



Privacy UX Truths and Design Guidelines

Presented by



Manya Sleeper
UX Researcher



Johanna Woll
UX Writer



While technology and regulation may change rapidly, there are **fundamental truths about privacy UX** that remain constant over time

Understanding these truths can
help us **design products** that
respect users' privacy

3 privacy truths

Representing user needs
drawn from research

3 design guidelines

to address these truths in
products

3 privacy truths





Alyssa

School Teacher
2009

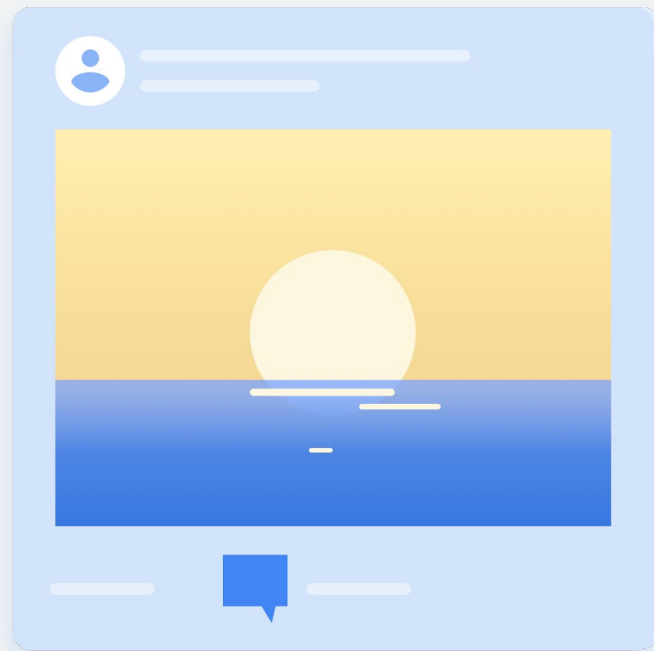


2009

- *Avatar* was the top grossing film
- The year of the social network
- No Instagram

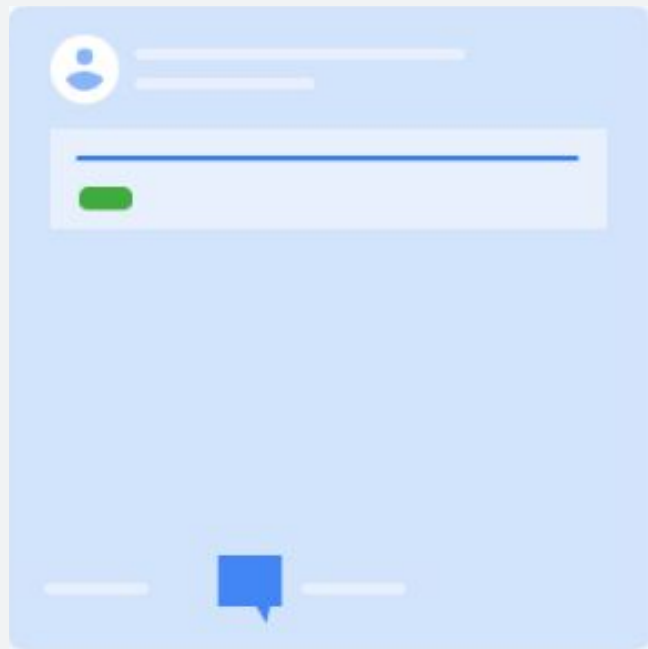


Alyssa loves
social networks.



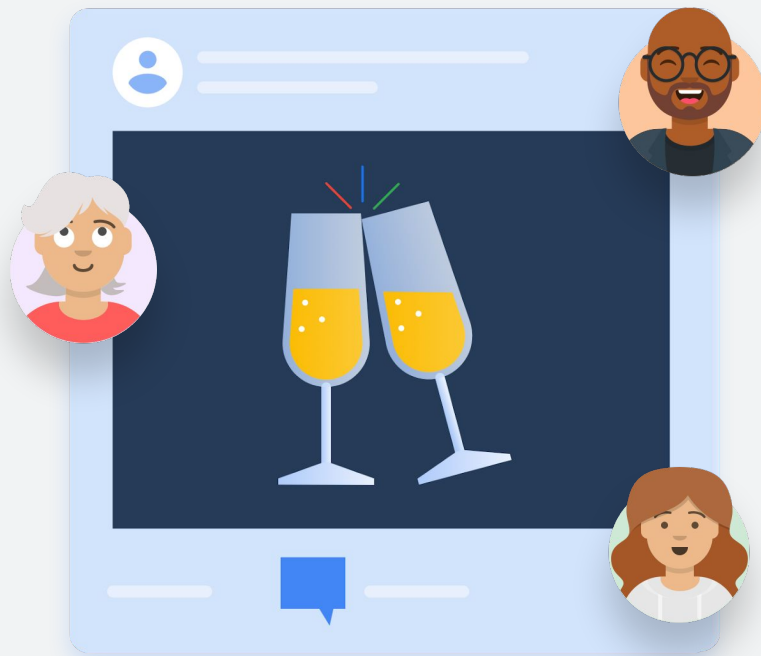


She is trying to lose weight, and is worried her friends **will see her weight loss ads.**



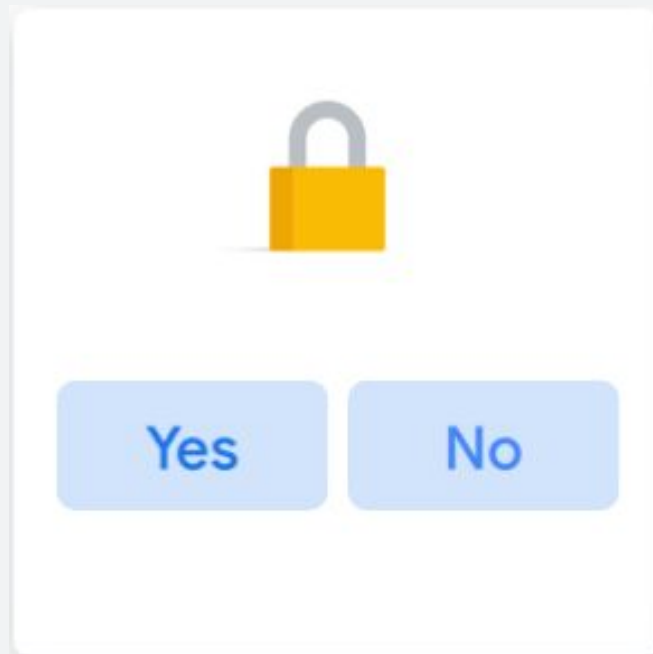


Alyssa was tagged in a picture, and is worried that **her boss may have seen it.**





Despite having these concerns, she still **dismisses privacy reminders.**





Riku

Financial Advisor
2019

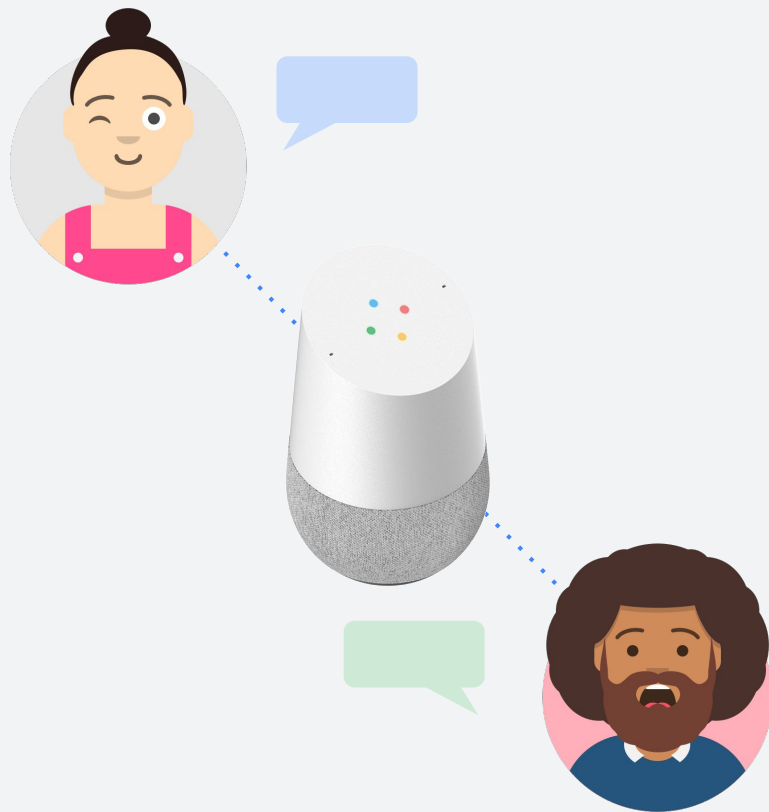


2019

- *Avengers: Endgame* is the top grossing film
- IoT is on the rise
- Instagram is thriving



Riku loves new technology and has **invested heavily in IoT** throughout his home.





When he tried to access his settings, he was frustrated by the **overwhelming amount of information.**



Privacy UX truths remain consistent over time

3 themes about truths

around privacy UX needs
drawn from research

01



Privacy is **complex and contextual**.

02



Multiple factors shape privacy “ABCs”
(attitudes, behaviors, comprehension).

03



Privacy is often **not users’ main task**,
even though it’s important to them.

01



Privacy is complex
and contextual

Privacy is a **complex concept** with many interpretations

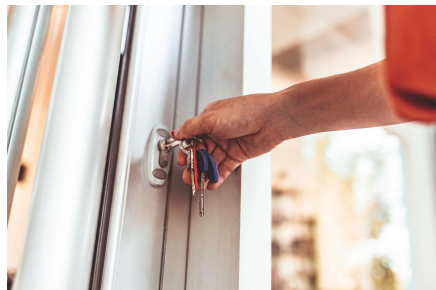


Sources: Privacy Illustrated, Oates et al. "Turtles, locks, and bathrooms...." *PETS*. 2018.

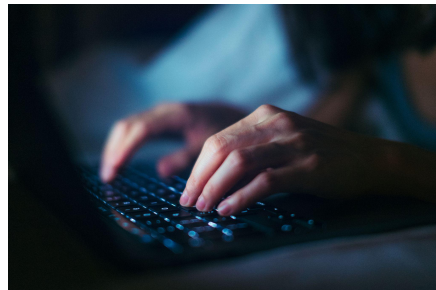
People face a **variety of security and privacy threats**



Companies



Local threats



Hackers



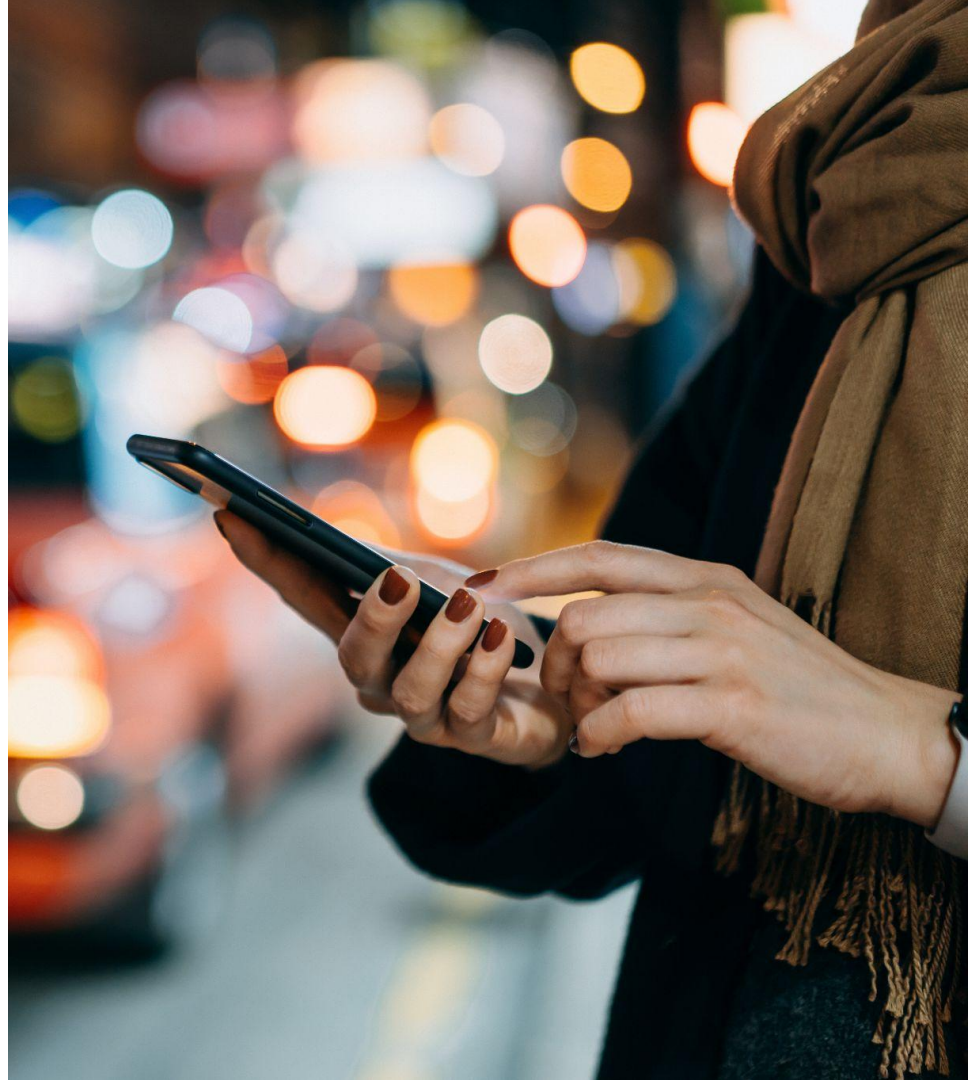
Government

Global survey participants were concerned about....

Hackers **77%**

Tech companies **47%**

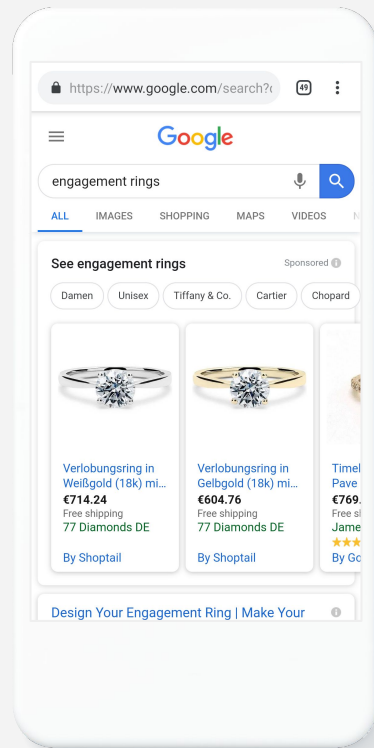
Friends & family **25%**

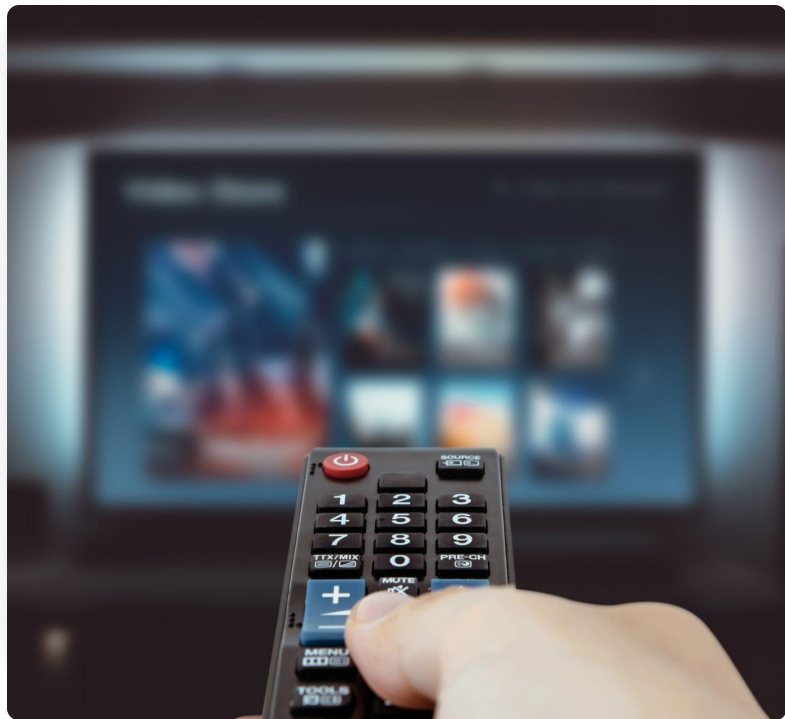


Privacy attitudes and needs are contextual — everyone is privacy sensitive sometimes

Sources: Nissenbaum "A contextual approach..." *Daedalus*. 2011., Solove "I've got nothing to hide..." *San Diego L. Rev.* 2007. Friedman et al. "The Watcher and the Watched." *Human-Computer Interaction*. 2006. Mazurek et al. "Exploring Reactive Access Control." *CHI*. 2011. Woodruff et al. "Would a privacy fundamentalist..." *SOUPS*. 2014. Agarwal et al. "Do Not Embarrass..." *SOUPS*. 2014.

A user might think it's generally useful to save their shopping activity...but might become privacy sensitive when looking for an engagement ring





“When I watch online movies, the movies open in a pop-up player of a third party. They don’t care about what kind of people are watching. They show **ads of scantily-clad women**. I was watching it with my mom [once] and it became pretty embarrassing.”

Source: Agarwal et al. “Do Not Embarrass...” SOUPS. 2014

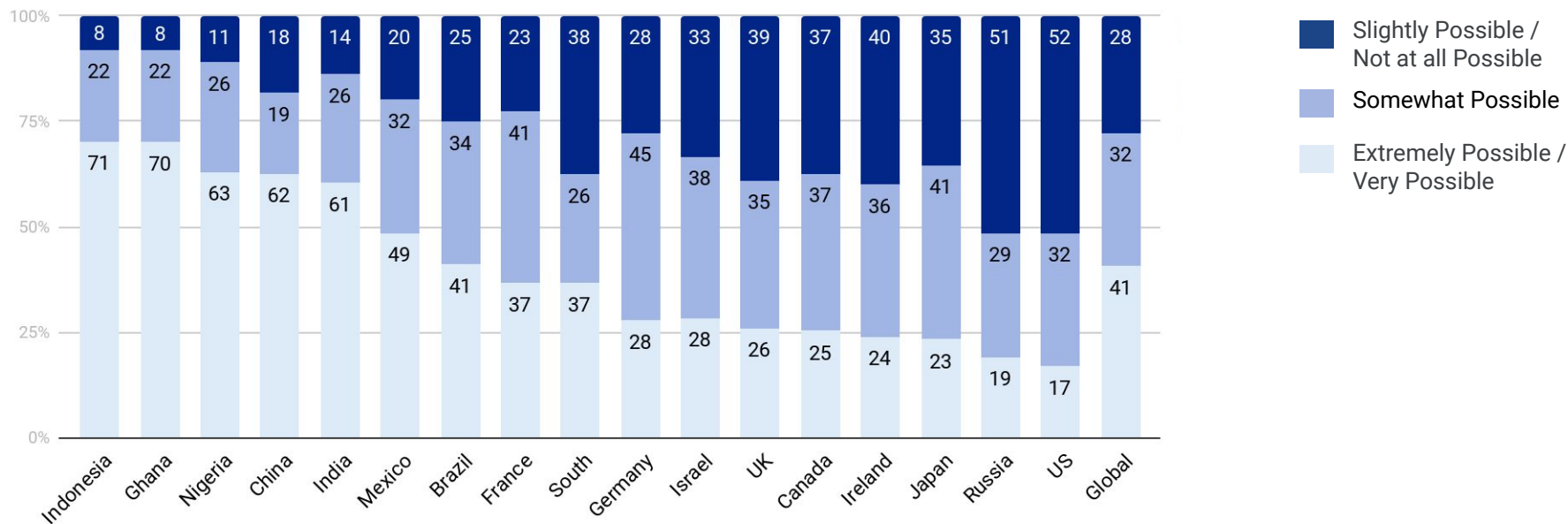
Geographic and cultural differences exist (and matter)

Sources: Cho et al. "Collective Privacy Management..." *ACM Trans.Comput-Hum Interact.* 2018, Cho et al. "A multinational study..." *New Media & Society.* 2009, CIGI-Ipsos Global Survey on Internet Security and Trust 2019, Li et al. Cross-Cultural Privacy..." *PETS.* 2017, Miltgen and Peyrat-Guillard "Cultural and generational influences..." *Eur. J of Info. Sys.* 2019, Rho et al. Differences in online privacy and security attitudes..." *ECIS.* 2018, Ur and Wang "A cross-cultural framework..." *WWW.* 2013.



Privacy perceptions differ across 15 countries

How possible is it for you to have privacy in today's world?



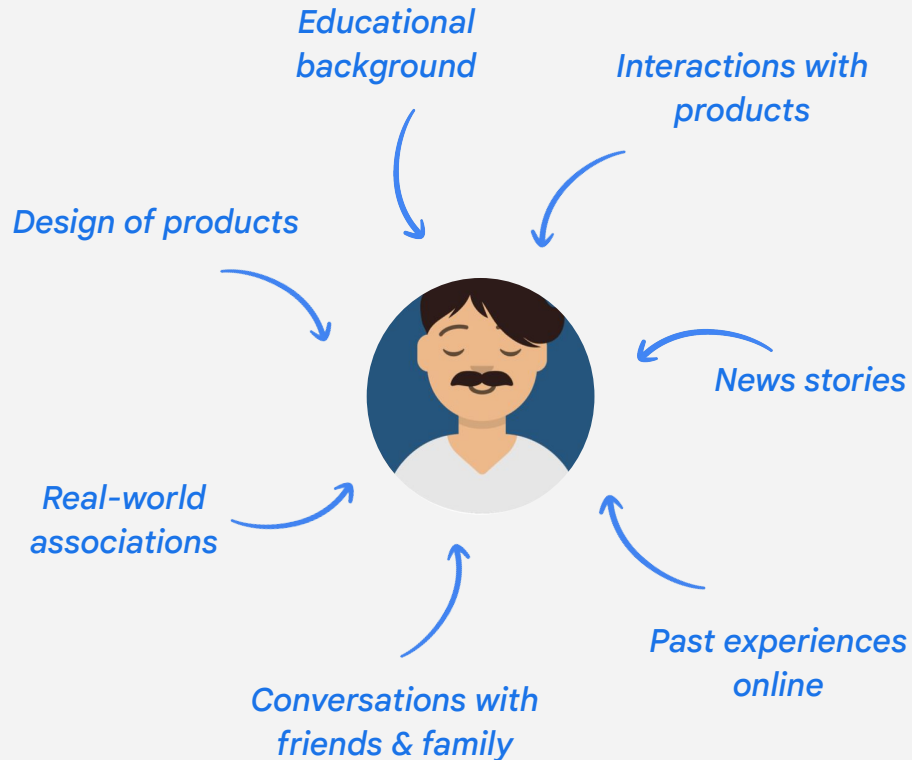
02

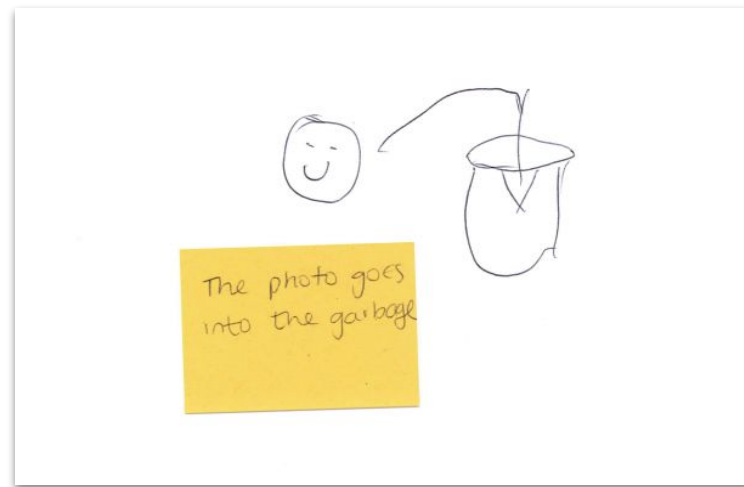
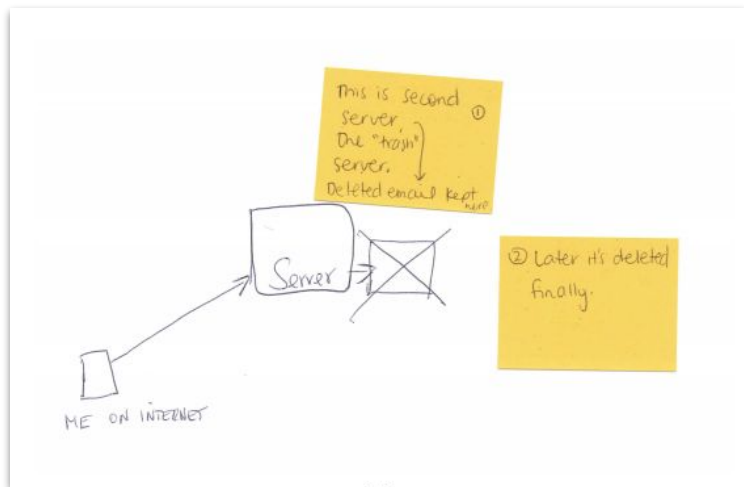


Multiple factors
shape privacy “ABCs”
(attitudes, behaviors, comprehension)

“Folk” models impact how people interact with and understand online systems

Sources: Kempton. “Two Theories of Home Heat Control.” *Cognitive Science*. 1986, Yao et al. “Folk models of online behavioral advertising.” *CSCW*. 2017, Kang et al. “My data just goes everywhere...” *SOUPS*. 2015. Wu and Zappala. “When is a tree really a truck...” *SOUPS*. 2018, Oates et al. “Turtles, locks, and bathrooms...” *PETS*. 2018, Eslami et al. “First I ‘Like’ it, then I hide it...” *CHI*. 2016, Fulton et al. “The Effect of Entertainment Media...” *SOUPS*. 2019





03



Privacy is often not
users' main task

Privacy is **often not**
users' primary task,
even though privacy
is important to them

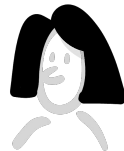


Privacy can become a primary task based on privacy / security events or life circumstances

Security or privacy events

Users may look for security or privacy settings after experiencing a potential or actual security or privacy event (e.g., news stories, account compromise, security alerts, etc.)

A user might see a segment about hackers on the morning news and want to make sure Google is really keeping my emails safe



Life circumstances

At-risk users may face circumstances that put them at greater risk (e.g., survivors of intimate partner abuse, activists, journalists, etc.)

A survivor of intimate partner abuse might focus on how to prevent their abuser from accessing their location



Sources: Sleeper et al. "Tough times at transitional homeless shelters." *CHI*. 2019, Matthews et al. "Stories from survivors..." *CHI*. 2017, Angulo and Ortlieb. "'WTH...!?!' Experiences, Reactions and Expectations..." *SOUPS*. 2015.

People find **transparency,**
education, and control
helpful, but the wrong
balance can be harmful

Sources: Eslami et al. "Communicating algorithmic process in online behavioral advertising." *CHI*. 2018,
Samat et al. "Raise the Curtains..." *SOUPS*. 2017



Users typically want privacy when they need it, rather than as an interruption

“ I’m driving...you’re not going to distract me with a privacy notification...**It’d be better ‘no, thanks later’** - maybe on an email”



Design guidelines

3 early-stage design guidelines

to address these truths in product

- 01 **Deliver appropriate outcomes**
- 02 **Design for the context**
- 03 **Craft with care**

01

Deliver appropriate outcomes

Deliver appropriate outcomes



Privacy is complex
and contextual



Multiple factors shape
privacy “ABCs”

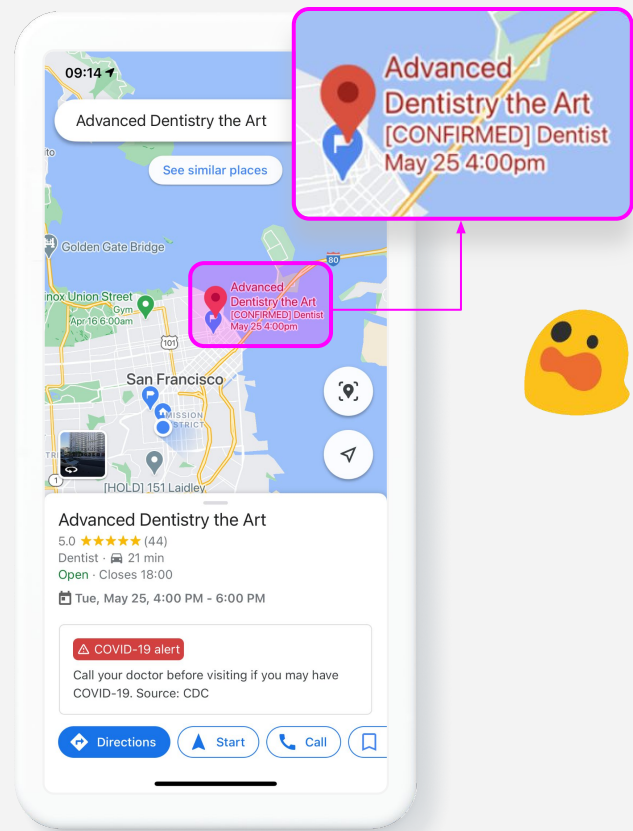


Privacy is often
not users’ main goal

Design around
**privacy-focused critical
user journeys**, instead of
privacy personas

Privacy problem

User may experience unexpected personalization



Deliver appropriate outcomes



Privacy is complex
and contextual



Multiple factors shape
privacy “ABCs”

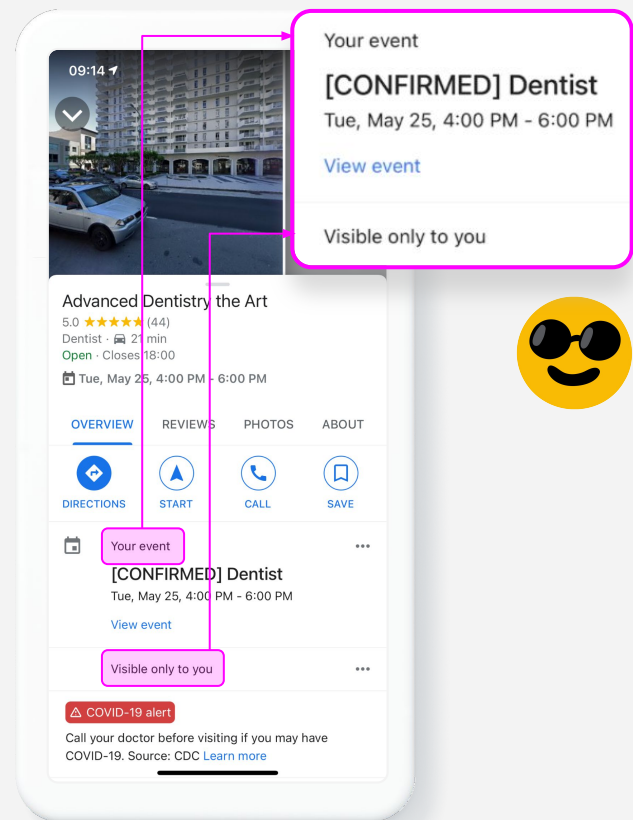


Privacy is often
not users’ main goal

Design around
**privacy-focused critical
user journeys**, instead of
privacy personas

Privacy CUJ

Provide easy access to feature explanation and control



Deliver appropriate outcomes



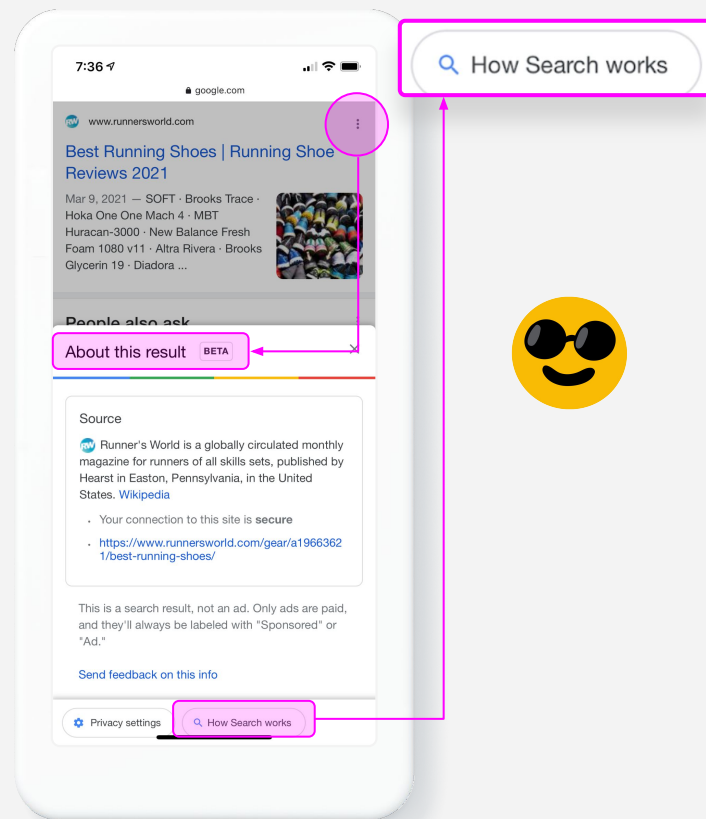
Privacy is complex and contextual



Design around
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Privacy CUJ

Provide easy access to feature explanation and control



Deliver appropriate outcomes



Privacy is complex
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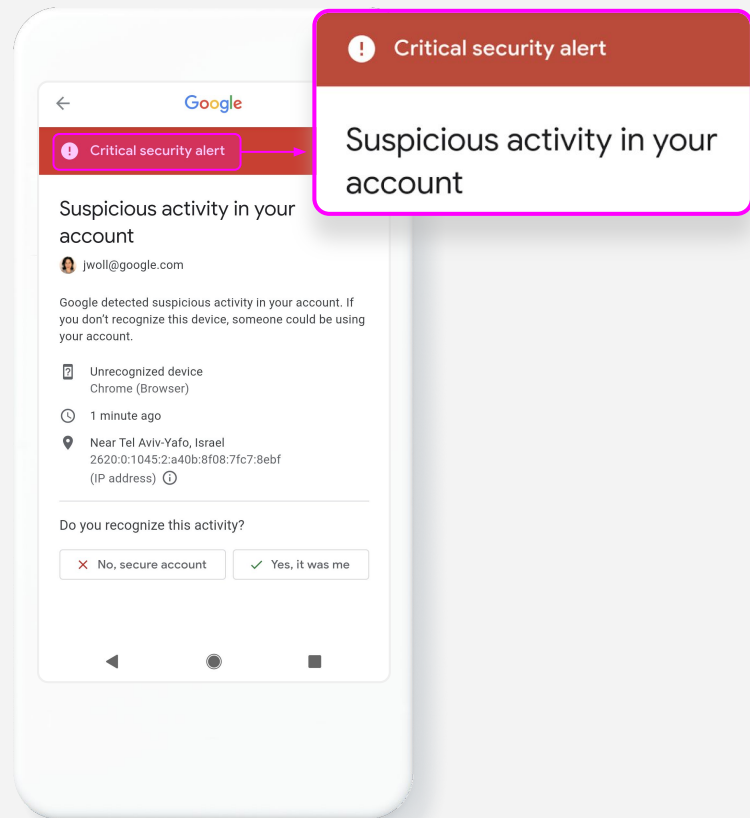
Multiple factors shape
privacy “ABCs”



Privacy is often
not users' main goal

Promote agency, at privacy touchpoints

Reactive



Deliver appropriate outcomes



Privacy is complex
and contextual



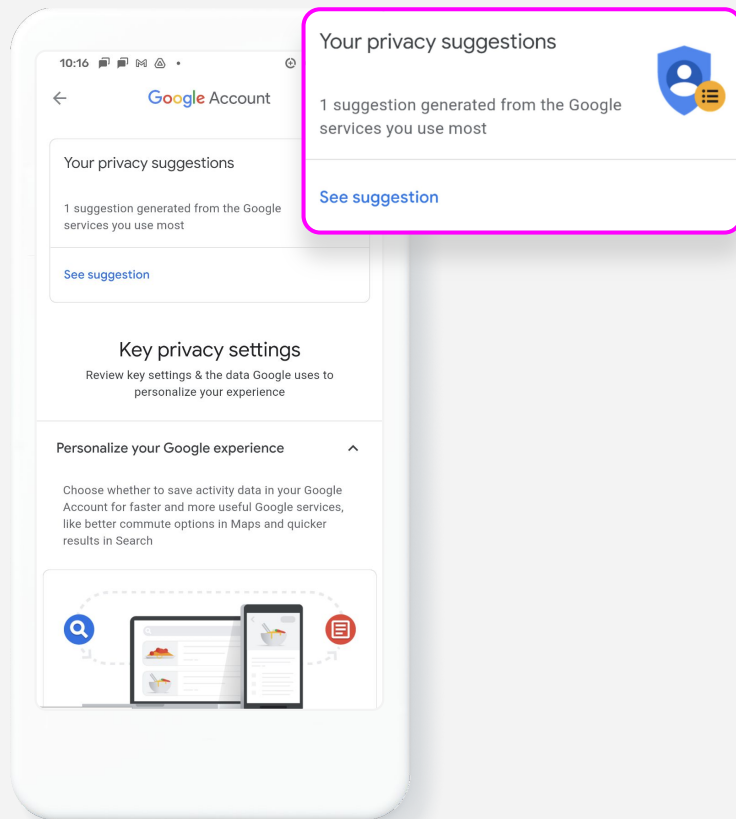
Multiple factors shape
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Privacy is often
not users’ main goal

**Promote agency,
at privacy touchpoints**

Proactive



02

Design for the context

Design for the context



Privacy is complex
and contextual



Multiple factors shape
privacy “ABCs”



Privacy is often
not users’ main task

Test for global context

Portuguese ▾

privacidade

noun

a **privacidade**
privacy

a **intimidade**
intimacy, privacy, familiarity,
nearness, inwardness, intimacy

o **segredo**
secret, secrecy, mystery,
confidence, privacy, concealment

a **reserva**
booking, reservation, reserve,
backup, reservoir, privacy

o **retiro**
retreat, retirement, withdrawal,
seclusion, den, privacy

German ▾

Privatsphäre

noun

das **Privatleben**
private life, privacy

die **Ruhe**
calm, rest, quiet, peace, silence,
privacy

die **Geheimhaltung**
secrecy, privacy

die **Zurückgezogenheit**
seclusion, privacy, retirement

die **Einsamkeit**
loneliness, solitude, isolation,
seclusion, solitariness, privacy

Hindi ▾

एकांत

ekaant

एकान्त
privacy, seclusion, intimacy,
loneliness, shadowy

noun

एकान्त स्थान
privacy, solitude, stowaway,
retirement

मुचता एकानता
privacy

French ▾

intimité

noun

l' **intimité**
privacy, intimacy, nearness

le **secret**
secret, secrecy, privacy, wrap,
stealthiness, hugger-mugger

la **solitude**
solitude, loneliness, seclusion,
privacy, desolation, retirement

Design for the context



Privacy is complex
and contextual

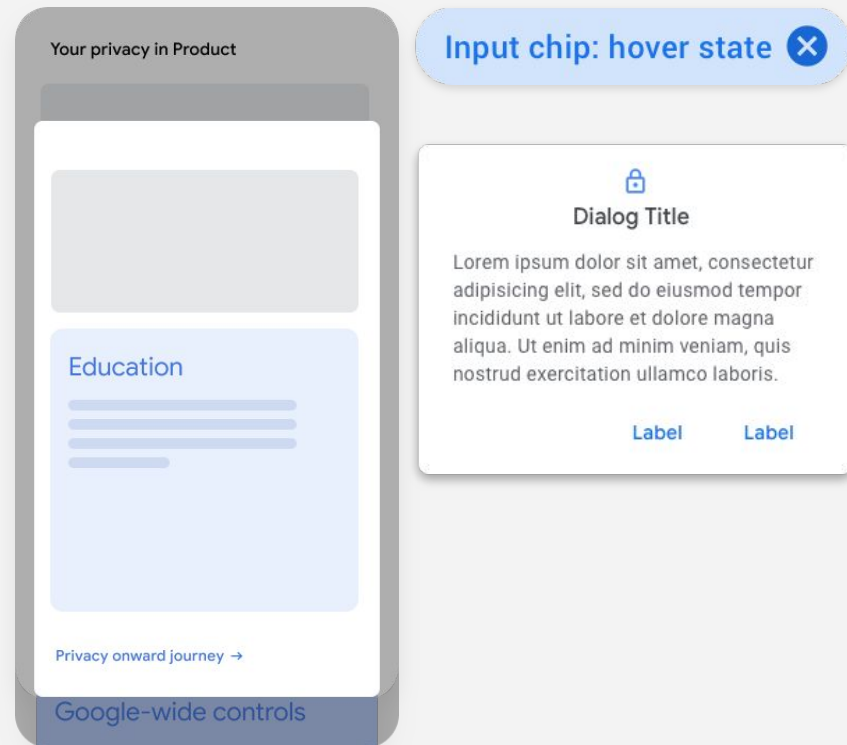


Multiple factors shape
privacy “ABCs”



Privacy is often
not users’ main task

Design with **progressive disclosure** to align with the user journey



Design for the context



Privacy is complex
and contextual



Multiple factors shape
privacy “ABCs”



Privacy is often
not users’ main task

Use content design for progressive disclosure

Google

For a better YouTube homepage, save your YouTube History

Step 2 of 5

Choose whether to save YouTube History

☐ **Keep activity until I delete manually**
Helps improve your YouTube experience with full personalization based on all your activity

☐ **Keep activity for 36 months**
Personalizes your experience based on history from the last three years

☐ **Don't save YouTube History in my account**
Limits the information used to personalize recommendations and tailor your YouTube homepage

How we use this saved data
Data saved in your account may be used in any Google service where you are signed in to personalize your experience, like giving you better recommendations, a tailored YouTube homepage, and videos that pick up right where you left off. [Learn more](#)

What data is saved
YouTube History saves your activity on YouTube, like videos you watch and things your search for. [Learn more](#)

How you can manage your data
You can see your data, delete it, and withdraw your consent for saving data at [account.google.com](#).

[Back](#) [Confirm](#)

Title

Subheadings

2nd info layer

Design for the context



Privacy is complex
and contextual

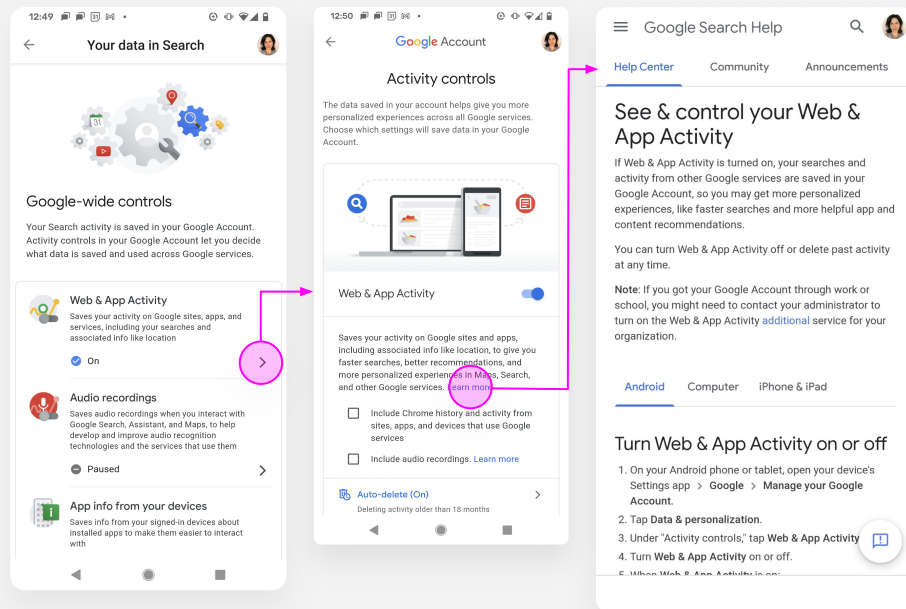


Multiple factors shape
privacy “ABCs”



Privacy is often
not users’ main task

Design with **progressive disclosure** to align with the user journey



Design for the context



Privacy is complex
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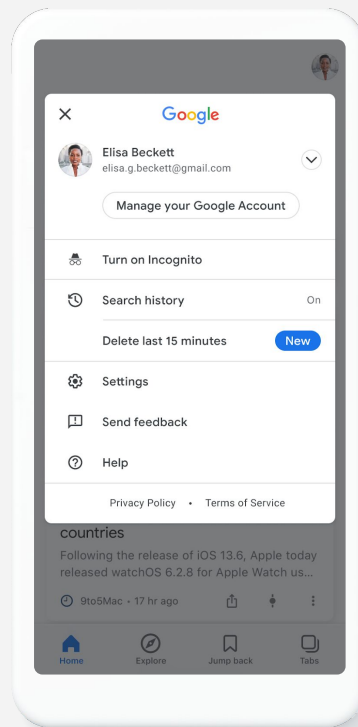
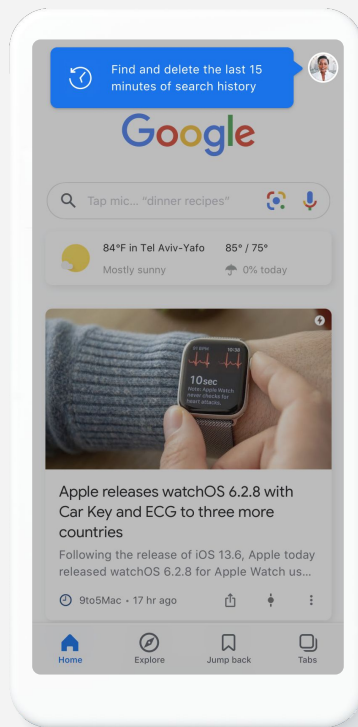


Multiple factors shape
privacy “ABCs”



Privacy is often
not users’ main task

Give users an **easy path**
to meaningful choices
and controls



Design for the context



Privacy is complex
and contextual



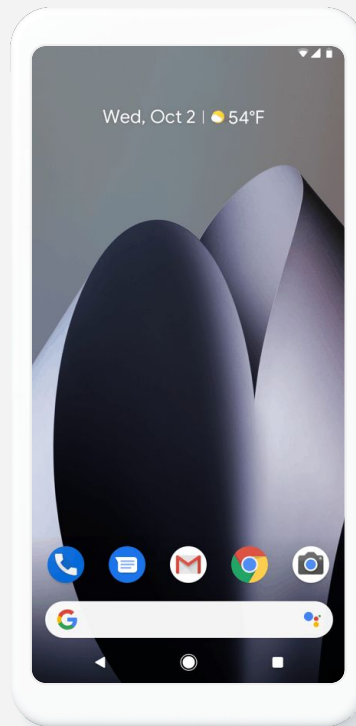
Multiple factors shape
privacy “ABCs”



Privacy is often
not users’ main task

Privacy Actions

- “delete the last thing I said to you”
- “forget everything I said today”
- “erase my history from last week”



03

Craft with care

Craft with care



Privacy is complex
and contextual

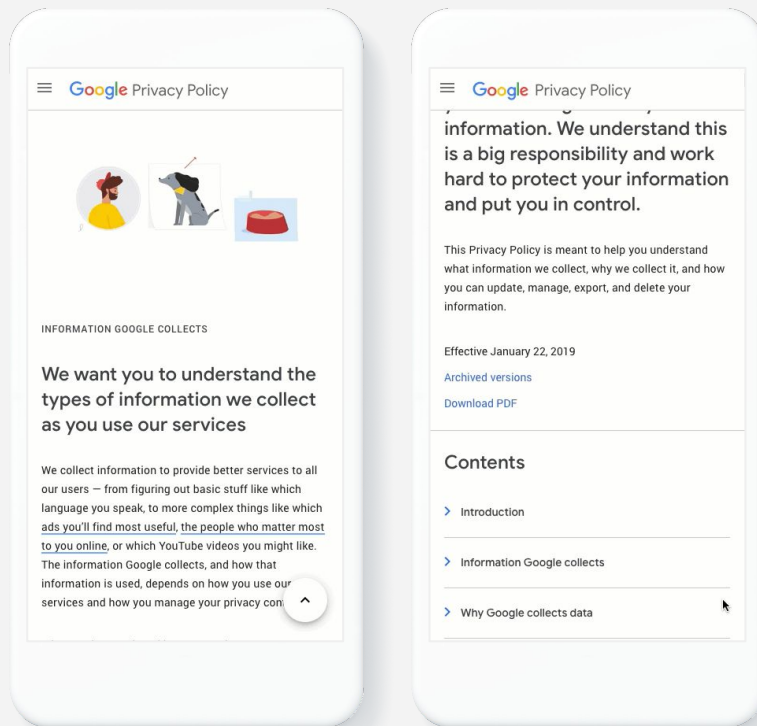


Multiple factors shape
privacy “ABCs”



Privacy is often
not users’ main task

Optimize for comprehension
by breaking up experiences
with design, illustration,
video, and real-life examples



Craft with care



Privacy is complex
and contextual

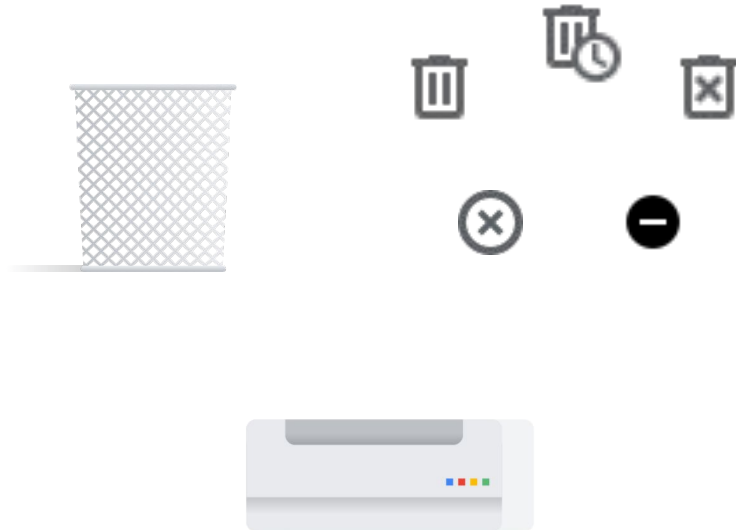


Multiple factors shape
privacy “ABCs”



Privacy is often
not users’ main task

Promote & enforce consistency



Craft with care



Privacy is complex
and contextual



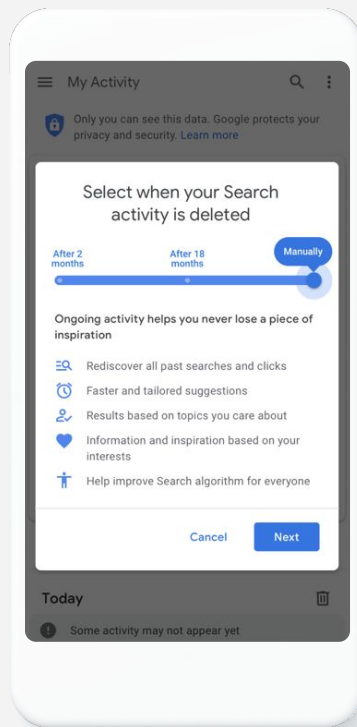
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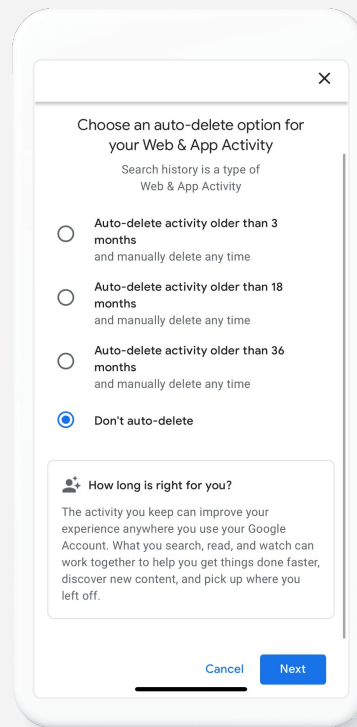
Privacy is often
not users' main task

Balance design tradeoffs,
so users don't need to

**Provide control
but not too many controls**



Before



After

Takeaways

Takeaways for the PEPR community

Privacy UX is a **challenging and constantly evolving** space...but we **can start by thinking about how to account for constants** (while adapting this guidance to specific product goals)

Takeaways for the PEPR community

But, this is just the start of the conversation...we'd like to challenge the PEPR community to expand and build on this set of "truths" and guidelines — what are fundamentals about user needs & design that our industry would benefit from?

Thank You



Manya Sleeper

UX Researcher
manya@google.com



Johanna Woll

UX Writer
jwoll@google.com



Anneke Glasius

UX Designer
annekeglasius@google.com



Gretchen Gelke

UX Manager
ggelke@google.com