Experimenting towards company-level observability

Bart Enkelaar | SRE NL | June 20th, 2024

bol.

Bart Enkelaar

Principle Tech Lead - SRE

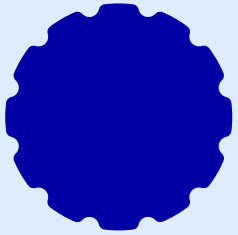
About me

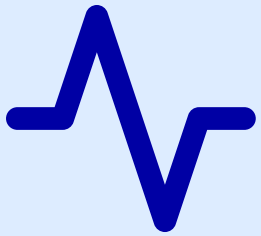
- Dev since 2008
- @bol since 2014
- SRE since 2019

bol.
CORE

bol.
150ish
DevOps
1000ish
You build it, you run it, you love it

bol. ∞ DevOps





Product

Platform

Support

Tech Leads
Security
Architecture
SRE

bol. ∞ DevOps

Product

- Defines their own metrics
- Defines their own logs
- Defines their own alerts
- Runs their own daytime support
- While bounded within their own systems, runs their own incidents

\+

- Great awareness of local application availability
- Rapid fixing of localized bugs

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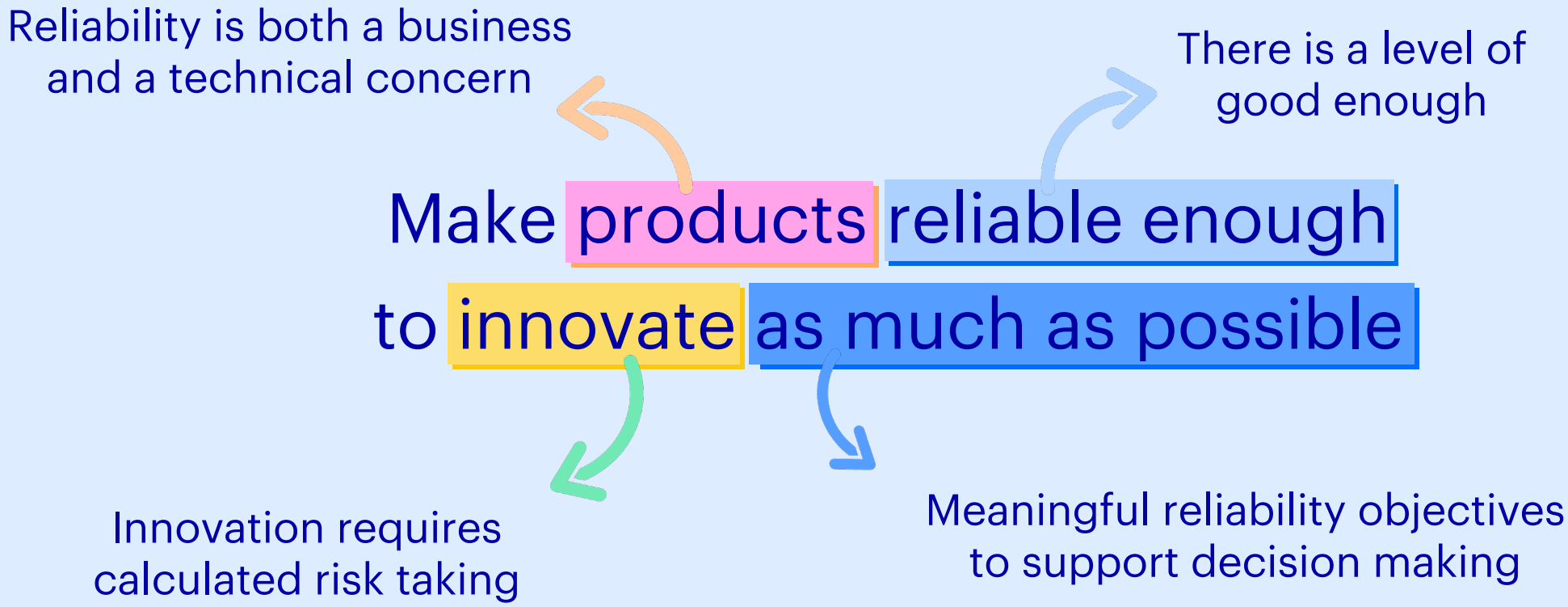
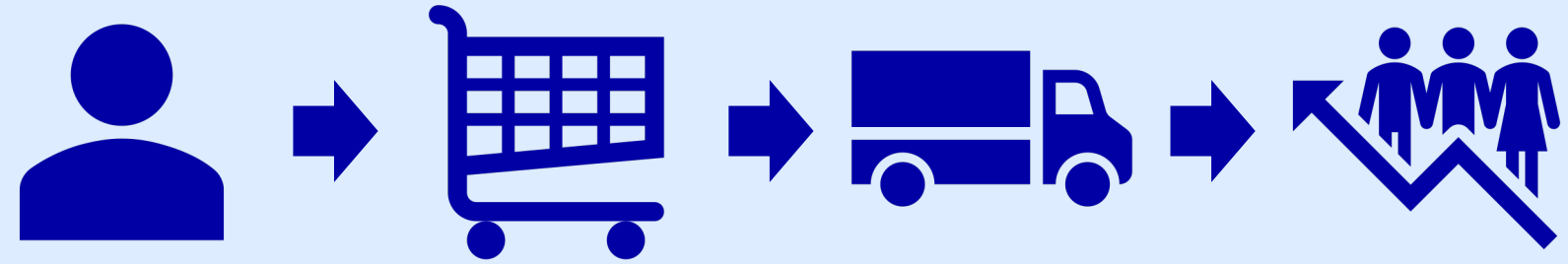
- Limited visibility of costly integration failures
- Hard to manage risk based on holistic user impact

Vision - SRE

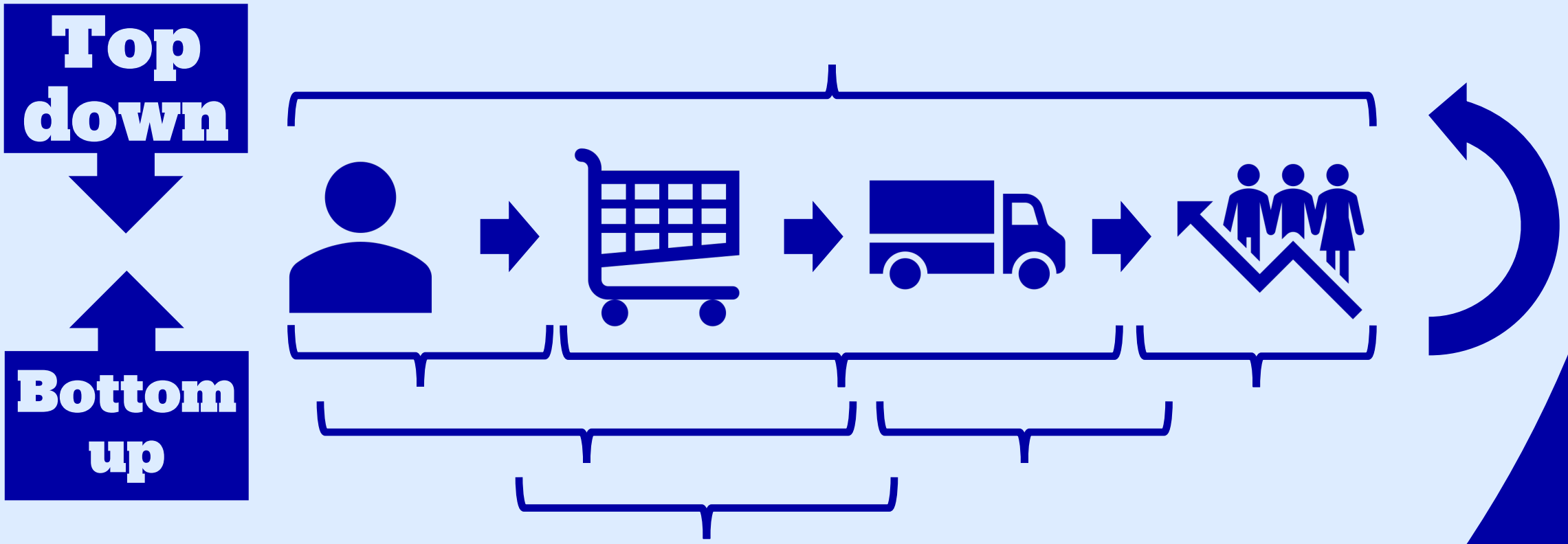
Setting bol up for reliability success



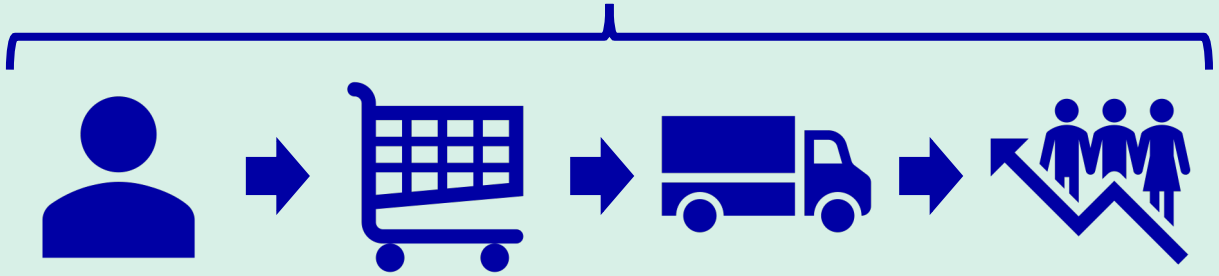


End-to-end observability

End-to-end observability



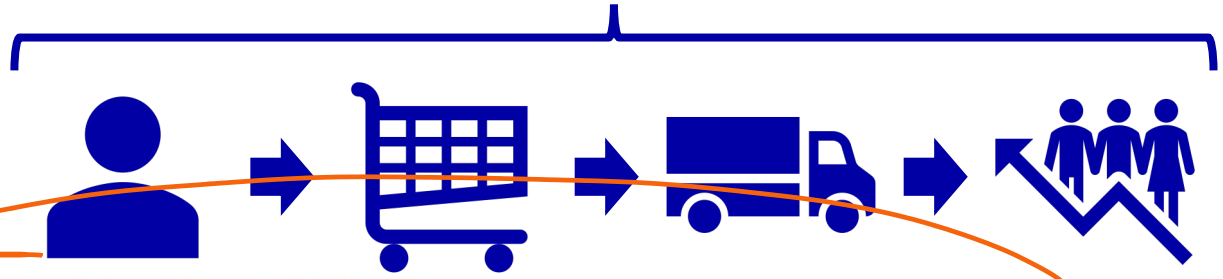
Top-down approach



Solution design

- End to end measurements
- Full system coverage
- Real user impact

Use case



Met Select **Geen extra verzendkosten** **Onbeperkt** alle bezorgopties **Geen ophaalkosten** meer

225 punten gespaard met **Select**

bol

paw patrol

Welkom
Bart

Categorieën Cadeaus & Inspiratie Aanbiedingen Zakelijk Cadeaukaart Bestelstatus Klantenservice NL

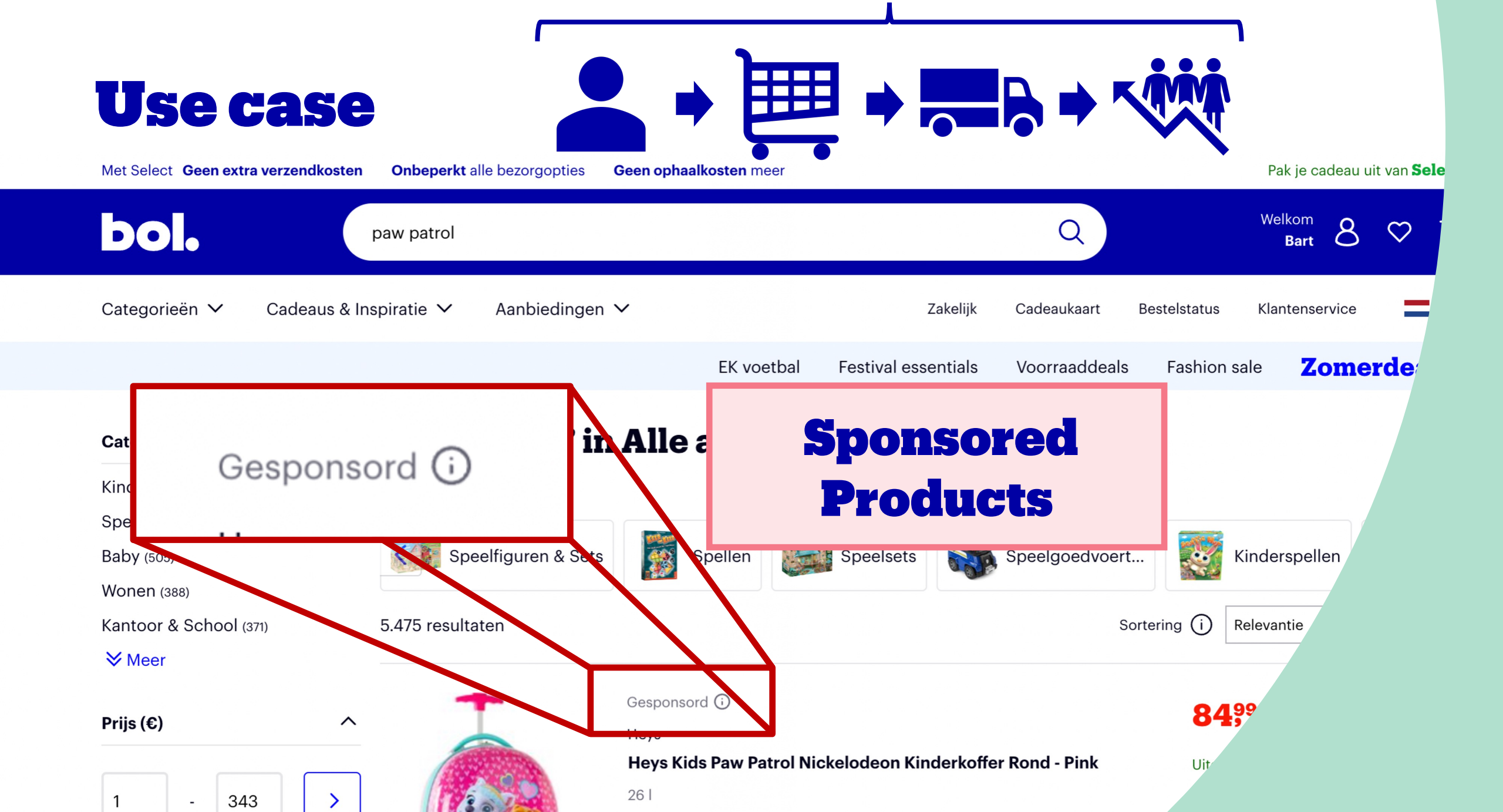
EK voetbal Festival essentials Voorraaddeals Fashion sale **Zomerdeals**

OUTLET

op = op

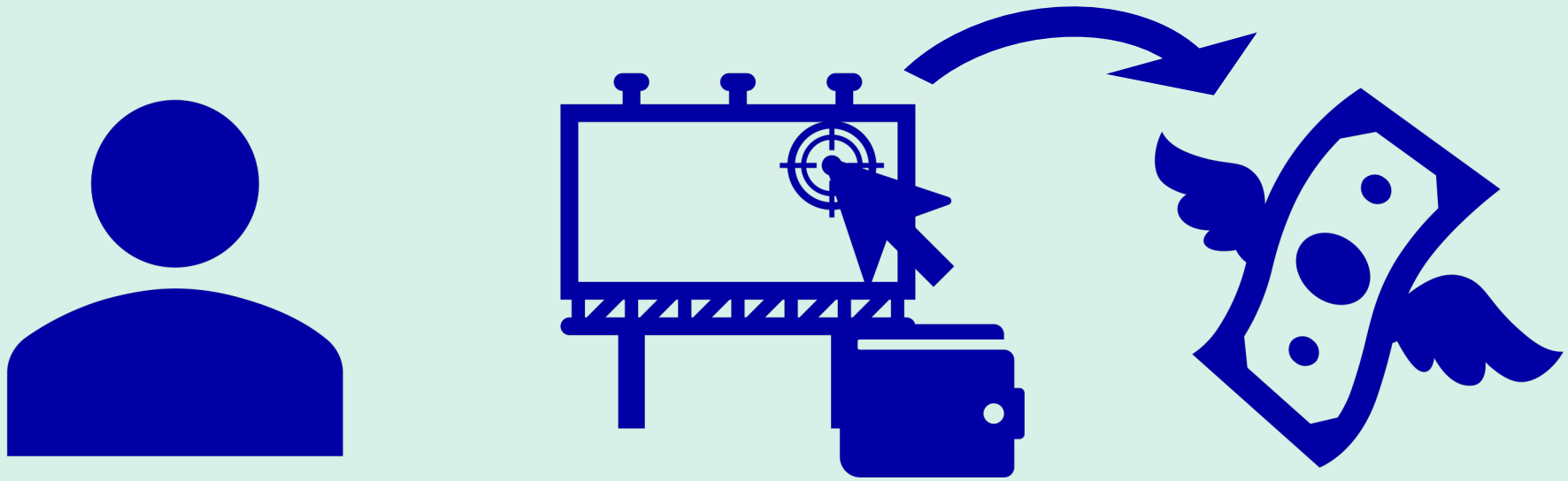
Hoge korting*

Use case



Met Select Geen extra verzendkosten
Onbeperkt alle bezorgopties
Geen ophaalkosten meer
Pak je cadeau uit van Sele
bol.
paw patrol
Welkom
Bart
Categorieën
Cadeaus & Inspiratie
Aanbiedingen
Zakelijk
Cadeaukaart
Bestelstatus
Klantenservice
EK voetbal
Festival essentials
Voorraaddeals
Fashion sale
Zomerde
Gesponsord
Sponsored Products
Baby
Wonen (388)
Kantoor & School (371)
Meer
Speelfiguren & Sets
Spellen
Speelsets
Speelgoedvoert...
Kinderspellen
5.475 resultaten
Sortering
Relevantie
Prijs (€)
1
343
Gesponsord
Heys Kids Paw Patrol Nickelodeon Kinderkoffer Rond - Pink
26 l

Sponsored Products



Campaign billing user journey

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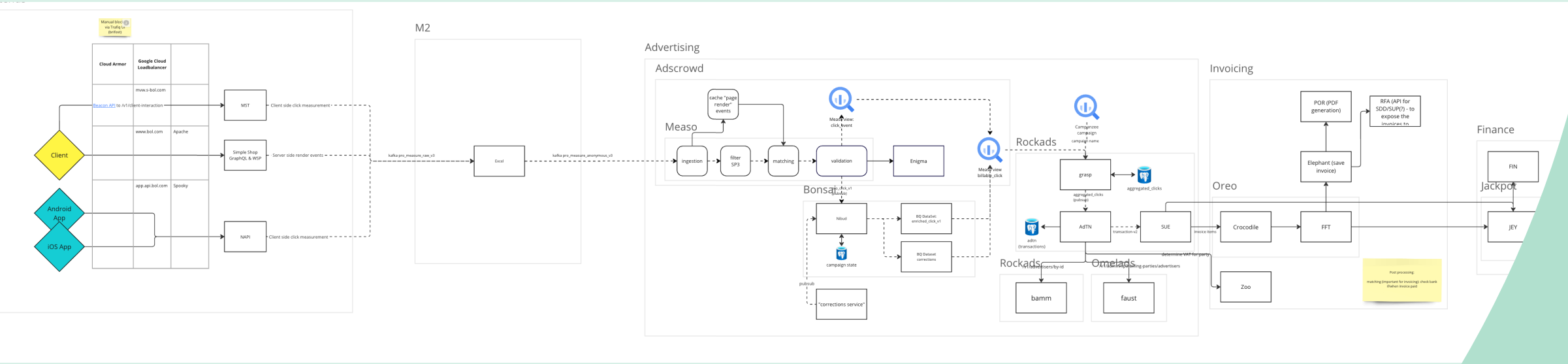
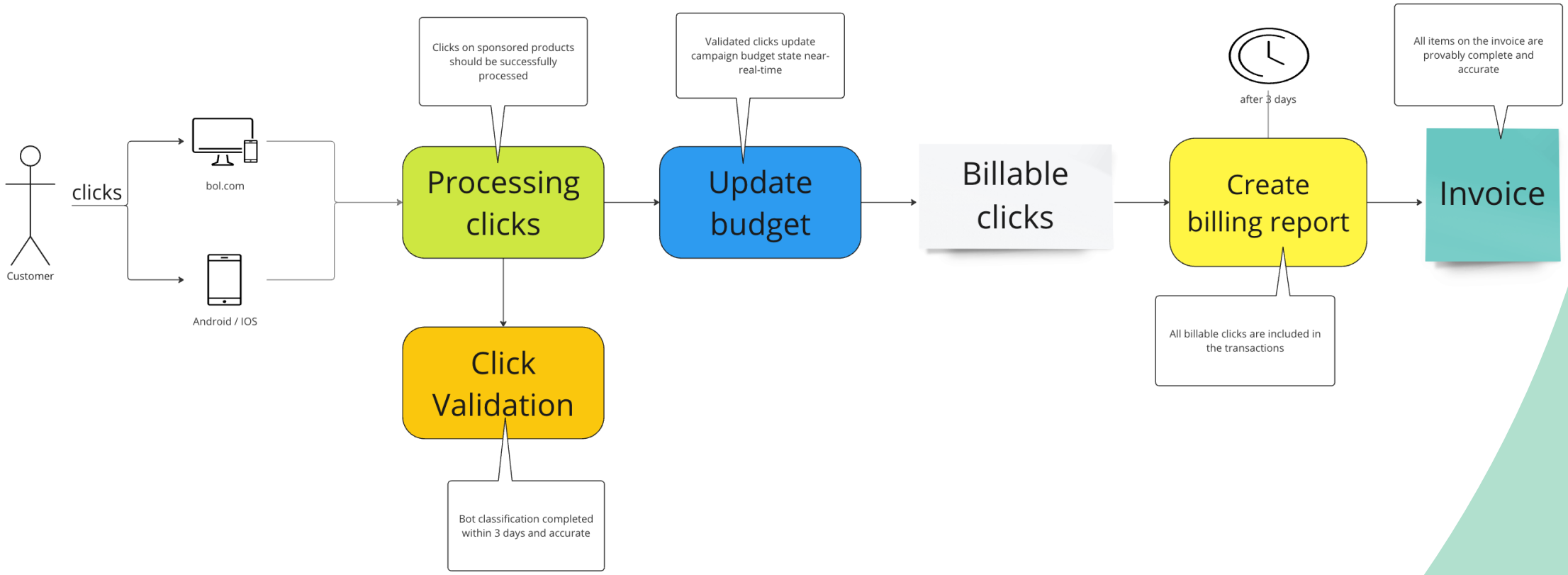


Campaign billing user journey



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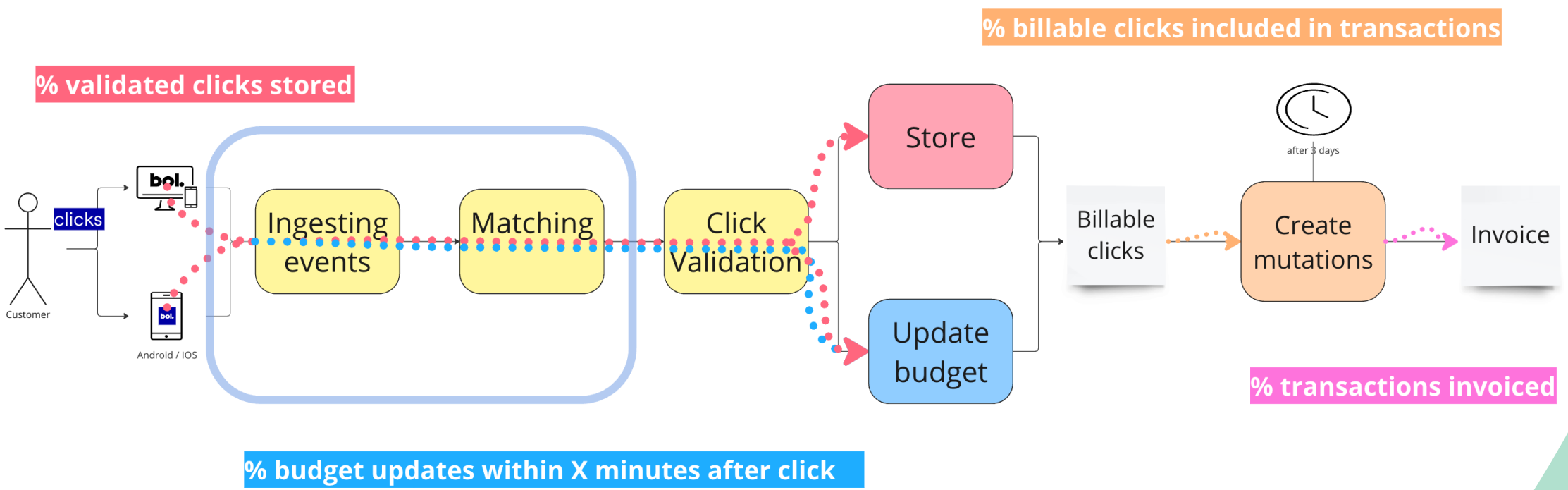

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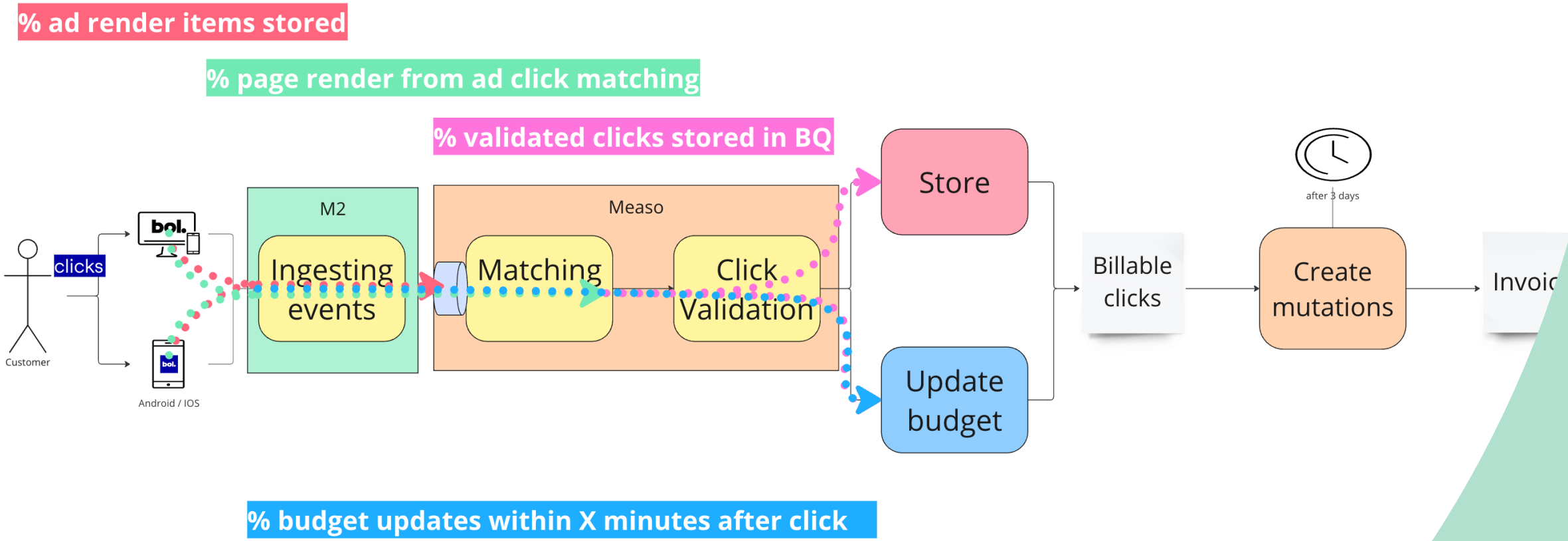

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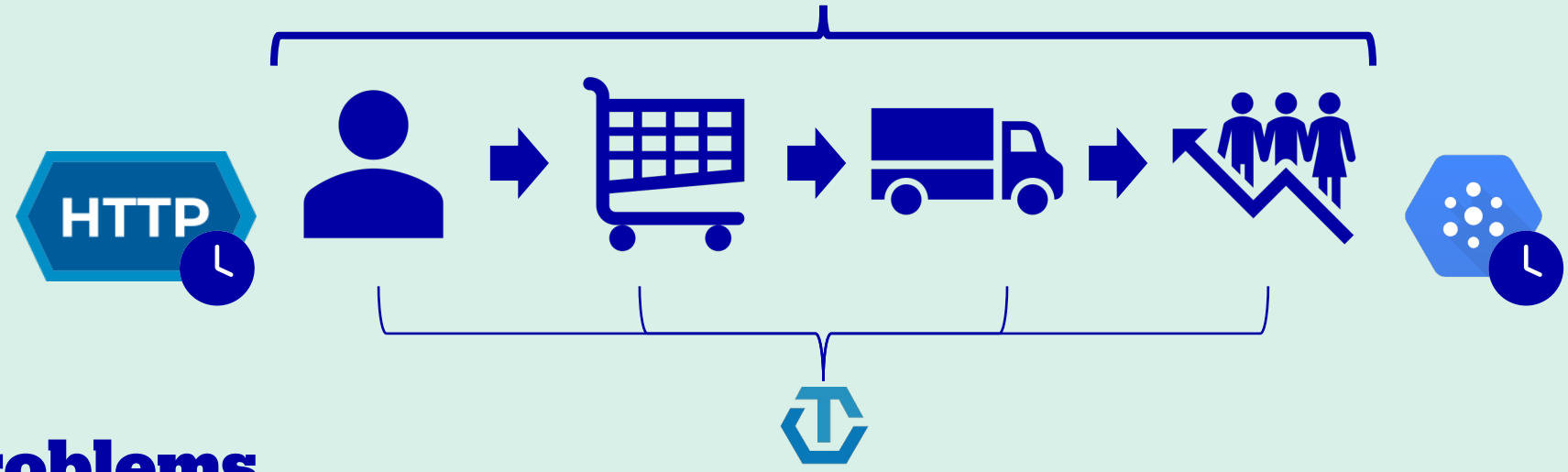
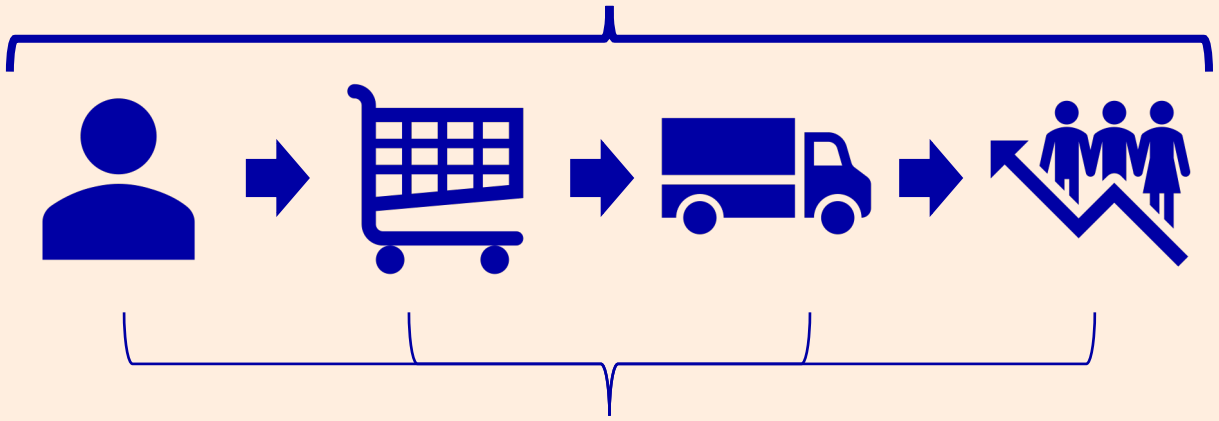
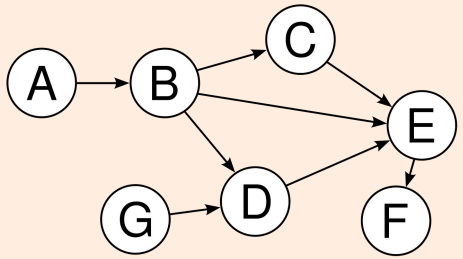


Problems

- Hard to scale up – throttling brings uncertainty
- A-synchronous support for distributed tracing is still very limited
- Hard to unify branching message paths
- Identity-based counting doesn’t work across aggregation steps

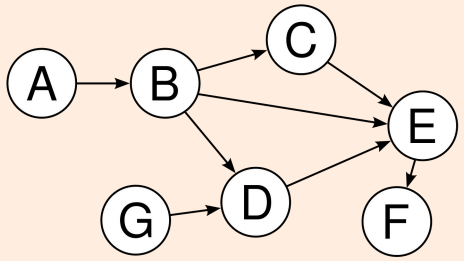
Value Chain Observer

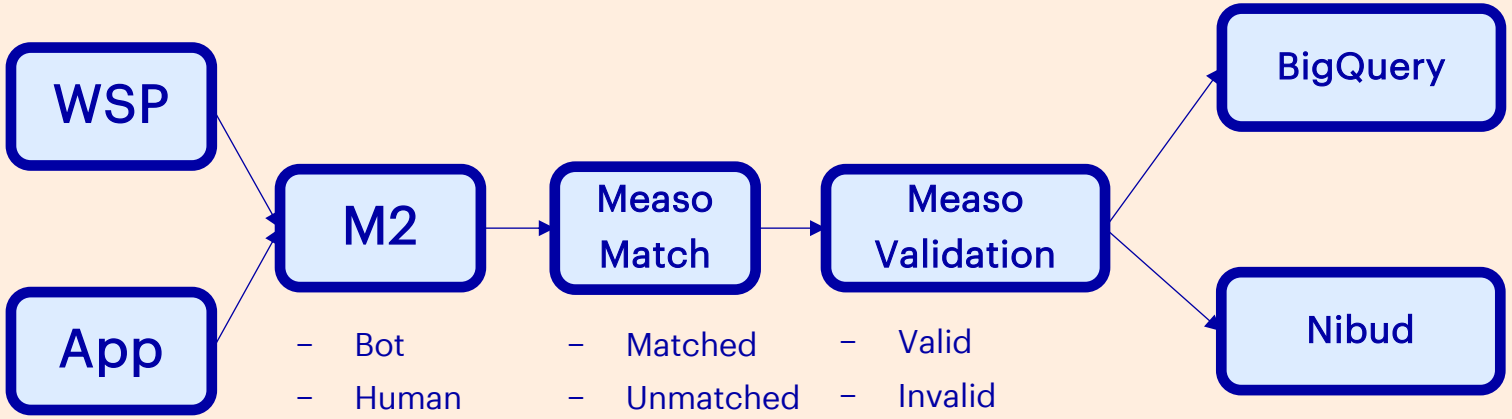




- Define user journey DAG
- For each point define possible outcomes (success/failure/follow-up)
- Count events bucketed on time of source event
- Correlate buckets to get to required measurements
  - Coverage, latency, quality, etcetera

Value Chain Observer





% ad render items stored

% page render from ad click matching

% validated clicks stored in BQ

% budget updates within X minutes after click

Conclusions

- Autonomy comes at a price
- End-to-end measurement of reliability is important
- Distributed tracing is not the answer to all problems
- Event counting can be used to broaden possibilities

Thank you