

**PANOPTYKON
FOUNDATION**

**IS ONLINE ADVERTISING BROKEN
BY DESIGN? NAVIGATING PRIVACY
CHALLENGES IN ADTECH**

@ka_iwanska

Digital ad spend, worldwide, 2015-2021 (\$US billions)

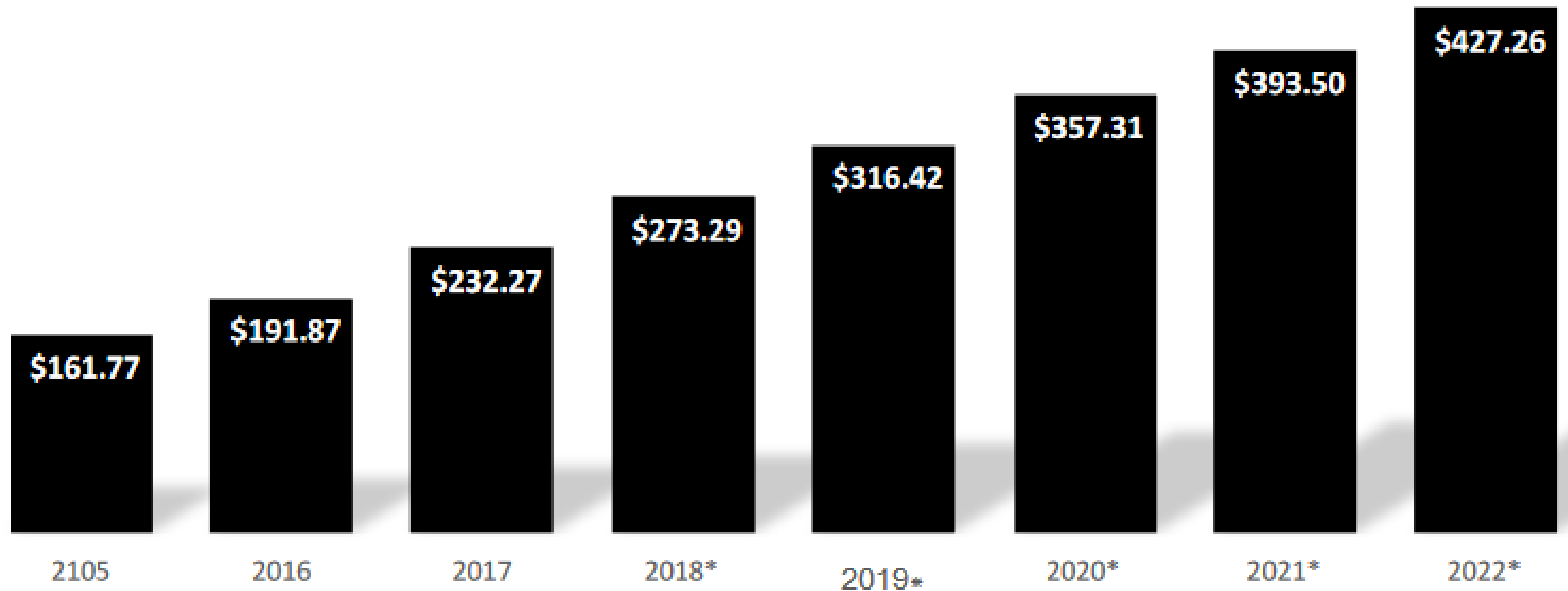


Figure 1: Digital Ad Spend Worldwide, 2015-2022³

2011



~150

2012



~350

2014



~1,000

2015



~2,000

2016



~3,500

2017



~5,000

2018



~6,800

2019



7,040

what the machine thinks about you

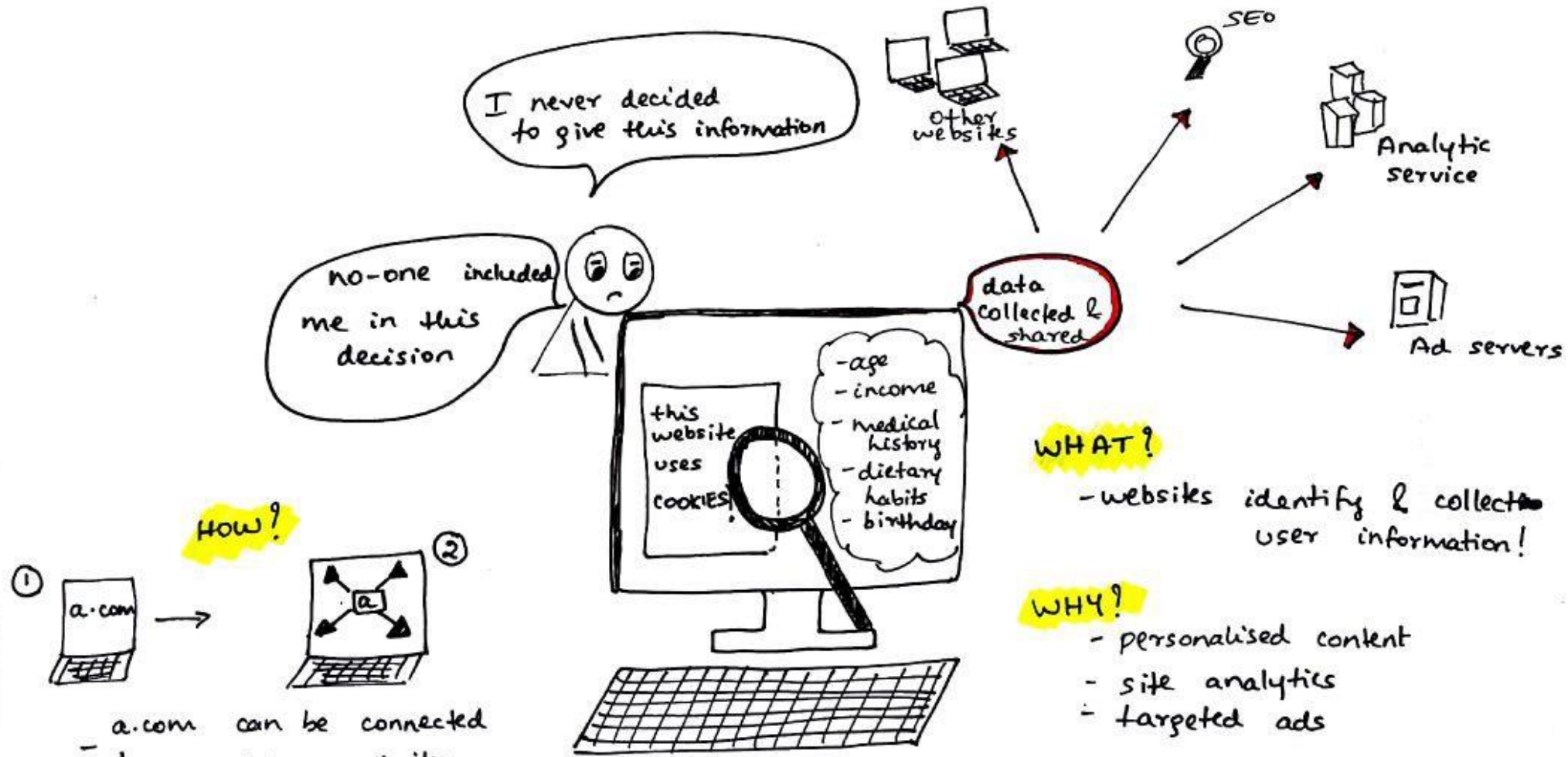
What your behaviour tells them

What you share



- level of education (real)
- former places of living
- place of work
- line of work
- professional skills
- new job
- ethnic affinity
- family members
- professional relationships
- religious views
- political affiliations
- psychometric profile
- high/low esteem
- IQ level
- mental illness
- rating (reputational systems)
- income level
- quit a habit
- overcame an illness
- expecting a baby
- pregnancy
- loss of a loved one
- new relationship
- language spoken at home
- lonely
- interested in dating
- interested in man
- interested in woman
- proximity to business location
- away from family
- away from hometown
- long distance relationship
- customer type, such as:
- conscious shopper
- compulsive shopper
- home stayed mom
- influencer/observer
- instagram user
- unemployed
- promoted
- gay/lesbian
- newly engaged (3.6 or 12.5...)
- actions performed on the site
- number of interactions /posts per day
- content consumed
- online purchase history
- shopping patterns (routine)
- mouse movements tracked
- keystroke dynamics (incl. misspelling and typos)
- typing speed
- device position and orientation
- distance from other devices
- ignored content
- articles/posts clicked
- number of devices connected
- plug-ins used
- time zone (device)
- visited websites
- ads viewed
- ads clicked
- ignored interactions
- number of posts clicked
- relationships (declared)
- education (declared)
- profession (declared)
- birth date
- linked accounts
- postal addresses (shopping)
- phone number(s)
- email(s) used
- social media handles
- hashtags used
- language (device)
- logins and passwords
- groups entered
- blocked contacts
- likes & other reactions
- search terms
- uploaded photos
- photo metadata
- people tagged on photos
- emoji used
- tests and surveys
- products and...
- data transfer times
- internet connection frequency
- connection times
- internet
- data transfer frequency
- data transfer times
- data transfer frequency
- data volume transferred/received
- protocols used
- VPNs used
- visited websites statistics
- apps usage patterns
- phone calls history
- SMS history
- full referral URLs
- secure browsing feature
- keep me logged in status
- removed braces
- broken bone
- glasses / contacts
- weight loss
- new eating habits
- home improvement
- bought a home
- place of living
- former places of living
- place of work
- line of work
- professional skills
- new job
- ethnic affinity
- family members
- professional relationships
- religious views
- political affiliations
- psychometric profile
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- home stayed mom
- influencer/observer
- instagram user
- unemployed
- promoted
- gay/lesbian
- newly engaged (3.6 or 12.5...)
- new instrument
- new hobby
- new language
- tattoo or piercing
- achievement or award
- changed beliefs
- luxury goods
- shopping
- fashion accessories
- coffee
- wine
- distilled beverage
- beer
- weight training
- running
- meditation
- gyms
- dieting
- bodybuilding
- real estate
- new sport
- new language
- tattoo or piercing
- achievement or award
- changed beliefs
- luxury goods
- shopping
- fashion accessories
- coffee
- wine
- distilled beverage
- beer
- weight training
- running
- meditation
- gyms
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- bodybuilding
- real estate

WEB TRACKING

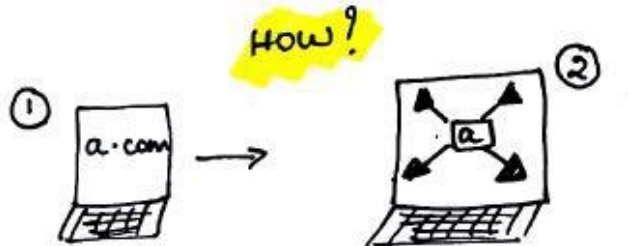


WHAT?

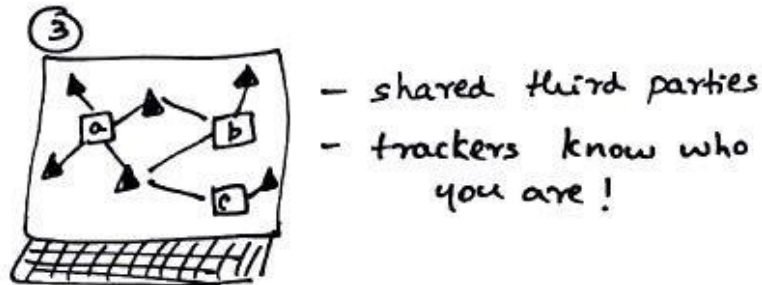
- websites identify & collect user information!

WHY?

- personalised content
- site analytics
- targeted ads



- a.com can be connected to numerous websites
- Eg: doubleclick.net



How Ad Blocker Users Feel About Targeted Ads

Targeted ads invade privacy

63%

Targeted ads are useful

20%

No opinion

17%

Percent of total respondents: N=500 ad blocker users
Source: Visual Objects 2019 Ad Blocker Survey



ADVERTISER 



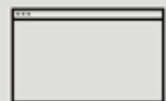
DSP
DEMAND-SIDE
PLATFORM



AD EXCHANGE



SSP
SUPPLY-SIDE
PLATFORM



← WEBSITE (PUBLISHER)

USER 



BROWSING HISTORY

GDPR PRINCIPLES

LAWFULNESS

PURPOSE LIMITATION

DATA MINIMISATION

TRANSPARENCY

SECURITY

PRIVACY BY DESIGN AND BY DEFAULT

HERE YOU ACCEPT TOO

WE VALUE
YOUR PRIVACY

AND WE SHARE YOUR DATA
WITH 400 TRUSTED PARTNERS

MORE

I ACCEPT

The modal is a dark rectangle with a red border. In the top right corner, there is a red 'X' icon with a red arrow pointing down to it. On the right side, there is a red tab with a white person icon and a white hamburger menu icon. The text 'WE VALUE YOUR PRIVACY' is in large white letters, and 'AND WE SHARE YOUR DATA WITH 400 TRUSTED PARTNERS' is in smaller white letters below it. At the bottom, there are two buttons: 'MORE' in white text on a white-bordered dark button, and 'I ACCEPT' in green text on a green-bordered dark button.

```
site {
```

```
  page: "PAGE_URL"
```

```
  publisher {
```

```
    id: "SELLER_NETWORK_ID"
```

```
    [com.google.doubleclick.publisher] {
```

```
      country: "GB"
```

```
    }
```

```
  }
```

```
  content {
```

```
    contentrating "DV-G"
```

```
    language "en"
```

```
  }
```

```
  mobile: true
```

————— What this specific person is reading right now

```
"ua": "Mozilla/5.0 (Windows NT 10.0; Win64;  
x64) AppleWebKit/537.36 (KHTML, like Gecko)  
Chrome/67.0.3396.99 Safari/537.36",
```

Distinctive information about this specific person's device

```
"ip": "IP_ADDRESS",
```

This specific person's IP address

```
"geo": {
```

```
"lat": 41.36714172363281,  
"lon": -81.8503646850586,
```

This specific person's GPS coordinates

```
"country": "USA",
```

```
"region": "OH",
```

```
"metro": "510",
```

```
"city": "Berea",
```

```
"zip": "44017",
```

This specific person's post code

```
"utcoffset": -240
```

```
},
```

```
"os": "Windows",
```

```
"devicetype": 2,
```

```
"pxratio": 1
```

```
name: "DoubleClick"
```

```
segment {  
  id: "5444"  
  value: "0.3"  
}  
segment {  
  id: "1080"  
  value: "0.2"  
}  
segment {  
  id: "1710"  
  value: "0.1"  
}  
segment {  
  id: "1715"  
  value: "0"  
}  
segment {  
  id: "96"  
  value: "0"  
}
```

This specific person's inferred interests. This could include highly sensitive special category data such as 571 eating disorders, 410 left-wing politics, 202 male impotence, 862 Buddhism, 625 AIDS & HIV, 547 African-Americans, etc. See Google's "publisher verticals" list.

PURPOSE LIMITATION

Analytics

Google Analytics is Google's analytics tool that helps website and app owners to understand how their visitors engage with their properties. It may use a set of cookies to collect information and report site usage statistics without personally identifying individual visitors to Google. The main cookie used by Google Analytics is the '_ga' cookie.

In addition to reporting site usage statistics, data collected on Google properties by Google Analytics may also be used, together with some of the advertising cookies described above, to help show more relevant ads on Google properties (like Google Search) and across the web and to measure interactions with the ads we show.

TRANSPARENCY

General:

Do I understand the processing and its consequences?

Individual:

What does my profile look like?

a_unit	value
GenderVisits;GB	[0.9995629009618636 4.370990381364389E-4]
InetHHAgeAndGenderVisits;GB	[0.16963163563535782 0.1851367583181307 0.1257233779170356 0.35388629681054534 0.061440967039154054 0.103743865241
InetHHAgeVisits;GB	[0.1697058138833724 0.18521771680399154 0.1257783555152497 0.35404104781200474 0.06146783457052116 0.1037892314144
InetHHChildrenV2Visits;GB	[0.5145015966768377 1.0530208287461875E-4 0.004911148431263959 0.08756180934764402 0.0038107317722292887 0.3891094
InetHHEducationVisits;GB	[0.03904572745494902 0.6540257453949422 0.3069285271501087]
InetHHIncomeVisits;GB	[0.2664956273083136 0.0629016098818328 0.0722023682149928 0.5984003945948608]
GenderVisits;GB	[0.999830749461473 1.6925053852702787E-4]
InetHHAgeAndGenderVisits;GB	[0.21469208759269612 0.19940725420905558 0.1418112512367487 0.29205254687839644 0.04761961398810414 0.104247995554
InetHHAgeVisits;GB	[0.2147284304951945 0.19944100970735293 0.14183525693036628 0.2921019852967127 0.0476276749977463 0.10426564257261
InetHHChildrenV2Visits;GB	[0.5506935498169285 1.1219017142199964E-4 0.0030622065531428627 0.024705961314971693 0.006543814076797697 0.414882
InetHHEducationVisits;GB	[0.03298286903380676 0.6663213365517425 0.30069579441445077]
InetHHIncomeVisits;GB	[0.34208517996066146 0.03563795182697384 0.08535273568653788 0.5369241325258268]
GenderVisits;GB	[0.9999056163347138 9.438366528628081E-5]
InetHHAgeAndGenderVisits;GB	[0.19660969859225438 0.1674718789630741 0.17443505858125827 0.25474274210826126 0.03901343076057947 0.167632807329
InetHHAgeVisits;GB	[0.1966282570878572 0.1674876870648696 0.17445152395550395 0.2547667879314994 0.03901711333874527 0.16764863062151
InetHHChildrenV2Visits;GB	[0.5044999754302371 5.67989066852668E-4 0.0021387712218162414 0.1950899754500293 8.373719731019416E-4 0.2968659168
InetHHEducationVisits;GB	[0.04567057386281842 0.35777441612624633 0.5965550100109352]

ADVERTISER 



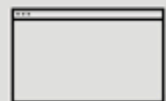
DSP
DEMAND-SIDE
PLATFORM



AD EXCHANGE



SSP
SUPPLY-SIDE
PLATFORM



← WEBSITE (PUBLISHER)

USER 



BROWSING HISTORY

RTB Callout Data Restriction. Buyer may store the encrypted cookie ID and mobile advertising identifier for the purpose of evaluating impressions and bids based on user-data previously obtained by the Buyer. All other callout data except for Location Data may be retained by Buyer after responding to an ad call for the sole purpose of forecasting the availability of inventory through the Authorized Buyers program. Buyer is permitted to retain callout data only for the length of time necessary to fulfill the relevant purposes stated above, and in any event, for no longer than 18 months.

Unless Buyer wins a given impression, it must not: (i) use callout data for that impression to create user lists or profile users; (ii) associate callout data for that impression with third party data; or (iii) share rate card data in any form, including but not limited to aggregate form, with third parties.

Location Data Restriction. If Buyer receives information through the Authorized Buyers program that identifies or can be used to infer an end user's precise geographic location, such as GPS, wifi or cell tower data ("Location Data"), then Buyer is permitted to use such information solely for the purpose of bidding on the applicable impression and Buyer is permitted to retain such information solely for the length of time necessary to fulfill that purpose.



PRIVACY AND SECURITY

'Do Not Track,' the Privacy Tool Used by Millions of People, Doesn't Do Anything



Kashmir Hill

10/15/18 10:56AM • Filed to: FAILED EXPERIMENTS



111.0K



107



14



You may also like



Advertising & Promotion

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Search & Social Advertising

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Video Advertising

Print

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Interactive Content

Video Marketing

Email Marketing

Content Marketing

Optimization, Personalization & Testing

DAM & MRM

SEO

Marketing Automation & Campaign/Lead Management

CMS & Web Experience Management

Social & Relationships

Call Analytics & Management

Events, Meetings & Webinars

Social Media Marketing & Monitoring

Advocacy, Loyalty & Referrals

Influencers

Community & Reviews

Customer Experience, Service & Success

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Channel, Partner & Local Marketing

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Affiliate Marketing & Management

Ecommerce Marketing

Ecommerce Platforms & Carts

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Marketing Analytics, Performance & Attribution

Dashboards & Data Visualization

Business/Customer Intelligence & Data Science

iPaaS, Cloud/Data Integration, RPA & Tag Mgmt

Gov. Compliance & Privacy

Customer Data Platform

Management

Talent Mgmt

Product Mgmt

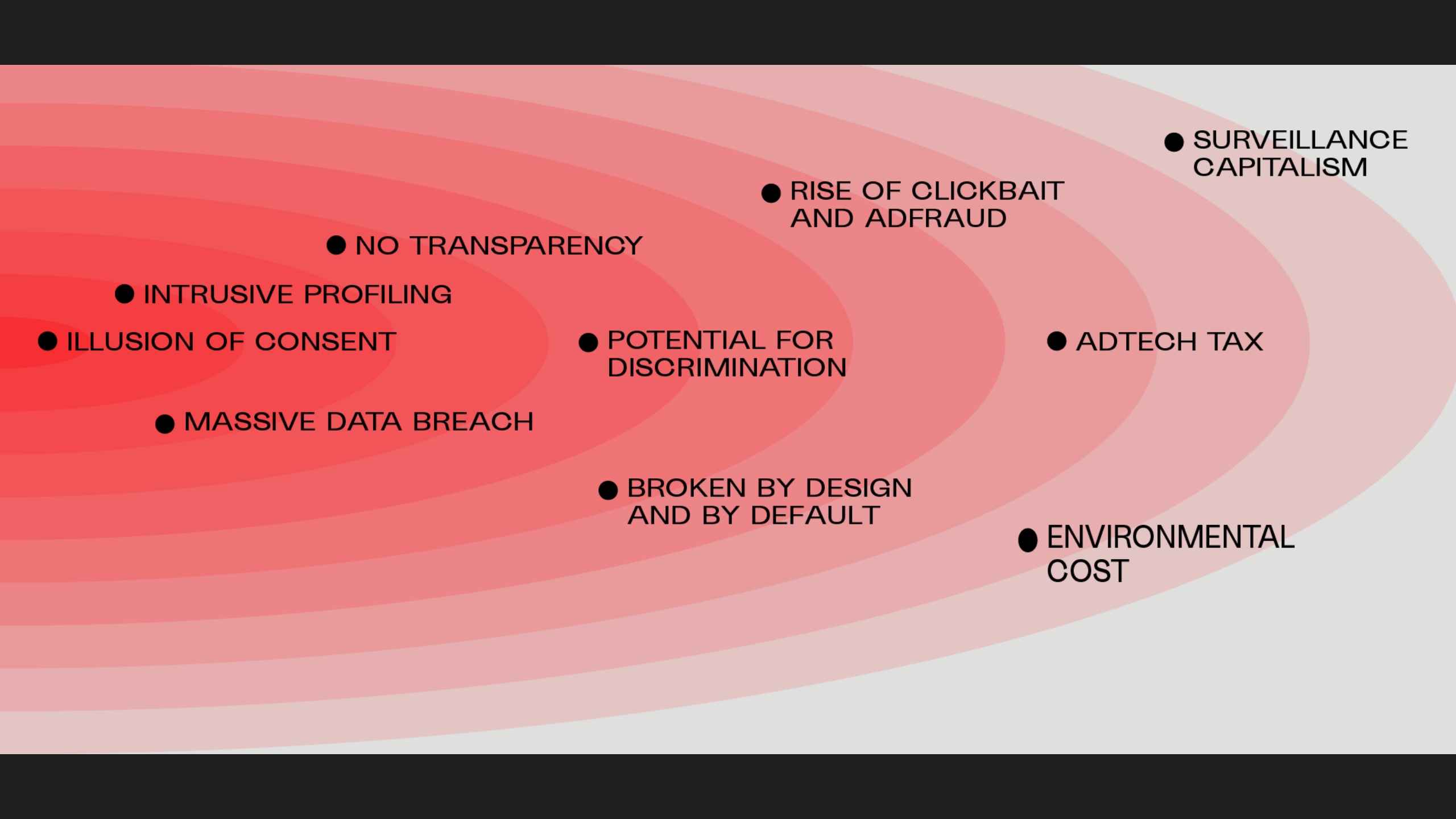
Budgeting & Finance

Collaboration

Projects & Workflow

Agile & Lean Mgmt

Vendor Analysis



URZĄD OCHRONY
DANYCH OSOBOWYCH

2019 -01- 28

WPLYNĘŁO

L.dz.....

, zał.....



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opis stanu faktycznego i naruszeń znajduje się

URZĄD OCHRONY
DANYCH OSOBOWYCH

2019 -01- 28

WPLYNĘŁO

L.dz.....

02-068 Warszawa
panoptikon.org

**...the lack of maturity of some market participants,
and the ongoing commercial incentives to associate
personal data with bid requests.**

**...we have general, systemic concerns around the
level of compliance of RTB.**

UK Information Commissioner's Office, June 2019

**COSMETIC FIXES? DESIGN SOLUTIONS?
OR BUSINESS DECISIONS?**

panoptikon.org

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1 0 0 0 1 1 0 1 0 1 0 0 0
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00

WOLNOŚĆ SIĘ LICZY

Bronimy wolności
i prywatności
w cyfrowym świecie

DOŁÓŻ SWÓJ 1%
KRS: 0000327613