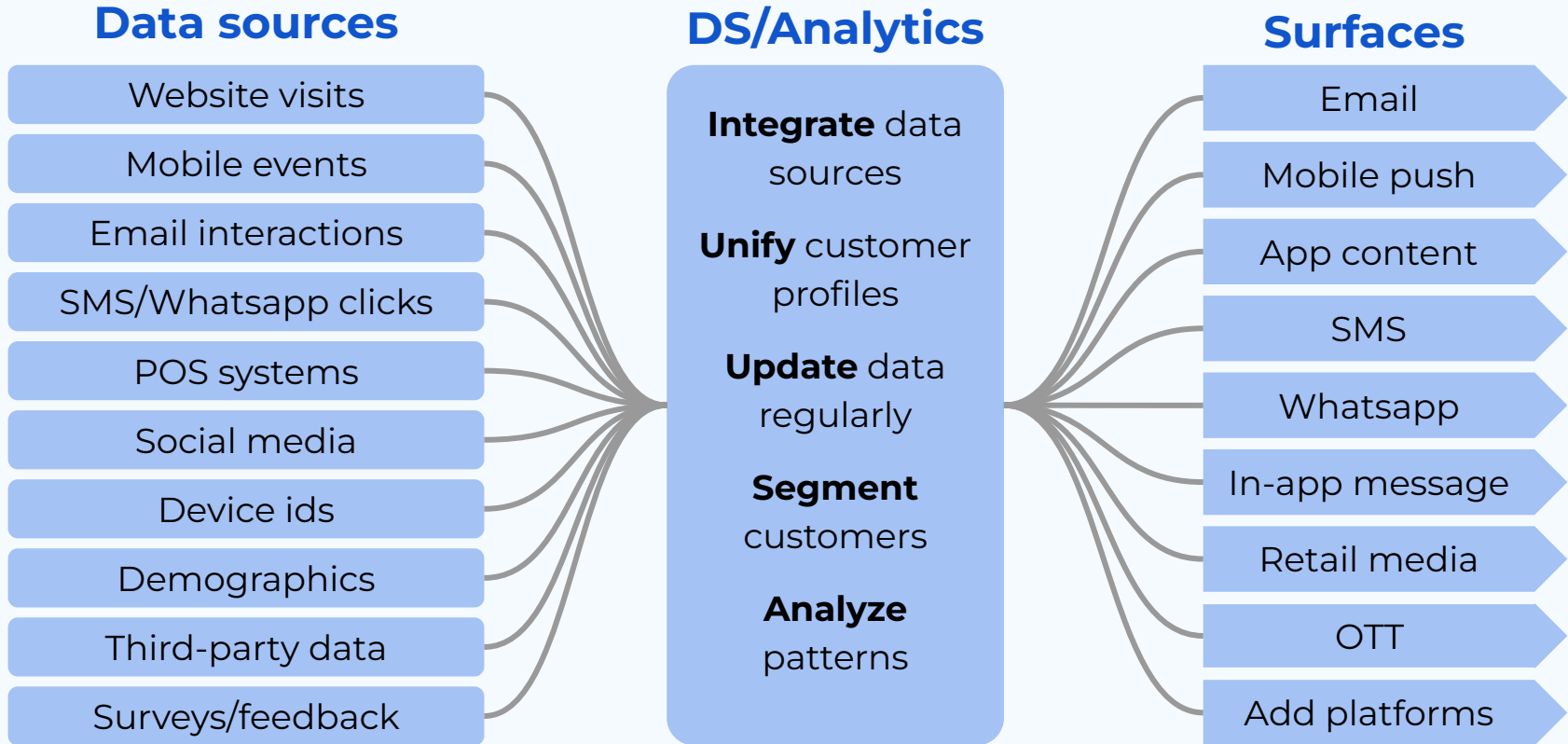
runna



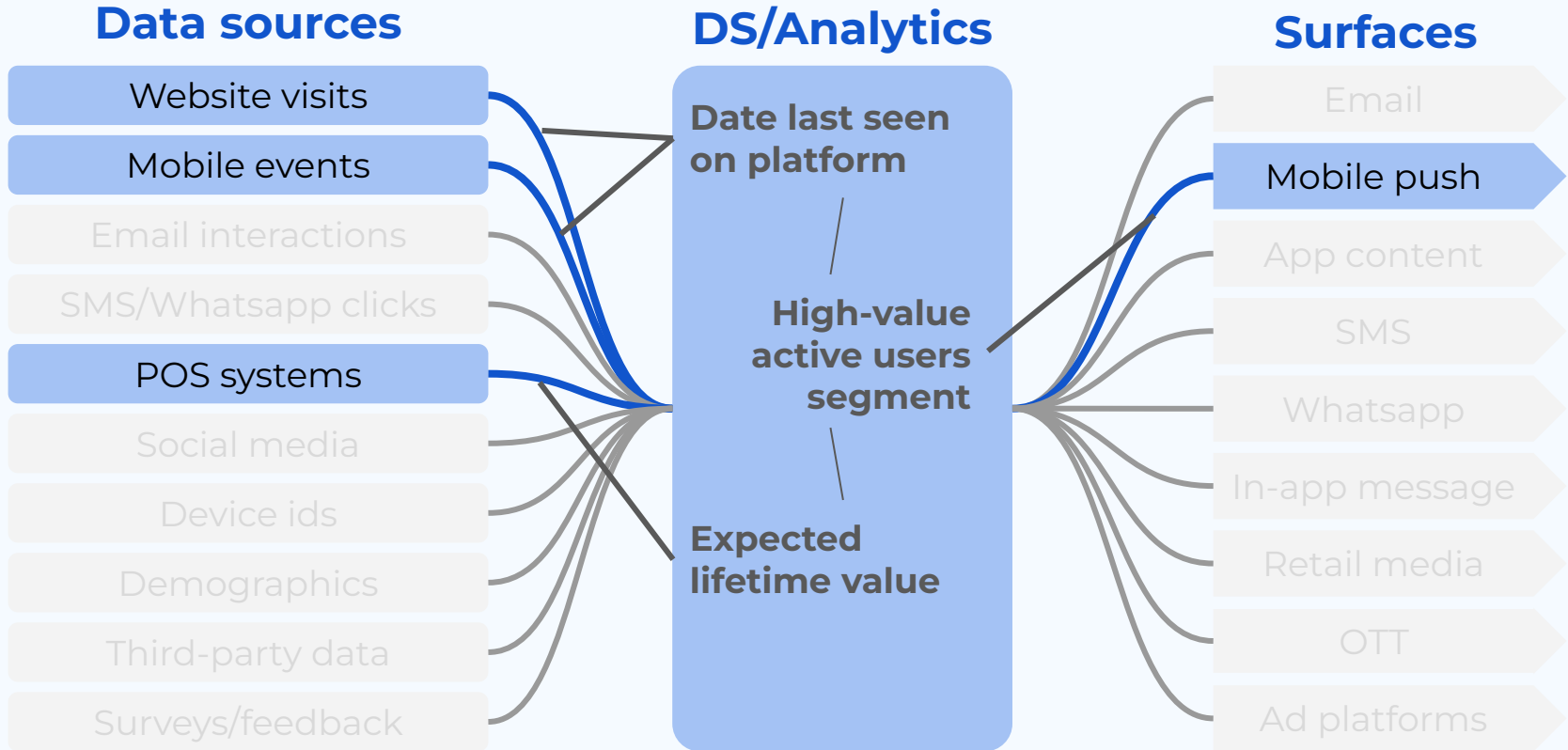


There are tons of apps, and their biggest problem is getting and keeping users' attention.

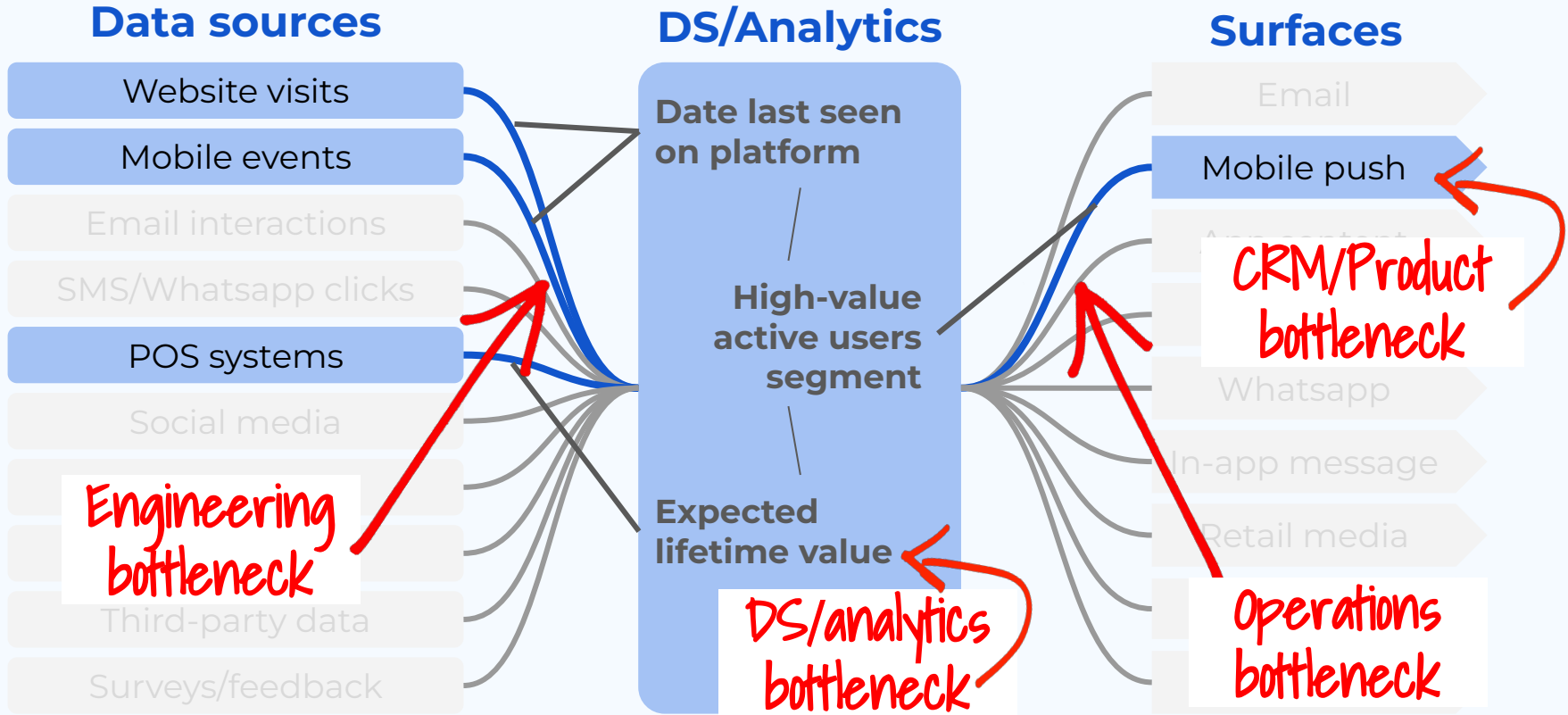
The big challenge is decision connectivity.



The big challenge is decision connectivity.

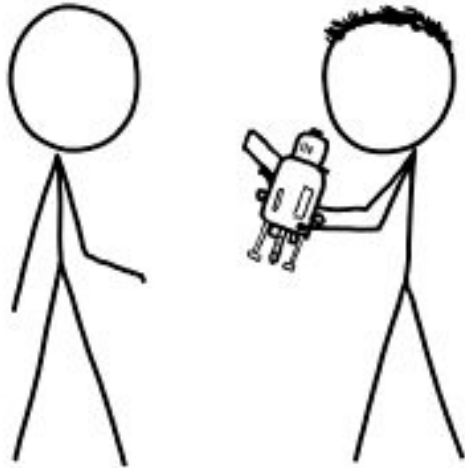


The big challenge is decision connectivity.



WE NEED TO MAKE 500 HOLES IN THAT WALL,
SO I'VE BUILT THIS AUTOMATIC DRILL. IT USES
ELEGANT PRECISION GEARS TO CONTINUALLY
ADJUST ITS TORQUE AND SPEED AS NEEDED.

GREAT, IT'S THE PERFECT WEIGHT!
WE'LL LOAD 500 OF THEM INTO
THE CANNON WE MADE AND
SHOOT THEM AT THE WALL.



Garbage in,
garbage out.

Software and
algorithms are
only a small part
of what goes in to
most business
decisions.

Static segments and trigger rules are the standard way of doing business.



This is dumb.

Static segments and trigger rules are the standard way of doing business.



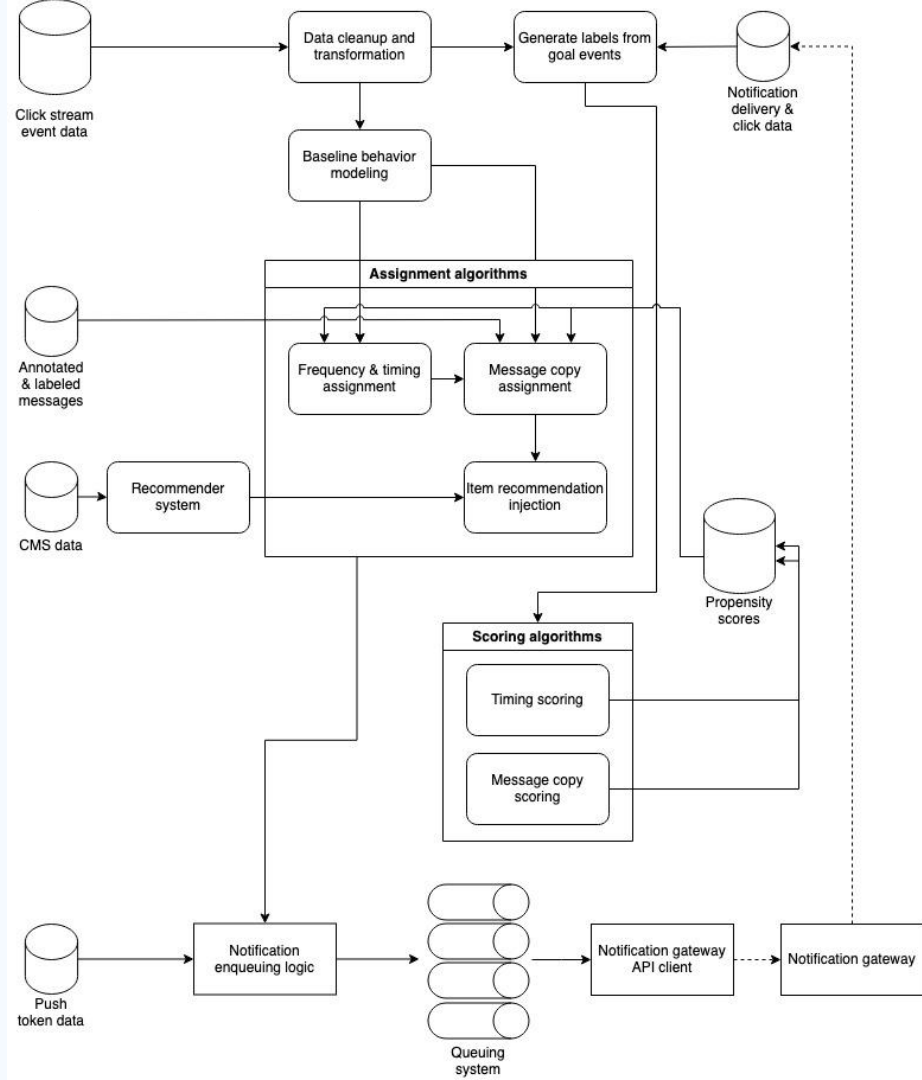
An agentic CDP resolves decision paralysis.

It's not an algorithmic problem. It's an architecture problem.

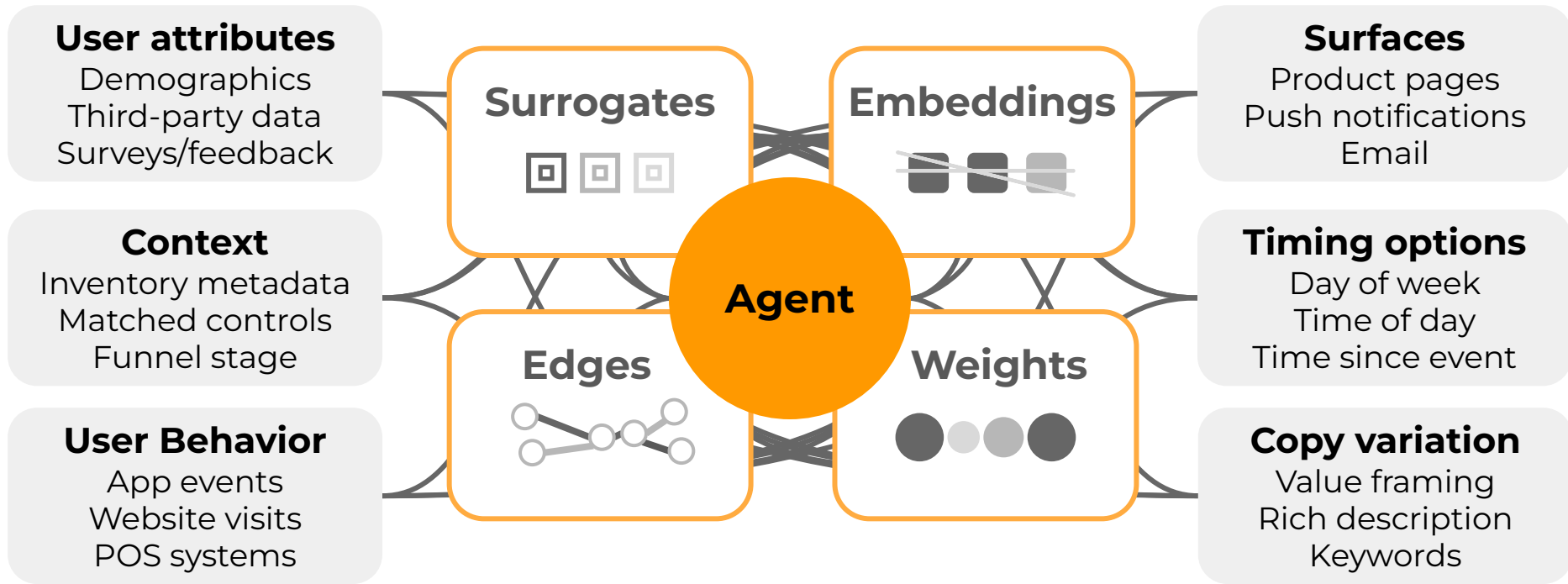


Super important but too detailed for today..

- Collect and tokenize **recent message history**
- Determine message **eligibility**
- Ensure selected messages are as different as possible from recent message history (to **reduce desensitization**)
- Ensure **explore/exploit** balance (to avoid local maxima)
- Fit an environment model capturing **baseline behavior** from event stream (and **consolidate sparsity**)
- Fit a **treatment model** based on policy and subsequent user behavior (target)
- Fit a **control model** using the control group behavior (baseline)
- **Compute weights** for individual users for each treatment
- And more....



Agents map data to options and then they do something about it.



Constraints

🎯 Objectives

▮▮ Segments

⌘ Triggers

() Bounds



Surrogates






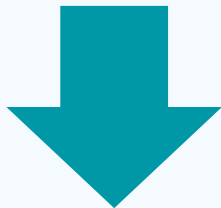
Anticipation: condense the event stream into surrogates.

- Arbitrary (business-determined) objective events.
- Optional segments/triggers for contextual messaging
- Contextual constraints on messaging frequency (global, per channel, per trigger, etc.)

Algorithmic distillation: surrogates model the impact of each event in the event stream upon the identified objectives. This gives the agent the ability to **anticipate user behavior** the ability to infer whether a user is “headed in the right direction.”

Context

-  Events
-  Messages
-  Controls



Embeddings

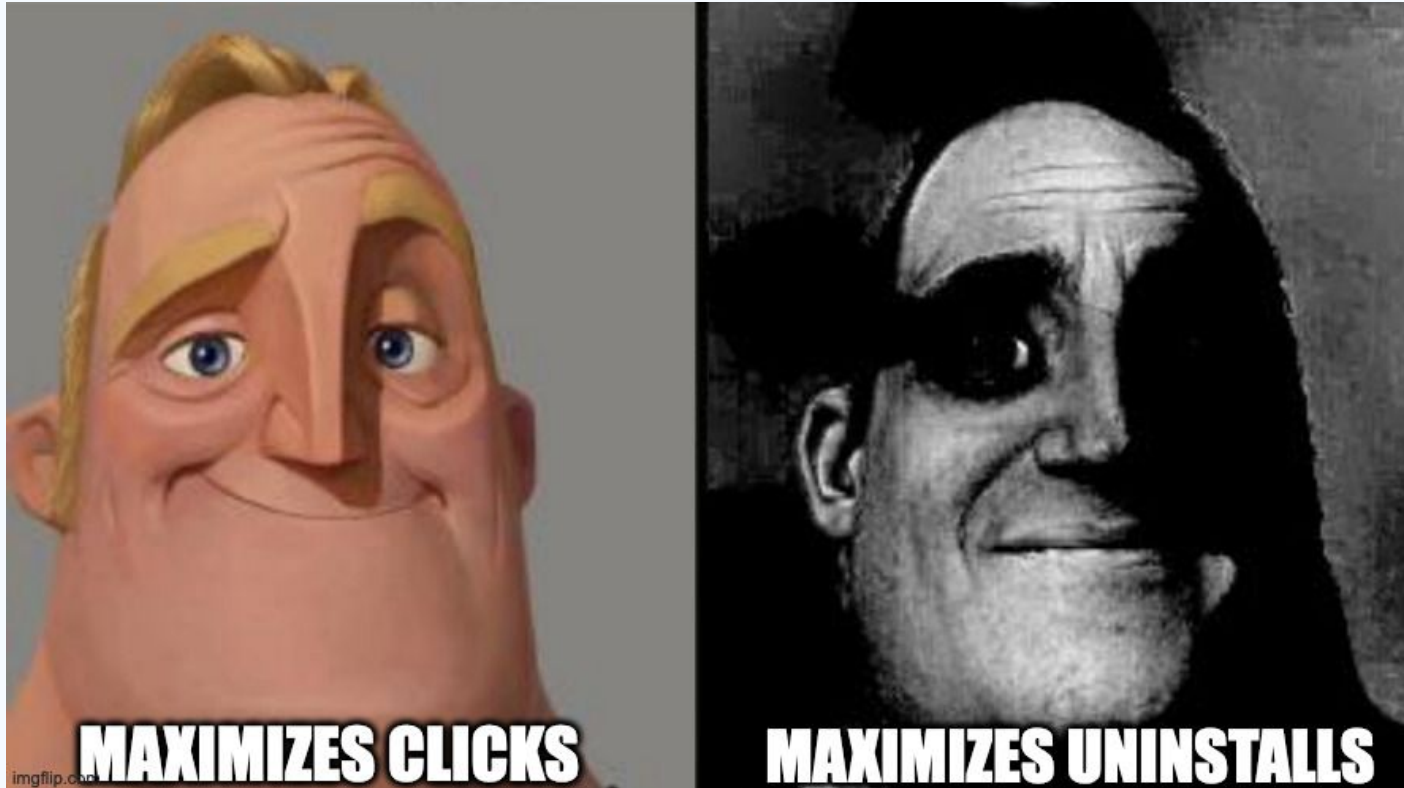


Differentiation: embed behavior/messaging histories.

- Behavioral embeddings that reflect short-, mid-, and long-term patterns.
- Message embeddings that reflect the amount of contact a user has received.
- Match messaged users to nearest-neighbor controls.

Algorithmic distillation: embeddings model individual user history as it relates to major learning objectives. This gives the agent the ability to **infer the similarity of a user to other users**.

Messaging optimization is risky.



Inventory

 Products

 Modules



Edges



Optionality: graph product and messaging inventory edges

- Import CMS inventory and metadata to recommend specific inroads into the app experience.
- Modularize and semantically label copy so it can be selected and recombined.


Algorithmic distillation: graph product and messaging inventory so **edges** indicate product and content relationships. This gives the agent the **ability to consider different content options** for messaging.

A Few Words About Netflix's Success: Vivid. Snappy. Tags.

The descriptive tags that the streaming service runs near each title — like “slick” for the show “Suits” — have proved crucial to getting people to click play.

Over **3,000 tags.**

Over **30 full-time tag managers.**



Each time the company has removed tags altogether as an experiment, engagement has plummeted, executives said.

“People would take much longer to choose,” Mr. Donald said. “They would drop out of a title because they didn’t like it too much or because they didn’t know what they were getting.”

As Netflix widens its Secretariat-like lead in the so-called streaming wars, the descriptive, if sometimes banal, tags stand out as an example of how the company stays ahead. Most rival streaming services don’t bother displaying tags, or don’t have the same financial resources to support a group of employees to do all the work behind them.



89% Match

TV-14

9 Seasons

HD

Witty • About Nothing • Ensemble

Actions

 Timing

 Channel

 Copy



Weights

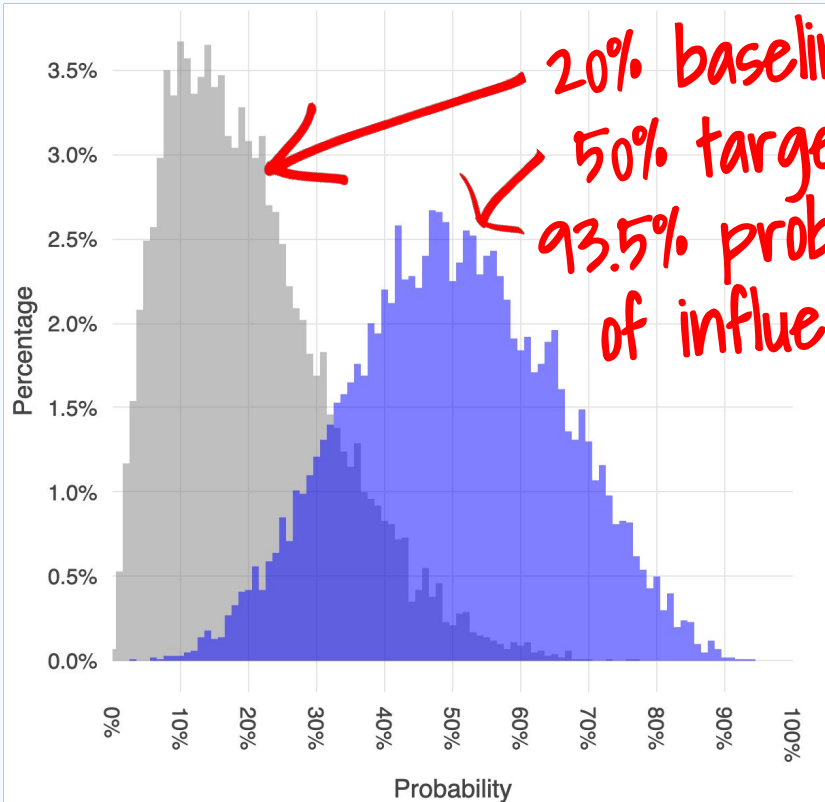


Evaluation: let actions operate as repositories for preferences

- Timing: day of week, time of day, hours from trigger, holiday, pay period, etc.
- Copy: persona, value proposition, product category, call to action, or even aesthetic choices like tone, greeting, or emoji.

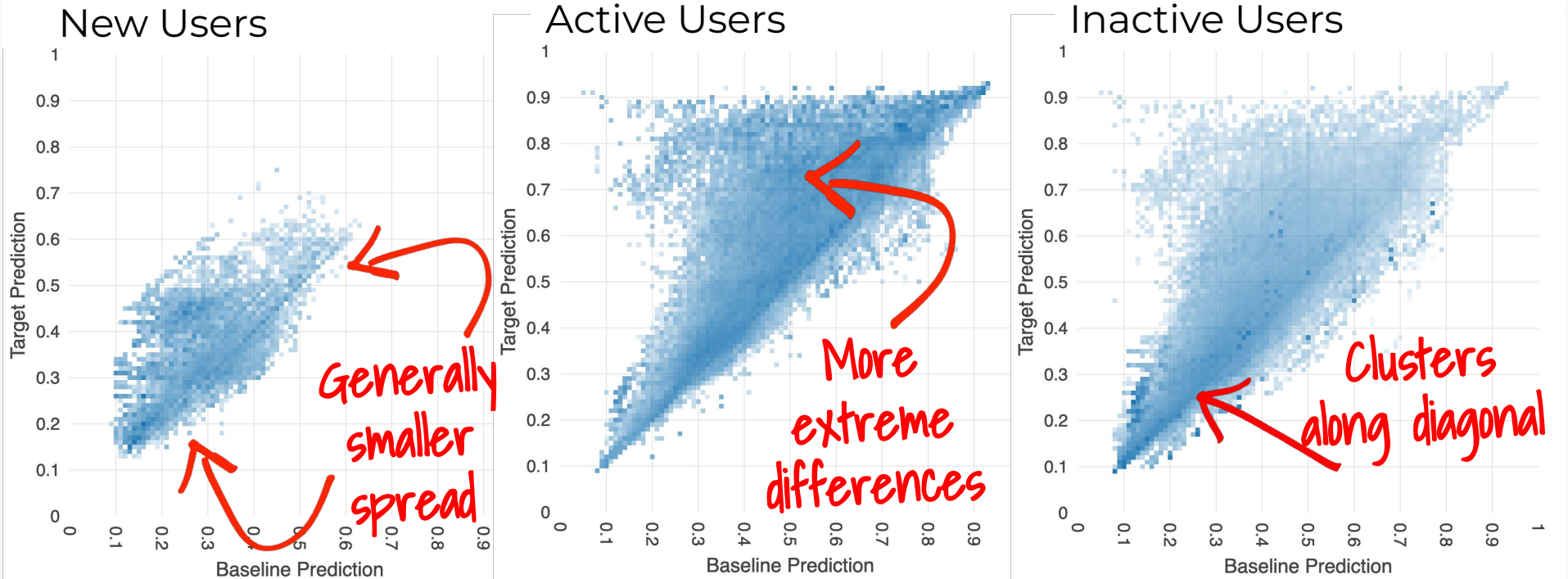
Algorithmic distillation: let each individual agent learn action weights based on (1) outcomes from other agents' assigned users, and (2) actions of matched control users in order to **estimate optimal choices**.

Baseline (control) and target distributions



- It's the intuition behind Thompson Sampling - repeated random draws simulate the influence probability.
- Allows decision making on both probability of action and probability of causing the action.
- Allows selection of a no-go action for timing.

Model weights give agents durable memory



Benchmarks

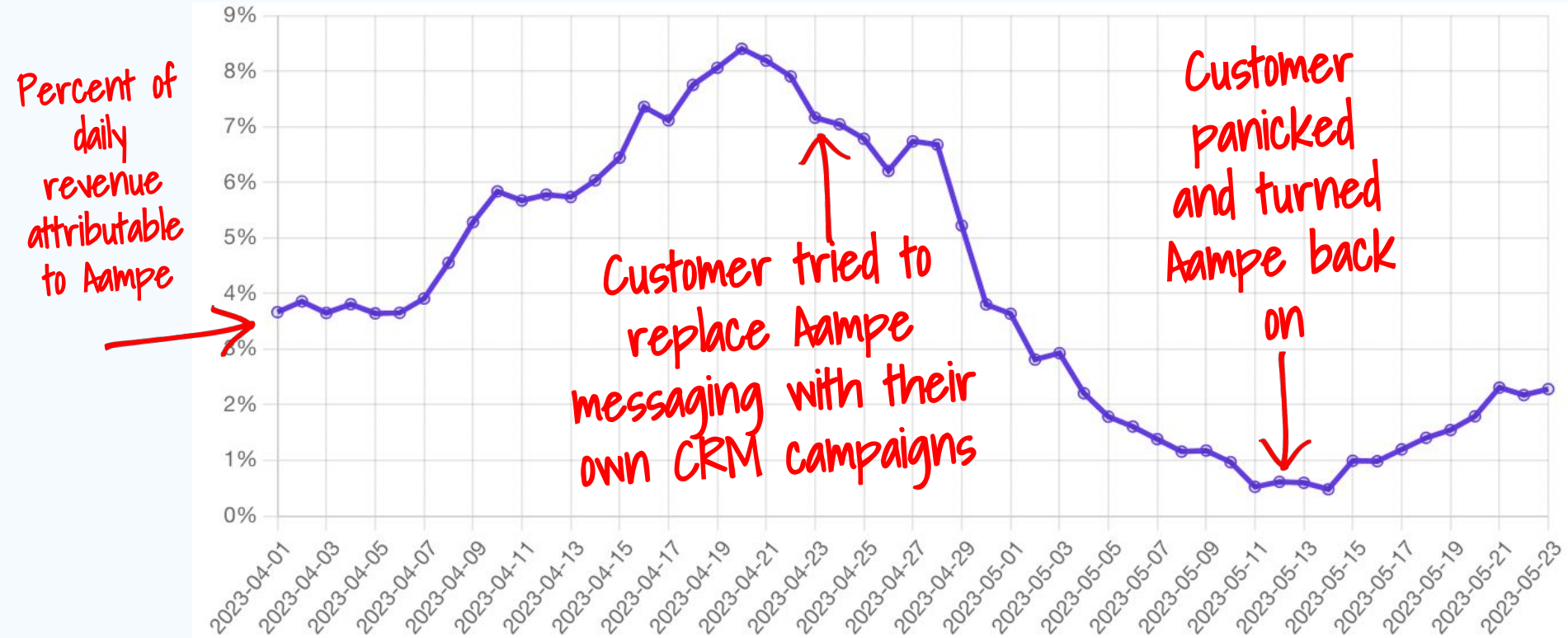
- Agent-orchestrated timing and copy vs manual process.
- 100% holdout control - no synthetic matching
- After 8 weeks, change copy to also advertise discount incentives.
- Measure visit rate within 12-hour window of message send.

		Visit rate		Baseline rate		% Difference in rate	
		Aampe	Manual	Aampe	Manual	Unadjusted	Adjusted
Phase 1 - Averages over 8 weeks							
Category	A	9.6%	9.9%	7.8%	8.5%	-3.0%	5.9%
	B	10.3%	10.1%	8.0%	8.7%	2.2%	11.6%
	C	10.8%	8.7%	8.2%	8.6%	24.9%	30.7%
	D	10.1%	9.2%	7.9%	8.5%	9.3%	17.8%
	E	11.1%	11.1%	8.3%	9.7%	0.6%	17.9%
	F	10.3%	10.4%	7.8%	8.9%	-0.9%	13.3%
	G	11.2%	8.1%	8.1%	8.6%	38.2%	46.7%
	H	9.9%	7.9%	7.9%	7.9%	26.3%	26.0%
	I	10.0%	9.5%	7.9%	9.2%	6.2%	23.9%
All categories		10.4%	9.4%	8.0%	8.7%	11.5%	21.5%

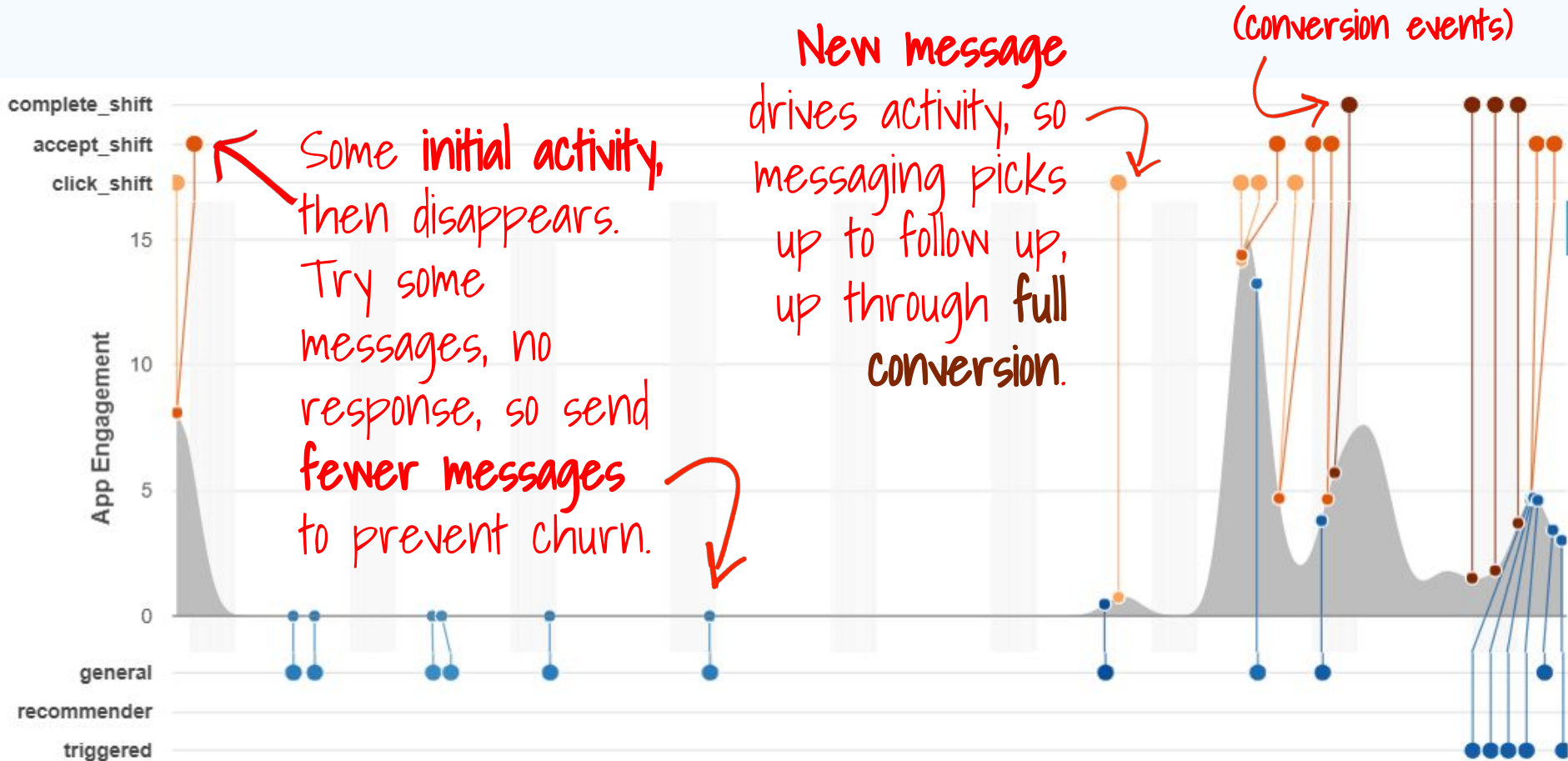
Phase 2 - Averages over 3 weeks

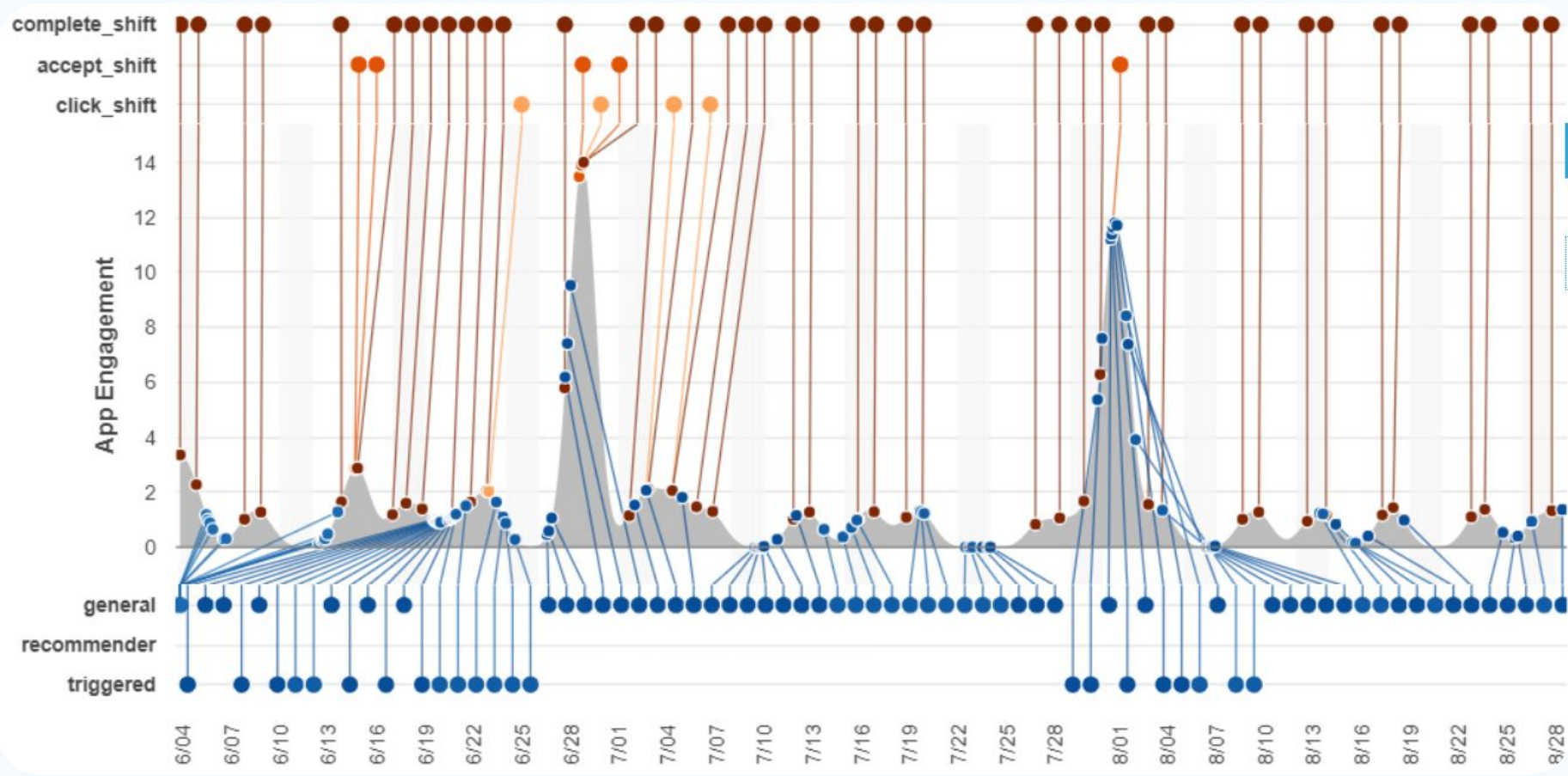
Category	A	10.7%	9.6%	8.0%	9.1%	11.1%	26.9%
	B	10.5%	10.1%	8.0%	9.3%	3.6%	20.0%
	C	9.8%	8.9%	7.7%	9.3%	10.5%	33.5%
	D	11.2%	9.0%	8.5%	9.1%	24.9%	34.2%
	E	10.5%	12.0%	7.9%	9.7%	-12.8%	7.5%
	F	8.5%	11.4%	7.3%	9.6%	-24.9%	-0.5%
	G	10.1%	8.1%	7.6%	9.2%	23.8%	49.7%
	H	9.0%	7.5%	7.6%	8.5%	20.1%	34.2%
	I	10.0%	10.4%	7.8%	9.3%	-3.5%	15.0%
All categories		10.0%	9.7%	7.8%	9.2%	5.9%	24.5%

Observable impact (when used correctly)

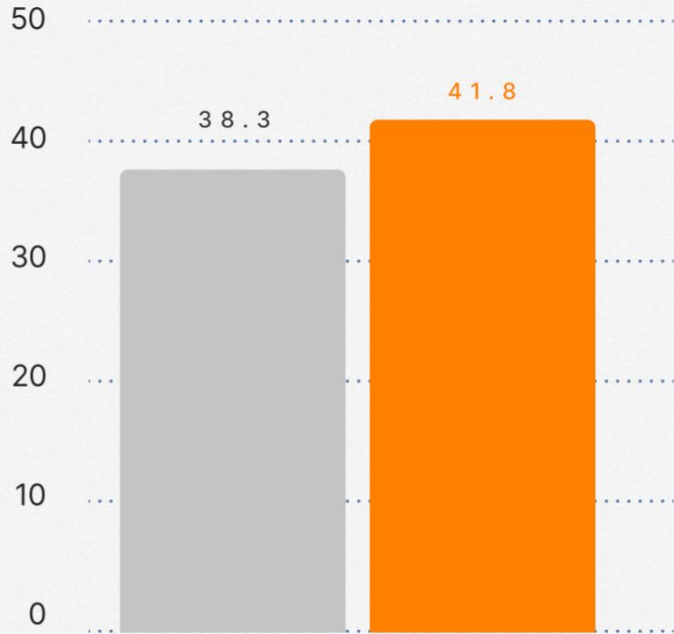


Agents enable personalized attention/response





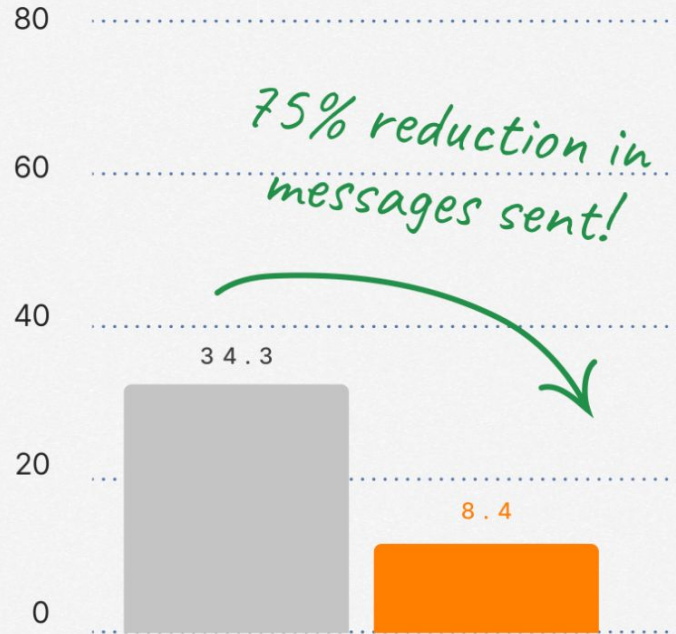
Conversions



Before

After

Messages Sent



Before

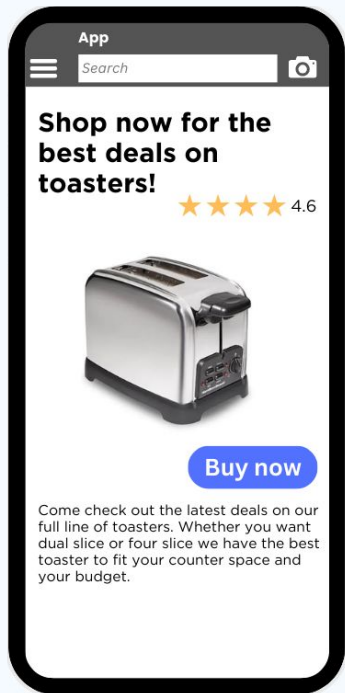
After

Every action in the system can be represented as a tag, and attached to specific copy.

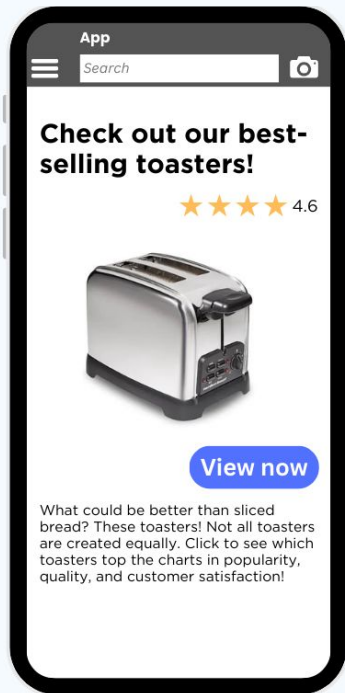
The actions then act as preference storage.

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"2b23be22-dd48-4232-b056-32a769505449": {  
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  "Availability": 0.34640212602552234,  
  "Bestsellers": 0.09669559043278242,  
  "Convenient": 0.9309143809493408,  
  "Efficiency": 0.47303762805809624,  
  "Quality": 0.46894028113151076,  
  "Top Rated": 0.022960432892572658,  
  "Value": 0.24974653802872993  
},  
"0c5fef94-0683-4b3d-86c3-b2d35a8364c8": {  
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  "Availability": 0.4952455430665107,  
  "Bestsellers": 0.6682155618968443,  
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  "Efficiency": 0.6969984712303366,  
  "Quality": 0.4640204635158407,  
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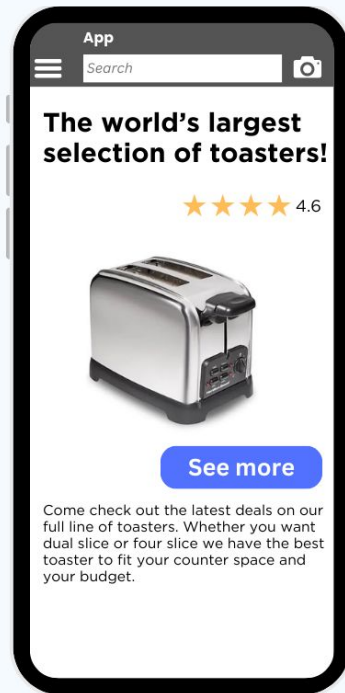
Affordability



Popularity



Selection



3 hooks.
3 descriptions.

Just one
toaster.

Control input



You

Can you help me find a dress for a formal event?



Bot

I'd love to help you find a dress for your event. Do you have a specific style or color in mind?



You

Um....blue?



Bot

Great choice! Blue is a classic color for formal events. What length are you looking for? Are you interested in something long and elegant, or perhaps a shorter cocktail dress?



You

Something a little longer. Not sleeveless.



Bot

Got it! Let me find some options for you. Are there any specific features you'd like, such as lace, sequins, or a particular neckline?



You

Not really. I'd like to see a variety.

Control output



Bot

Here are a few options:

Royal Blue A-Line Dress: This elegant gown features long sleeves and a flowing A-line silhouette, perfect for a formal occasion. It has a subtle v-neckline and a cinched waist for a flattering fit.

Navy Blue Lace Evening Gown: This stunning dress combines sophistication with a touch of romance. It has long lace sleeves and a floor-length skirt with a slight train. The intricate lace detailing adds a beautiful texture to the gown.

Midnight Blue Satin Ball Gown: If you're looking for something with a bit of glamour, this satin ball gown is a great choice. It features long sleeves with a modest bateau neckline and a full, sweeping skirt. The deep midnight blue color is rich and luxurious.

Please click on the links to view more details and images of each dress. Let me know if any of these catch your eye, or if you'd like to see more options!

Test system prompt.

You are a chatbot for a clothing e-commerce retailer.

Here is the profile of the user currently chatting.

Please make sure your responses take this information...

1. What this user values about the product.

- **Trendsetting (80% association):** Express your unique...
- **Fresh (50% association):** Items feature cutting-edge...

2. What this user values about the shopping experience.

- **Effortless (90% association):** Shopping should be smooth...
- **Personalized (75% association):** Tailored product recomm...

Begin the chat by simply saying: 'Hello! What can I help...

Test input



You

Can you help me find a dress for a formal event?



Bot

Of course! I'd love to help you find the perfect dress for your formal event. Since you're looking for something for a special occasion, I'll focus on our trendsetting and fresh styles that will make you stand out. Could you please provide me with some more details? Such as your size, preferred colors, and any specific styles you have in mind? This will help me narrow down the options for you!



You

Um...do you have anything in blue?

Test output



Bot

Absolutely! Blue is a fantastic choice for a formal event. Let's see what we have available.

I've found a couple of options that might catch your eye:

Elegant Navy Gown: This gown features a sleek silhouette with a hint of shimmer in the fabric. It's perfect for a formal affair and will definitely make a statement.

Powder Blue A-Line Dress: For a more subtle yet sophisticated look, we have this A-line dress in a soft powder blue. It's timeless and elegant, perfect for various formal occasions.

Would you like more details on either of these options, or are you looking for something specific like a certain length or neckline?

Compete multiple models/ systems against each other.

Choosing a “best” system leaves too much value on the table.

- 42.8% of users showed no positive response to best-performing system.
- Worst-performing system worked for 15.1% of users, and exclusively worked for 8.8%.
- 17.4% of users showed positive response to multiple systems.

System	% users
A	45.4%
B	16.8%
D	11.7%
C	8.8%
A, B	4.9%
A, D	3.5%
A, C	2.5%
B, D	2.0%
B, C	1.5%
C, D	1.1%
A, B, D	0.7%
A, B, C	0.5%
A, C, D	0.3%
B, C, D	0.3%
A, B, C, D	0.1%

**YOU BUILD SEGMENTATION
MODELS AND LIFECYCLE TRIGGERS**

**I BUILD FULL-PERSONALIZATION
AGENTIC INFRASTRUCTURE**

**WE ARE
NOT THE SAME**



schaun@aampe.com

in

schaunwheeler

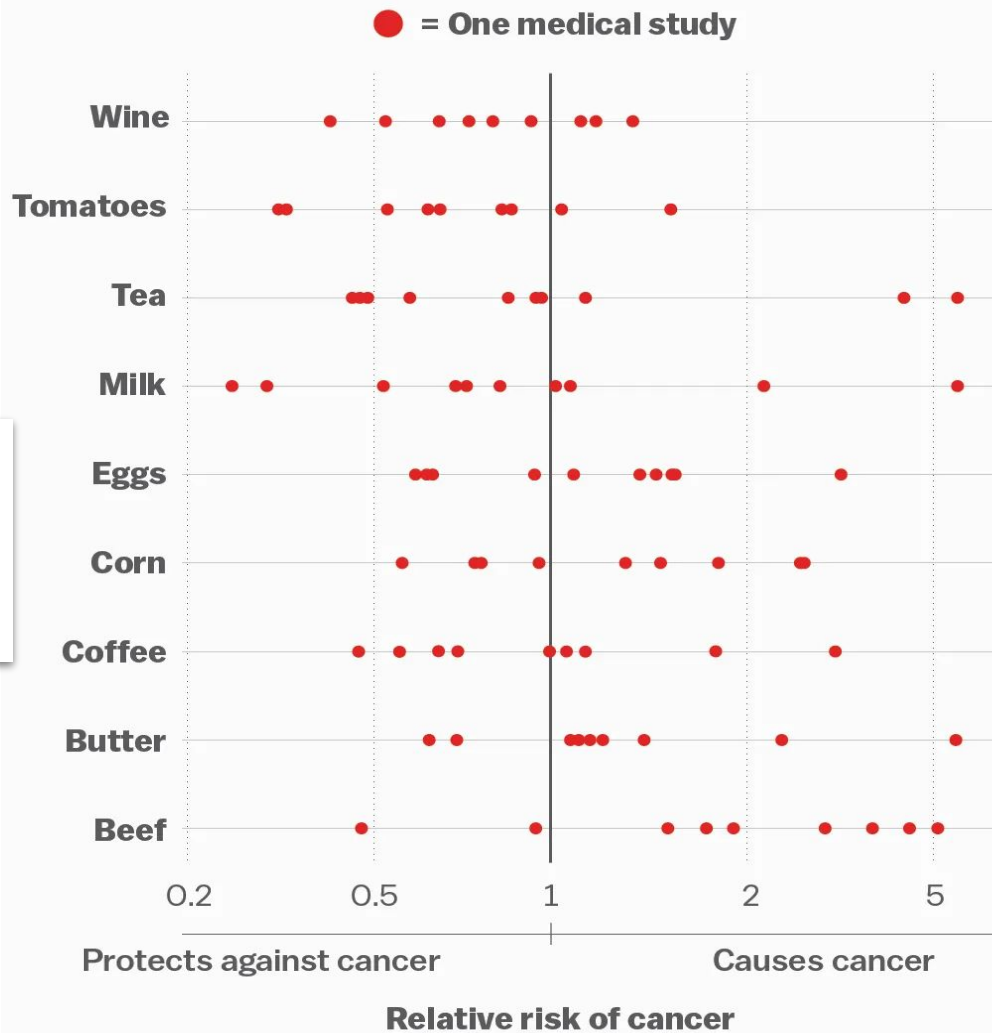
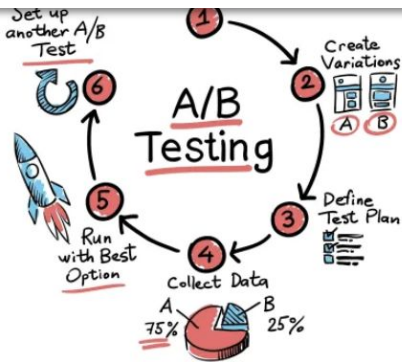
Backup slides

Guest

Why most A/B tests give you bullshit results

Justin Megahan, Mixpanel

[AppSumo](#) revealed that only 1 out of 8 tests produce results. [Kaiser Fung](#) estimates that 80 to 90 percent of the A/B tests he's run yield statistically insignificant results.



"Better"
decisions
aren't
better if
they're not
durable.

You
in an
A/B test



You in a
bandit
algorithm



I GOT 99 PROBLEMS



BUT CONTENT AIN'T ONE.

Generative AI creates a huge amount of differentiated content.

All by itself, that's another problem, not a solution.