



frog

# Monetizing Data in the Always On, Always Connected World

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The world according to frog

The evolution of technology, and its impact on products, brands & personal data

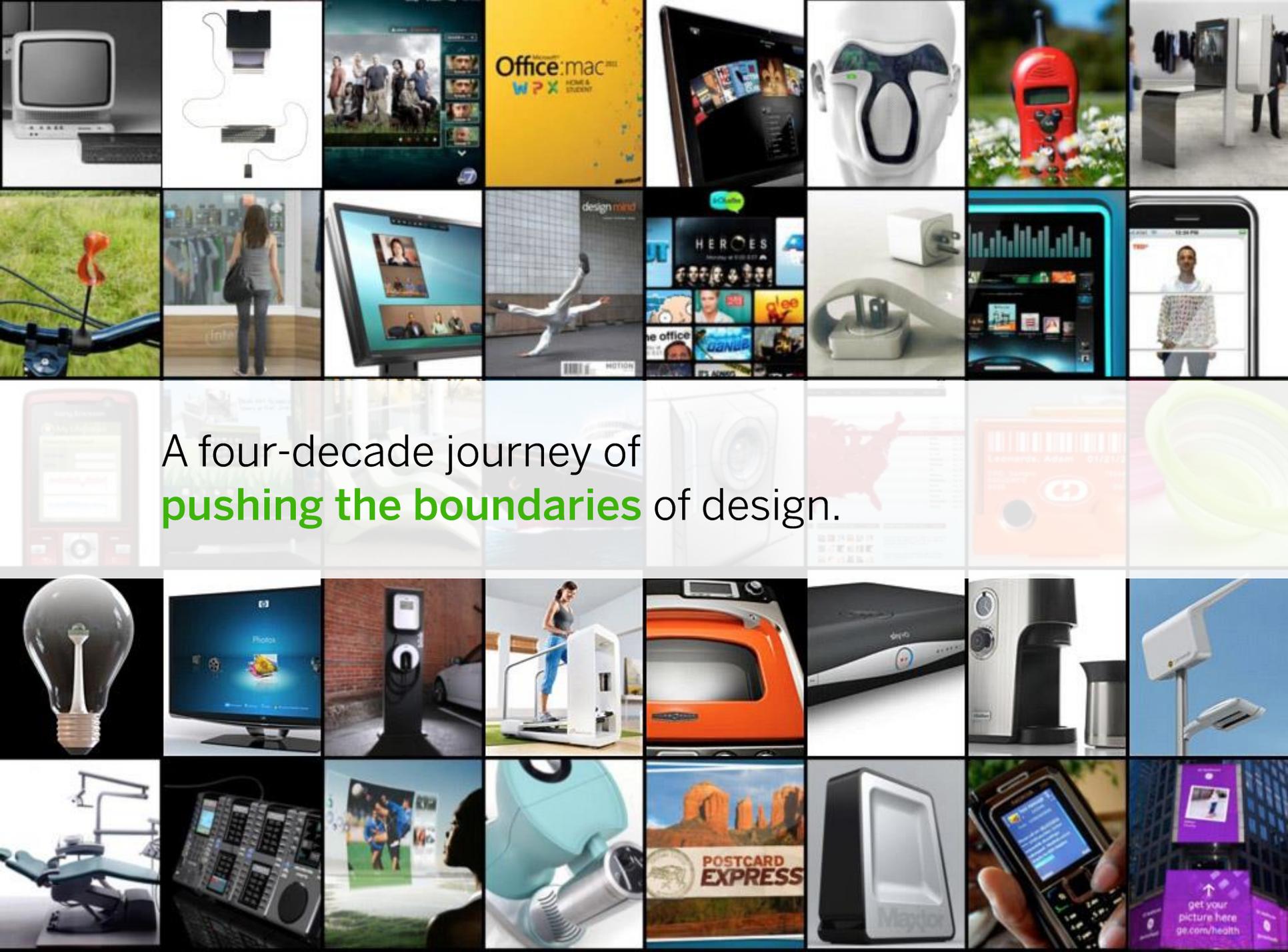
Quantifying the Value of Personal Data

How personal data shapes brands, businesses and experiences



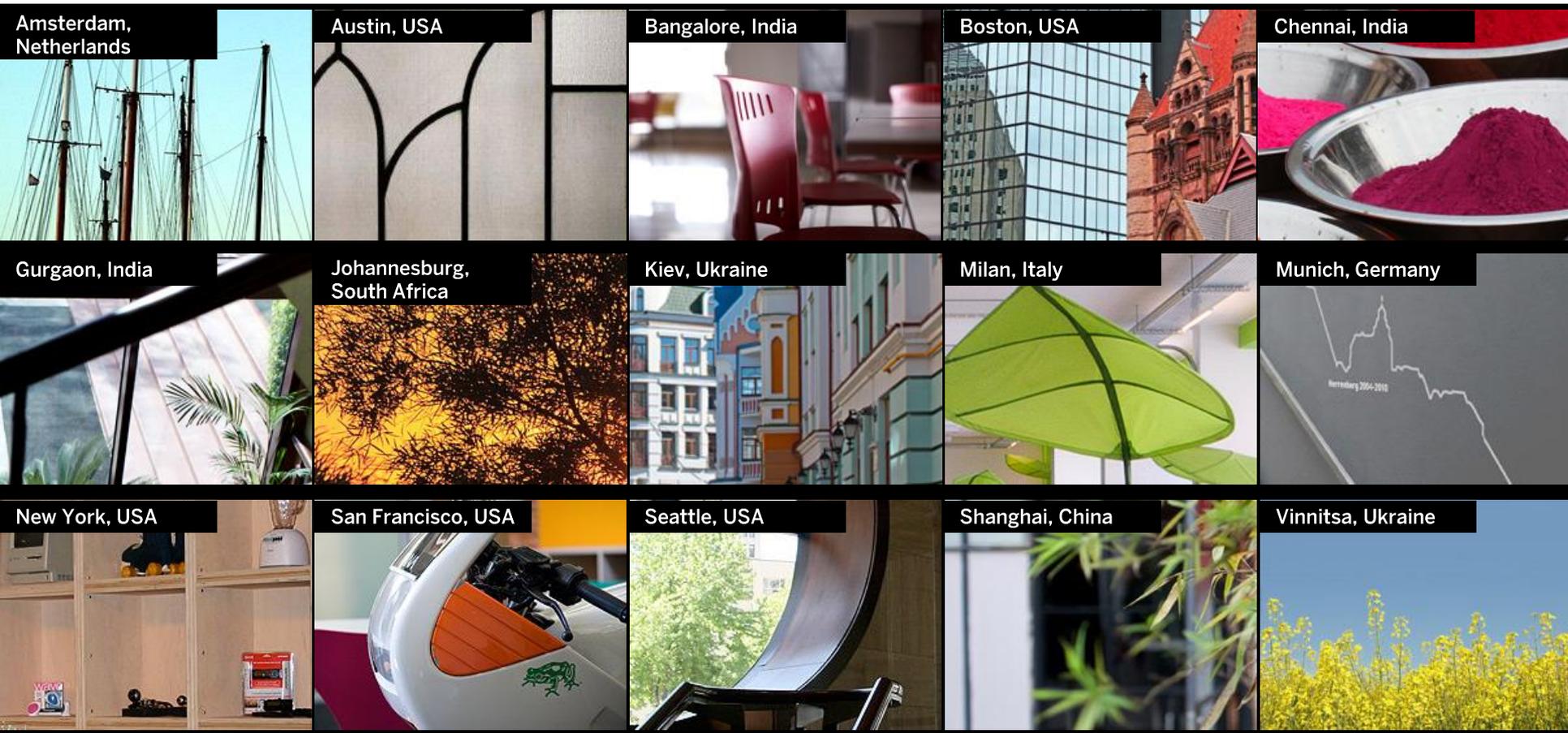
Technology is changing the human experience, creating **new connections** between people, products, and markets around the world.





A four-decade journey of **pushing the boundaries** of design.

## Who We Are

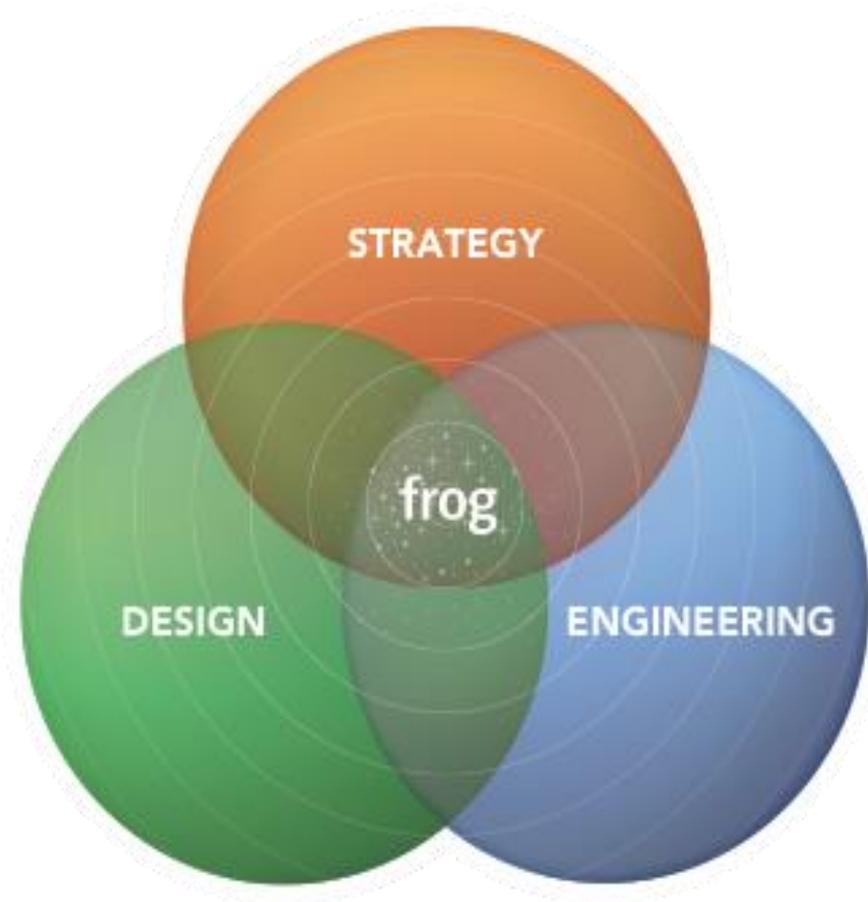


We are a global team of 1,100 diverse people with **deep insights** into the behaviors and technologies driving the connected world.

Clients



As a global partner, we believe that we are unique in collaborating with our clients in using integrated teams of strategy, creative, and engineering disciplines



### Creative

We are a world-class creative organization, capable of working across conceptual, hardware, software, and technical spaces.

### Strategy

We are a strategy organization that helps customers enter new markets, grow market share in existing markets, enhance their brand value, and adapt their businesses in changing markets

### Engineering

We are an engineering team that provides market transforming technology and implementation services with deep expertise in the communications market



# We bring game-changing innovations to market.

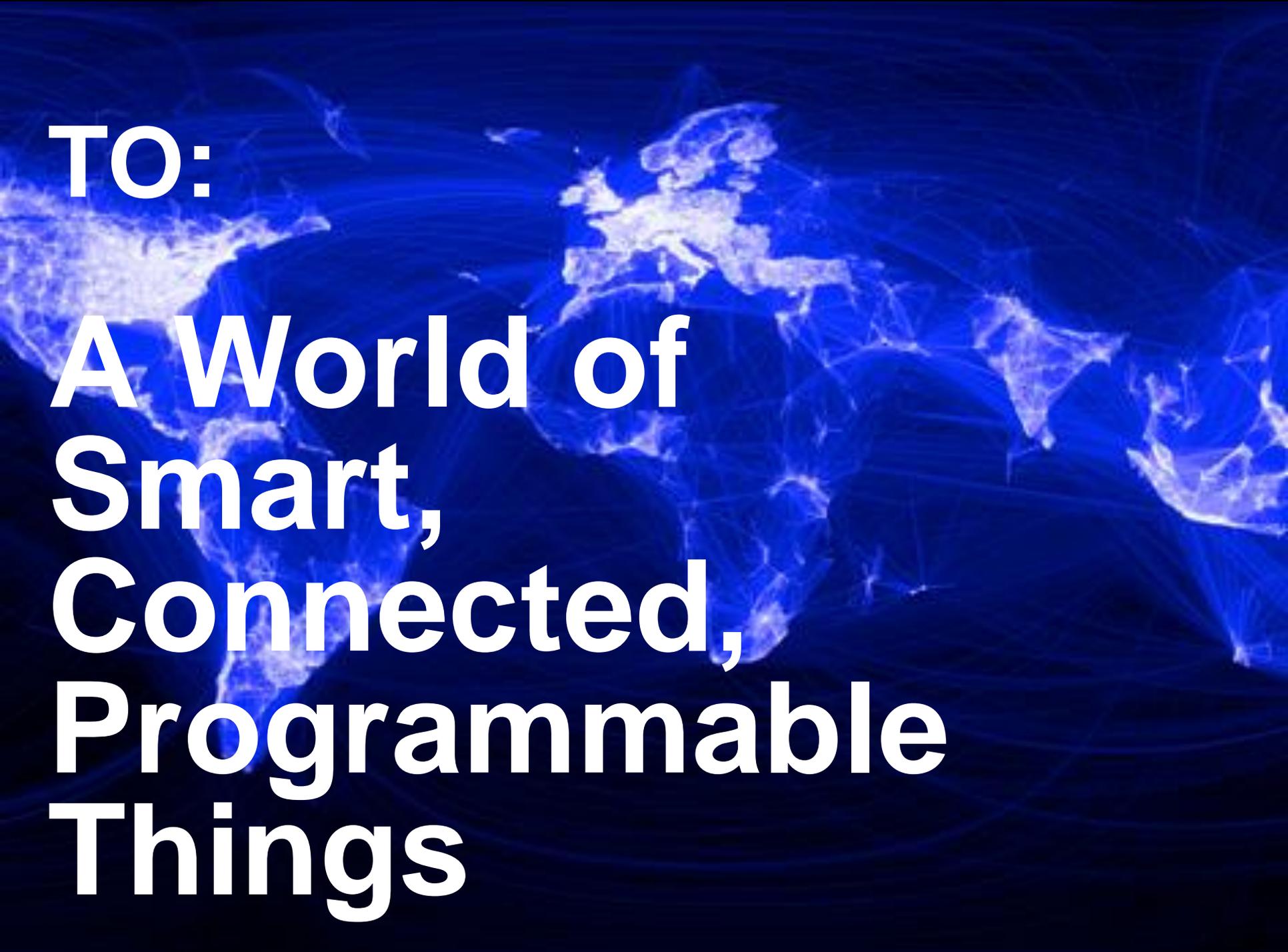
At frog, we have a deep understanding of the integrated needs of the business, the customer, and the technologies that make innovation possible. Our strategic offerings drive decision-making from the high-level details all the way through delivery — from idea to market.

**The  
world of products,  
brands and personal  
data is going through a  
radical transformation...**

FROM:

# A World of Things





**TO:**

**A World of  
Smart,  
Connected,  
Programmable  
Things**

# This has happened over the last sixty years of technology evolution in three waves

1<sup>st</sup> WAVE  
Information Graph

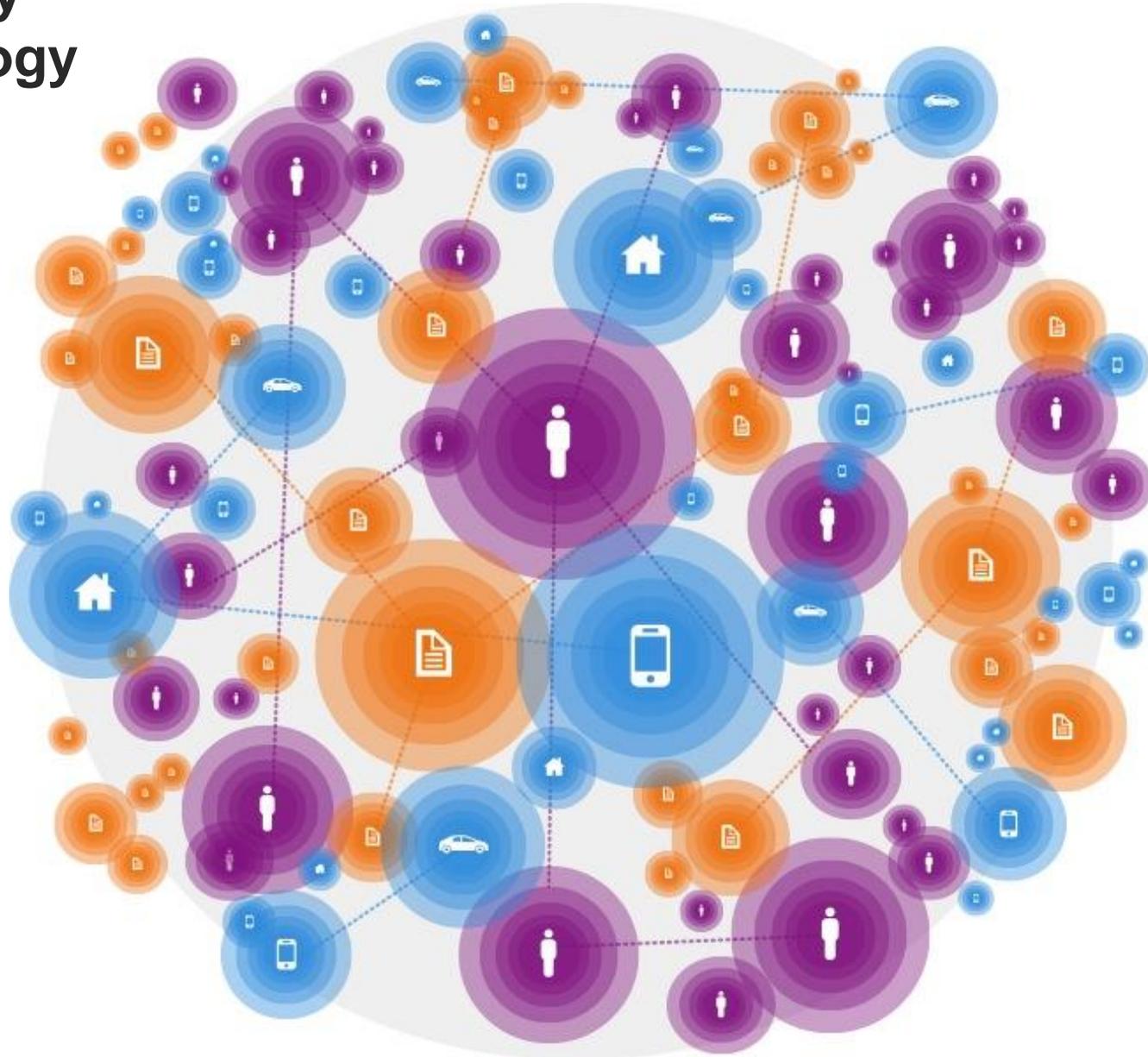
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2<sup>nd</sup> WAVE  
Social Graph

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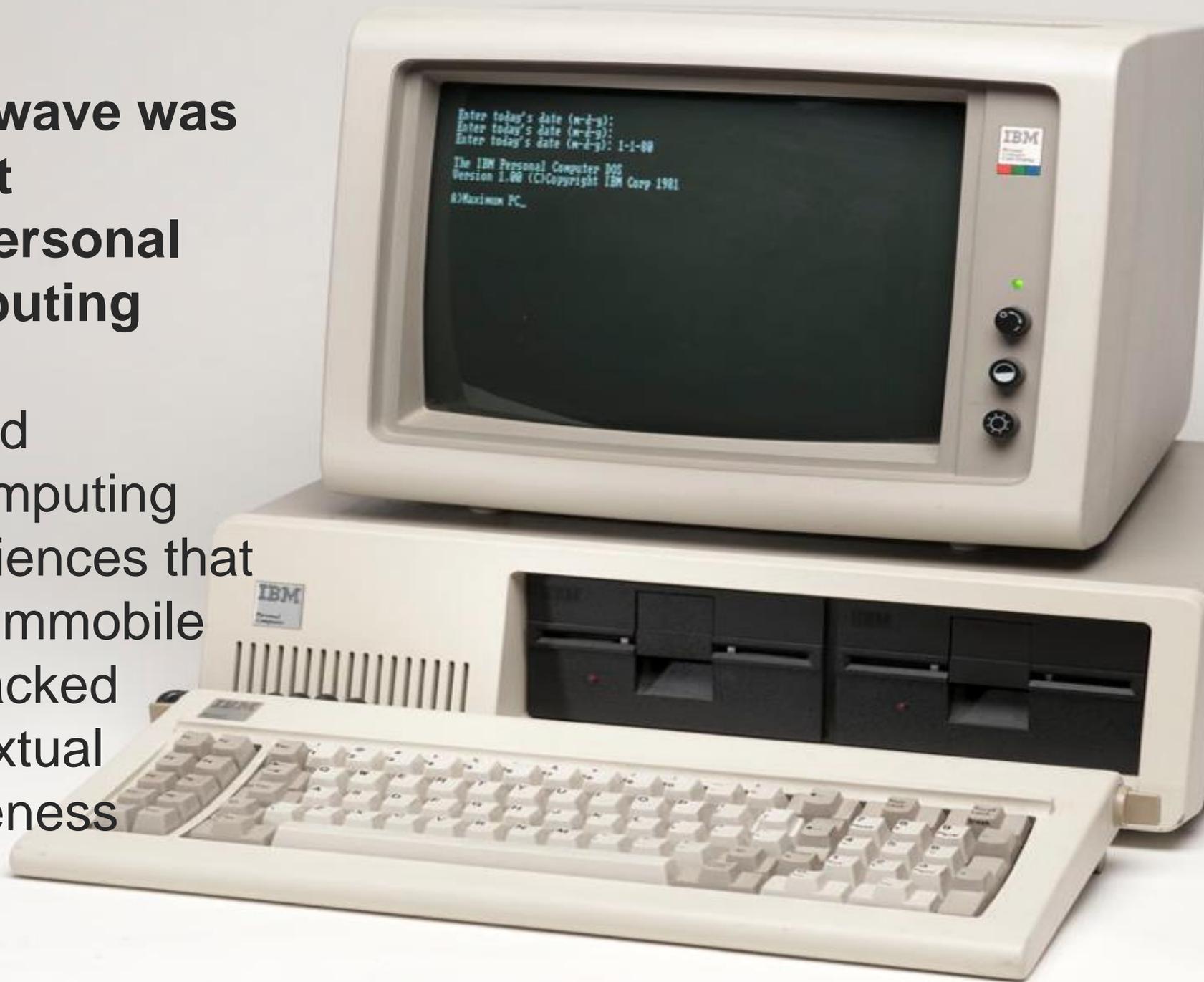
3<sup>rd</sup> WAVE  
Physical Graph

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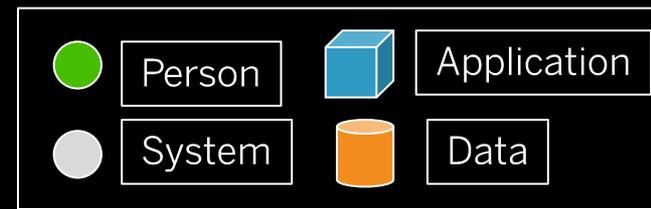
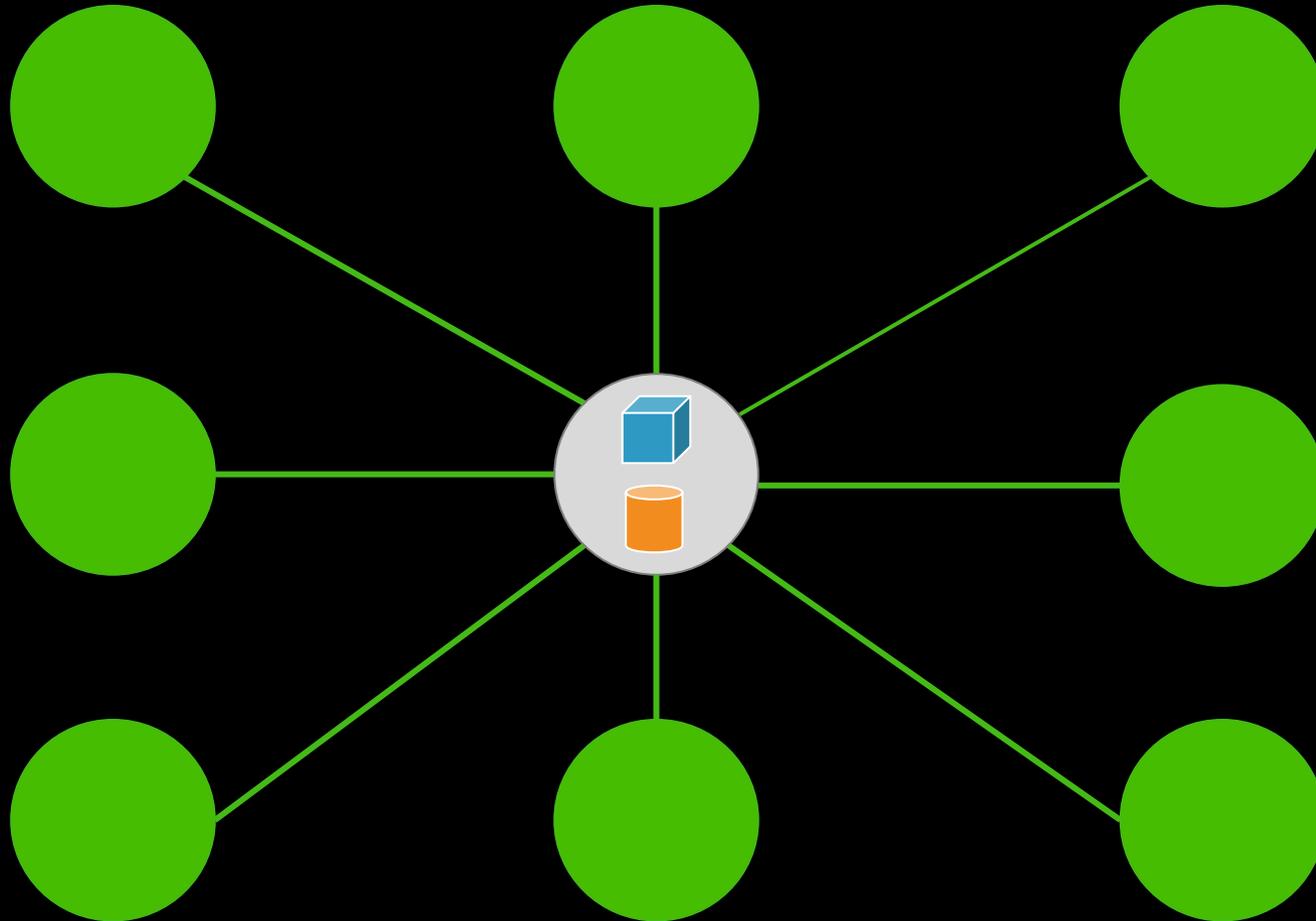


# The First wave was About (IM)Personal Computing

typified  
by computing  
experiences that  
were immobile  
and lacked  
contextual  
awareness



# First wave - mainframe to client/server computing



# Nature of Personal Data in the 1<sup>st</sup> Wave

- What's personal and valued by users
  - Their username
  - Their password
  - Their email address
  - Their access rights
- What the network knows
  - Their corporate social graph (aka their role in the organization)
  - Their usage patterns based on logon and log off times
  - Their privileges and access rights
- Jobs being done
  - Linking people with IT assets
  - Securing corporate information

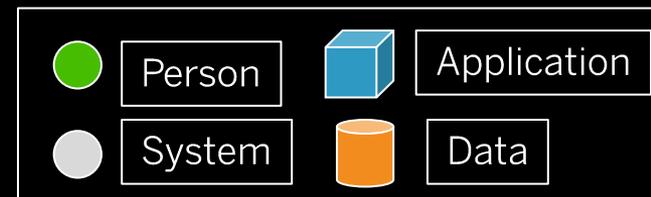
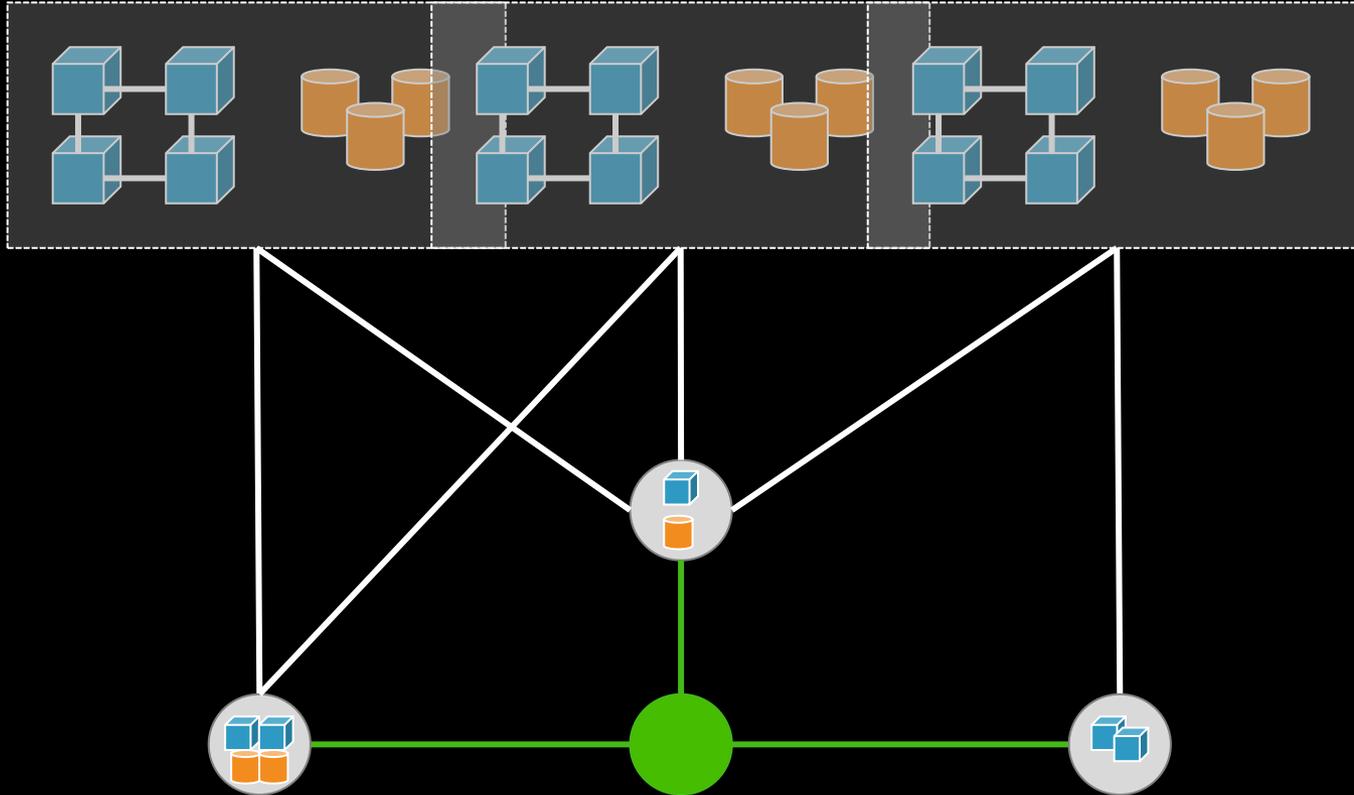


# The Second wave Got *Personal*

Now it is about  
being mobile,  
always connected  
and always “on”,



# Second wave & the cloud



# Nature of Personal Data in the 2<sup>nd</sup> Wave

- What's personal and valued by users
  - Their phone number
  - Their social graphs (aka their contact lists, FB friends, LinkedIn contacts, Twitter followers, etc.)
  - Their photos
  - Their apps
- What the network knows
  - Where you are (demographics, personal likes and dislikes)
  - Who you are interacting with throughout your day
  - Your web footprints; search and web history
  - Where you have been and where you are going to be
- Jobs being done
  - Linking people together via social bonds and contact points
  - Enabling digital advertising

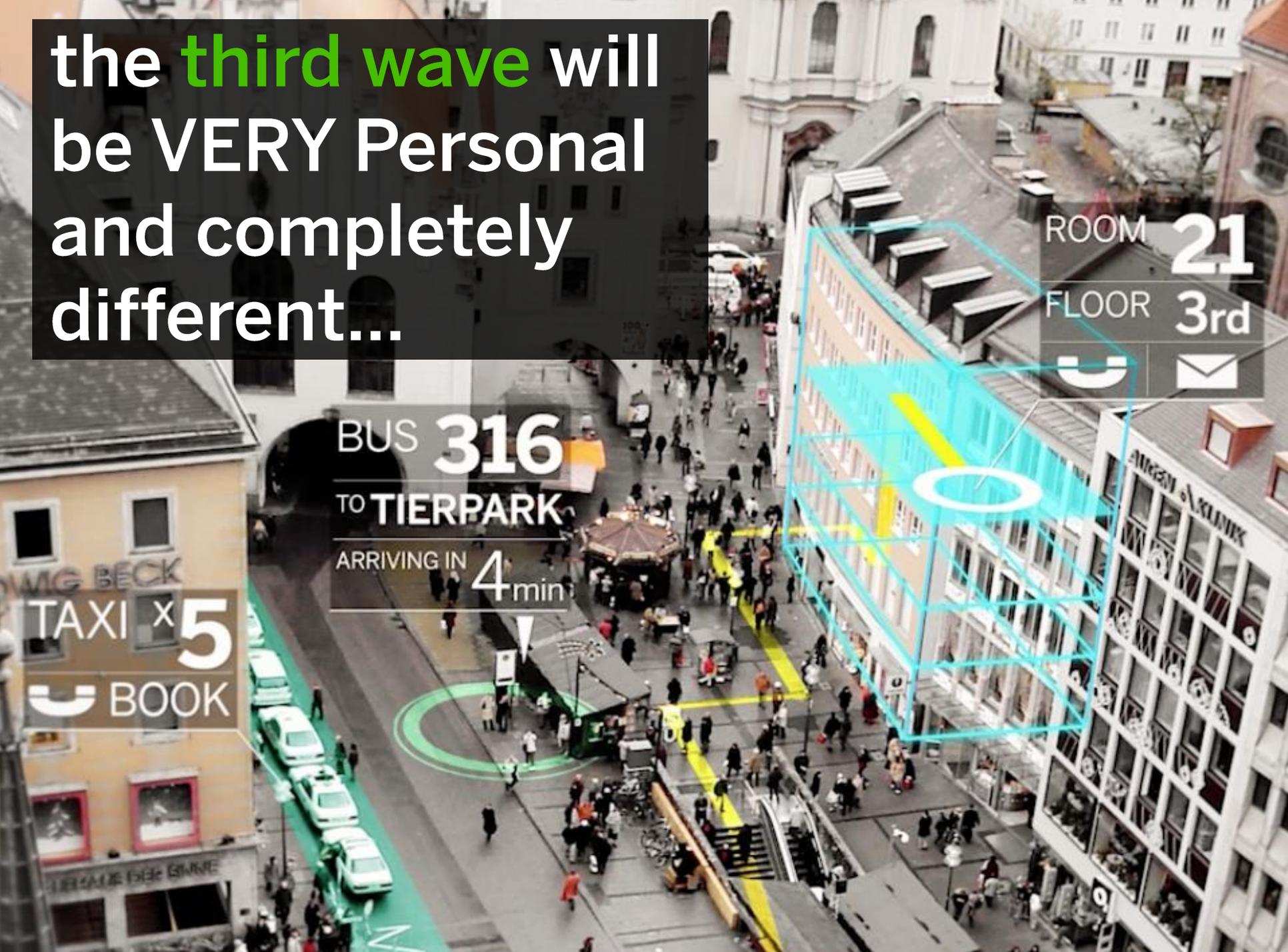
The Facebook logo, consisting of the word "facebook" in white lowercase letters on a blue rectangular background.

the **third wave** will be VERY Personal and completely different...

BUS **316**  
TO **TIERPARK**  
ARRIVING IN **4min**

TAXI x**5**  
BOOK

ROOM **21**  
FLOOR **3rd**



4:38 PM

Floor 1

D.ONE  
KNOT NECKLACE

NARTLY  
DRESS SHIRT

PRESSTON  
DRESS SHIRT

TUTTI  
TRENCH COAT

ARIANA  
PLAID TIE

CIV  
EYEWEAR

QR  
FELT CAP

RED SPADE  
SILK DRESS

AMORE  
DOWN PARKA

DIVA  
PEARL  
NECKLACE



AMORE  
DOWN PARKA

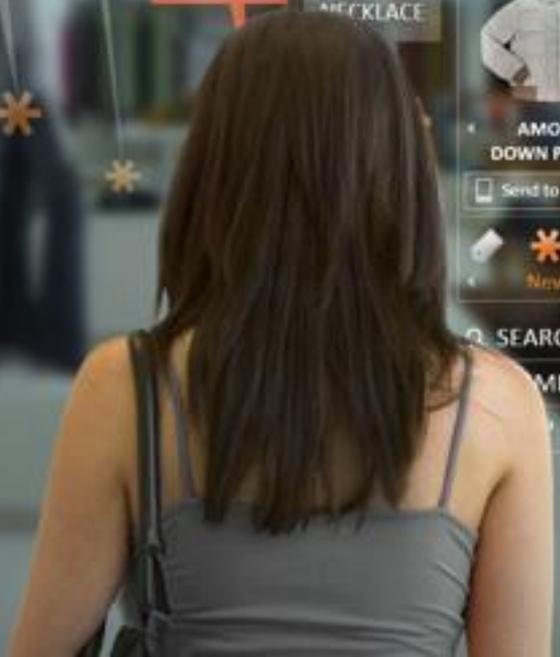
Send to Mobile

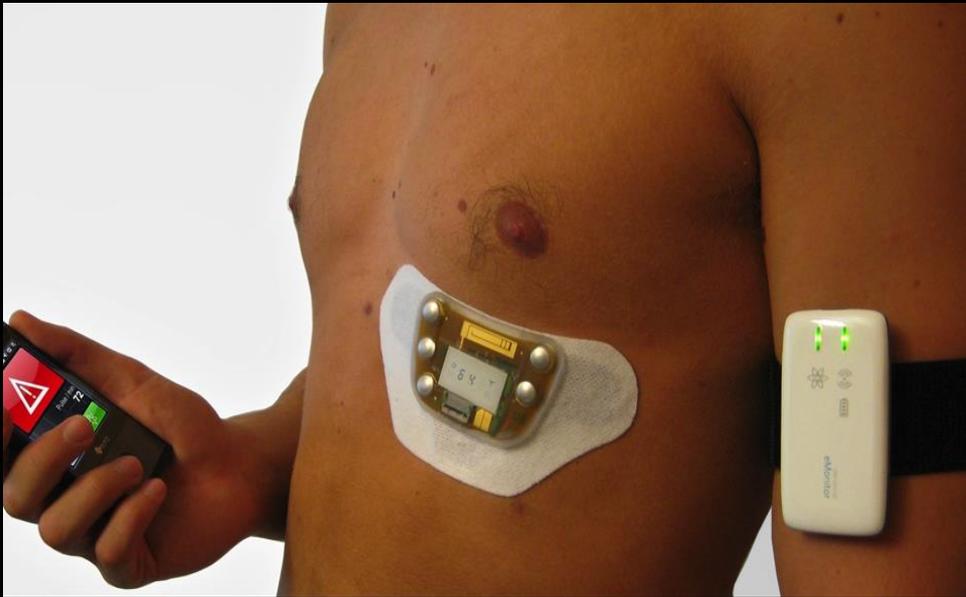


SEARCH

MEMBERS

Quit X



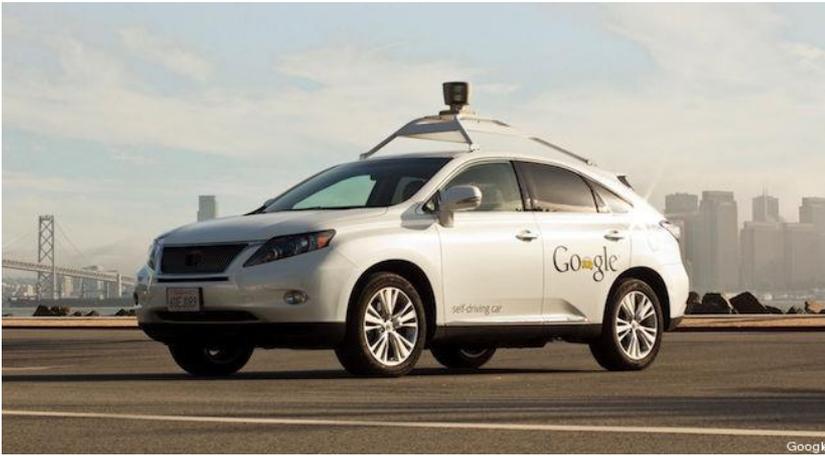


Airwaves  
connected  
mask –  
3<sup>rd</sup> wave is  
surrounding  
us



The **third wave** will play out in  
**three phases**.  
Two of them are already underway.





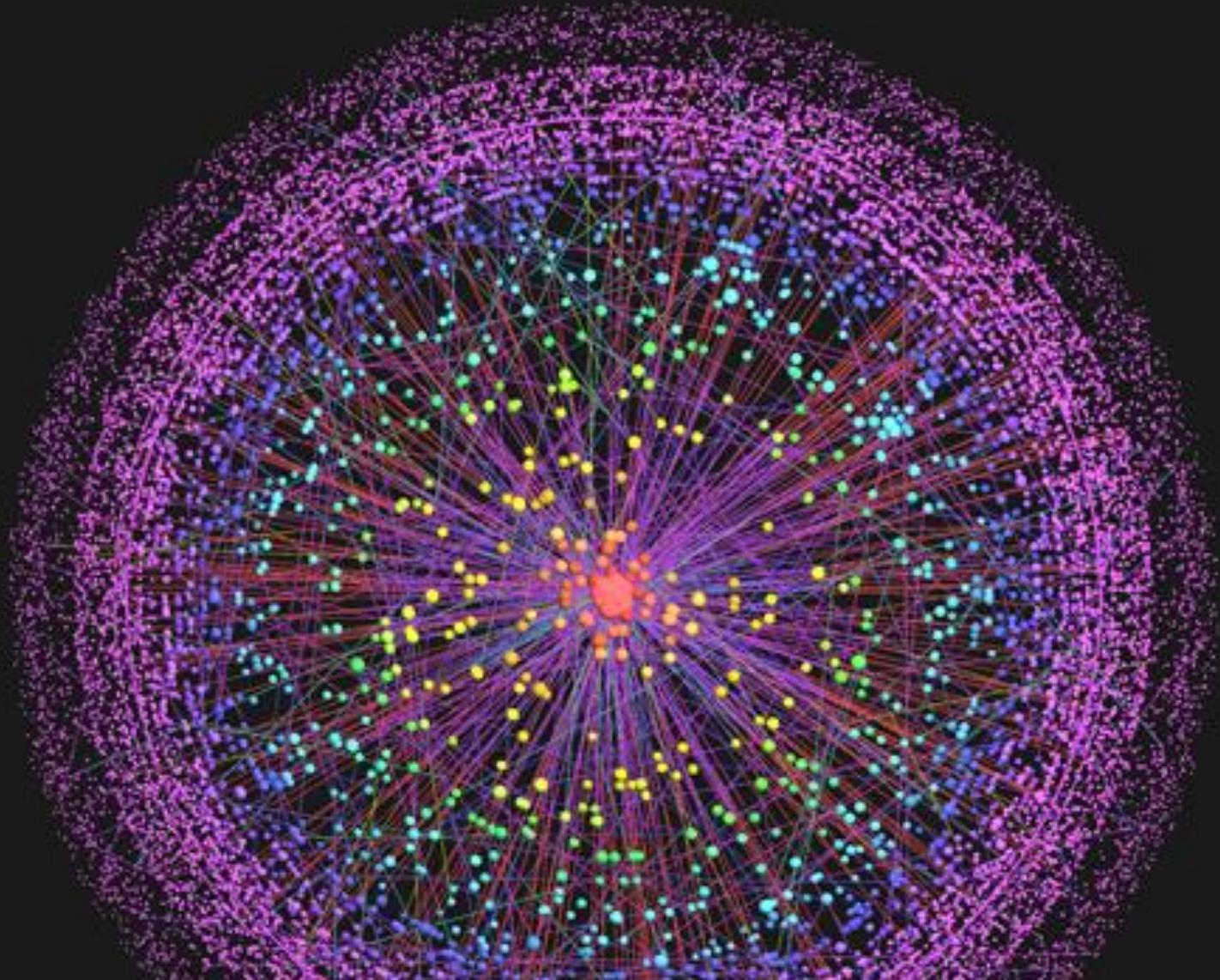
Everything is getting smart





Everything is getting connected





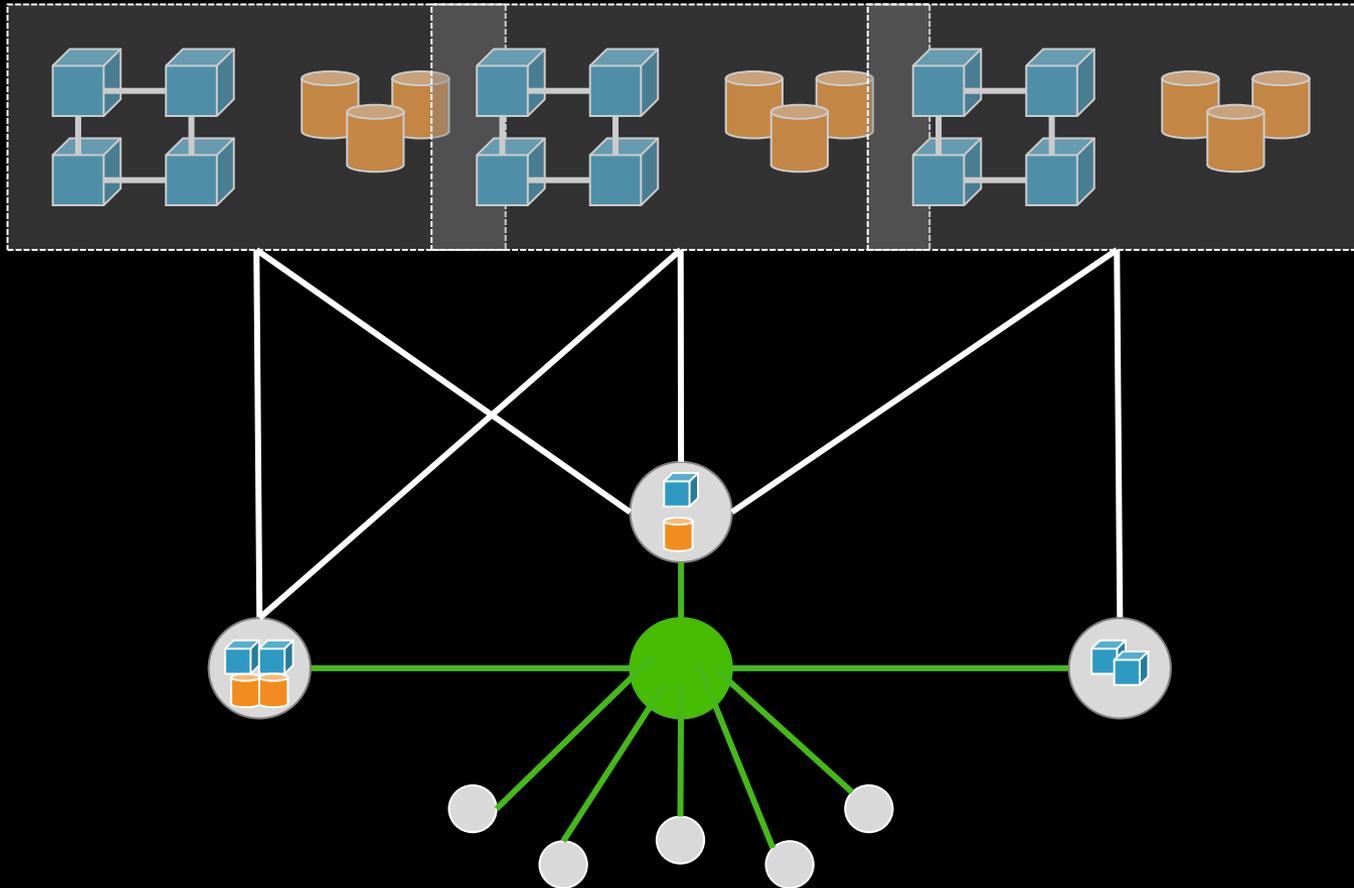
Everything will be programmable



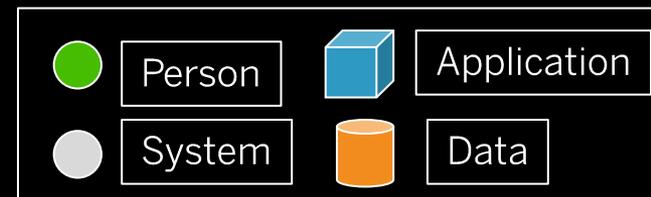


“The problem was that the data was coming in at such volume that humans were not able to process and understand the full meaning of it in time to prevent tragedy.”

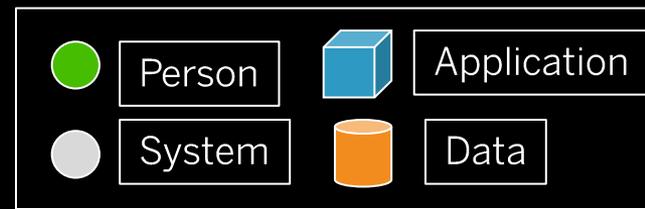
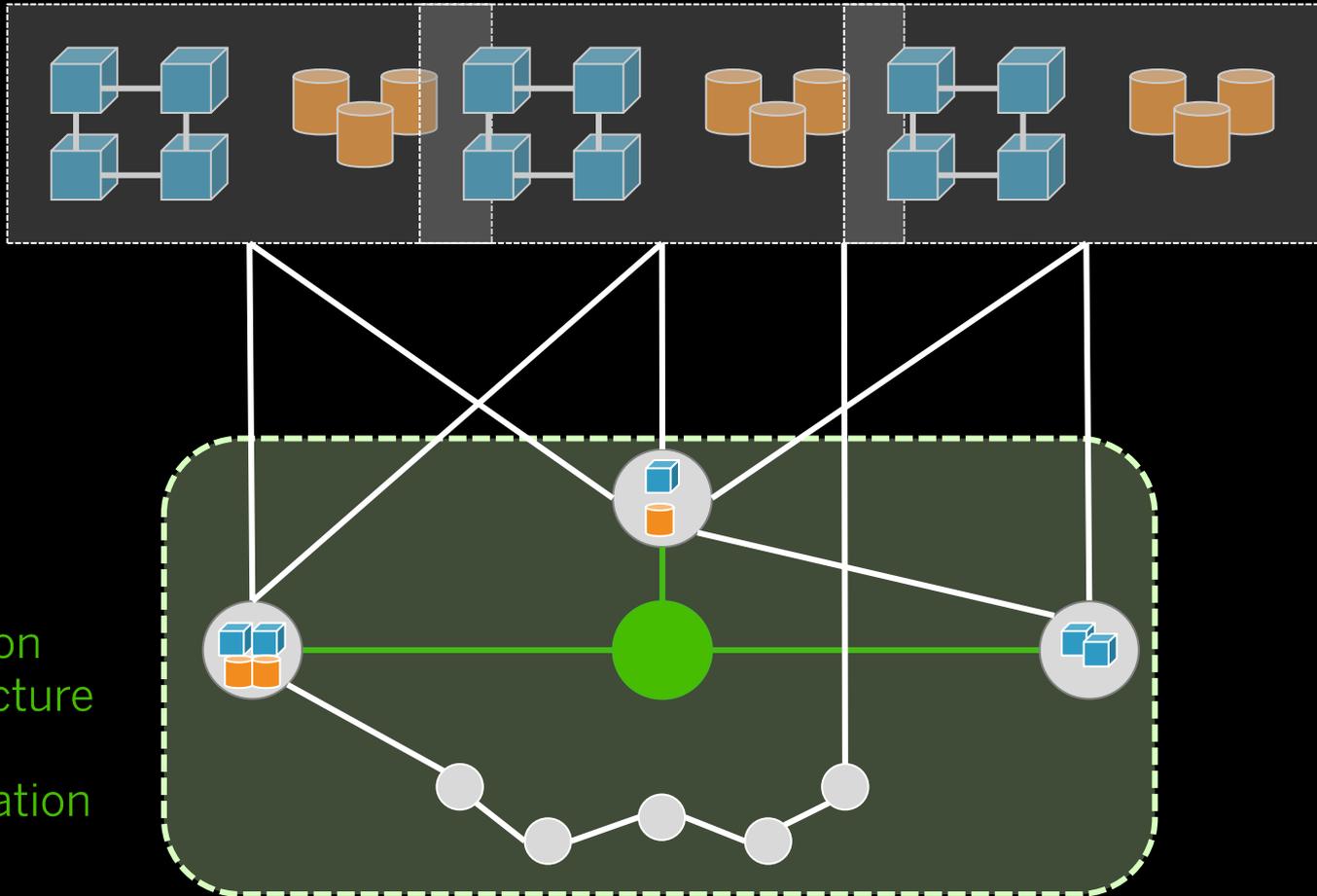
# Third wave / danger alert!



Danger: too many systems (and data) for 1 person!



# Third wave / orchestration



# Nature of Personal Data in the 3<sup>rd</sup> Wave

- What's personal and valued by users
  - Pre-emptive decision making based on networks of smart, connected, programmable things
  - Personalized brand experiences that shift advertising to content
  - Their data! Expectation that personal data has value for service providers and can be used as collateral for next generation services
  - We are seeing the first examples of this trade-off of personal data for new forms of value
- What the network knows
  - Personal metadata: likes, dislikes, preferences
  - Your complete profile; medical, financial, politics, education, professional, and your face.
  - The intersection of physical and digital worlds
  - That there is value in arbitrating personal data
  - Location information is more expensive so consumers expect higher value
  - That there is value in arbitrating personal data
- Jobs being done
  - Making activities visible and measurable in space and time
  - Enhancing every action with rich context

Google Now.





# HOW IT WORKS

## PERSONAL DATA

Gmail Inbox

Calendar

Google Maps

Search History

GPS Location



## ON DEMAND VALUE

Directions

Sports

Trip Reminder

Boarding Pass

Shipping Notices

News



In the Third Wave, how does a consumer quantify the value of one's own personal data?

We are part of some  
recurring conversations  
with our clients on this  
topic...

**Christina Gagnier**  
 Of Counsel at Diagne Margolin, Grant, Co...  
 2.0 Privacy  
 Posted: June 18, 2010 12:02 AM

**A Social Network Users Bill of Rights: You Decide**

What's Your Reaction?

Inspiring Funny Obsolete Scary Must-Have Amazing Innovative Nerdy

Read More: [Bill Of Rights](#), [Consumer Rights](#), [Consumers](#), [Data](#), [Facebook Privacy](#), [Social Networking](#), [User Generated Content](#), [Technology News](#)

Over the last week, IT specialists, journalists, activists, students as well as consumers have been talking about the need for a "Bill of Rights" for social network users. This week, in the aftermath of the Facebook privacy scandal, I've compiled a list of 10 "rights" that I think social network users should have.

12

**Facebook Bows to Pressure Over Privacy**

Basic Directory Information

1. Less publicly available information
2. Real privacy controls (no connections)
3. Necessary permissions for friends to find you

**Chris Jay Hoofnagle and Michael Zimmer**  
 Posted: June 18, 2010 07:49 AM

**How to Win Friends and Manipulate People**

What's Your Reaction?

Inspiring Funny Obsolete Scary Must-Have Amazing Innovative Nerdy

Read More: [Facebook](#), [Privacy](#)

**Anger Leads to Apology From Google About Buzz**

By MICHAEL HELFT  
 Published: February 14, 2010

What's Your Reaction?

Inspiring Funny Obsolete Scary Must-Have Amazing Innovative Nerdy

Read More: [Facebook](#), [Privacy](#)

**Pandora CEO On Facebook Privacy: 'The Holy Grail In Advertising Is More Data'**

First Posted: 06-25-10 08:04 AM | Updated: 06-25-10 08:10 AM

WHAT'S YOUR REACTION?

Inspiring Funny Obsolete Scary Must-Have Amazing Innovative Nerdy

Read More: [Pandora CEO](#), [Pandora CEO Interview](#), [Tim Westergaard](#), [Technology News](#)

**1 in 5 Android Apps Pose Potential Privacy Threat [REPORT]**

Do you like this story?

Like Dislike

Update: A Google spokesperson has reached out to us and gave us the following statement:

"This report clearly suggests that Android users don't have control over which apps access their data. Not only that, each Android app gets users' permission to access sensitive information, but developers must also go through billing background checks to confirm their real identities, and we will revoke any apps that are found to be malicious."

Mobile security company [Bitdefender](#) has looked into the potential privacy and security threats posed by some of the most popular Android apps.

FACEBOOK  
 TWITTER  
 RECOMMEND  
 SIGN IN TO EMAIL

An increasing sense of anxiety in the popular culture about privacy in social networks...



...the flood gates are  
opening on personal  
data...

M2M

EMR

LBS

... and curiosity among our clients in areas like identity management and trust services.



We wanted to understand how people quantify the value of their personal data.

We went into people's homes



We asked them about  
how they manage their  
information



I WOULD  
EXPECT TO  
SHARE

I WOULD  
SHARE

I MIGHT  
SHARE

I WOULD  
NOT  
SHARE

SSN

Calories consumed

Credit card  
information

Credit score

Medical records

Income

Retinal scan

GPS location of car at  
all times

We also asked about their  
willingness to trade personal  
data for various benefits

Age(s) of all  
household members

Fingerprints

Genome

Mobile Phone #

Alcohol consumed

Location of your  
mobile device at all  
times

Race/ethnicity

EMI, weight

Name

Body fat percentage

Birthday

Cholesterol level

Address

Blood sugar and  
insulin levels

# High level themes emerged:

- Anxiety about identity theft
- Willingness to share data when contextually relevant, with conditions
- Expectation of vendor transparency and user control of personal data



“Tell me what you’re doing and why, show me how it’s going to be used, and show me how I can turn it off.”

- Kimberly

We wanted to get a more nuanced understanding of how people “trade” data.

# We fielded a global survey

1,000 respondents from US, India, China, Germany, UK  
Screened to reflect the demographics of their country

# Dogs

\$3.42  
+ Tax

\$4.52  
+ Tax

\$3.65  
+ Tax

\$4.79  
+ Tax

\$5.25  
+ Tax

erve  
nato

# Combos

Double Cheeseburger  
& Soda \$6.39  
+ Tax

Double Cheeseburger  
Fries & Soda \$8.20  
+ Tax

Hamburger or  
Hot Dog & Beer \$7.03  
+ Tax

Single Cheeseburger  
& Soda \$5.25  
+ Tax

Double Cheeseburger  
& Soda \$6.39  
+ Tax

Double Cheeseburger  
Fries & Anchor \$8.20  
+ Tax

# Specials

Mon Sausa  
Sandwich

Tues Corn B  
Sandwich

Wed meat b  
Sandwich

Thurs chicken  
Parmesan

Fri Fish & C

Sat Corn B

Sun Hash

In order to understand how people value their data, we asked them to choose...

The choice:

Free web service  
(e.g. email) that  
collects some data

Pay web service  
(e.g. email) that  
collects no data

The choice:

Free web service  
(e.g. email) that  
collects some data

Pay web service  
(e.g. email) that  
collects no data

The price at which 50% choose to pay to protect a given piece of data is the revealed value of that data.

# Value of Personal Data: US

In the US, there are **three distinct tiers** of data value.

## Revealed Value of Personal Data.



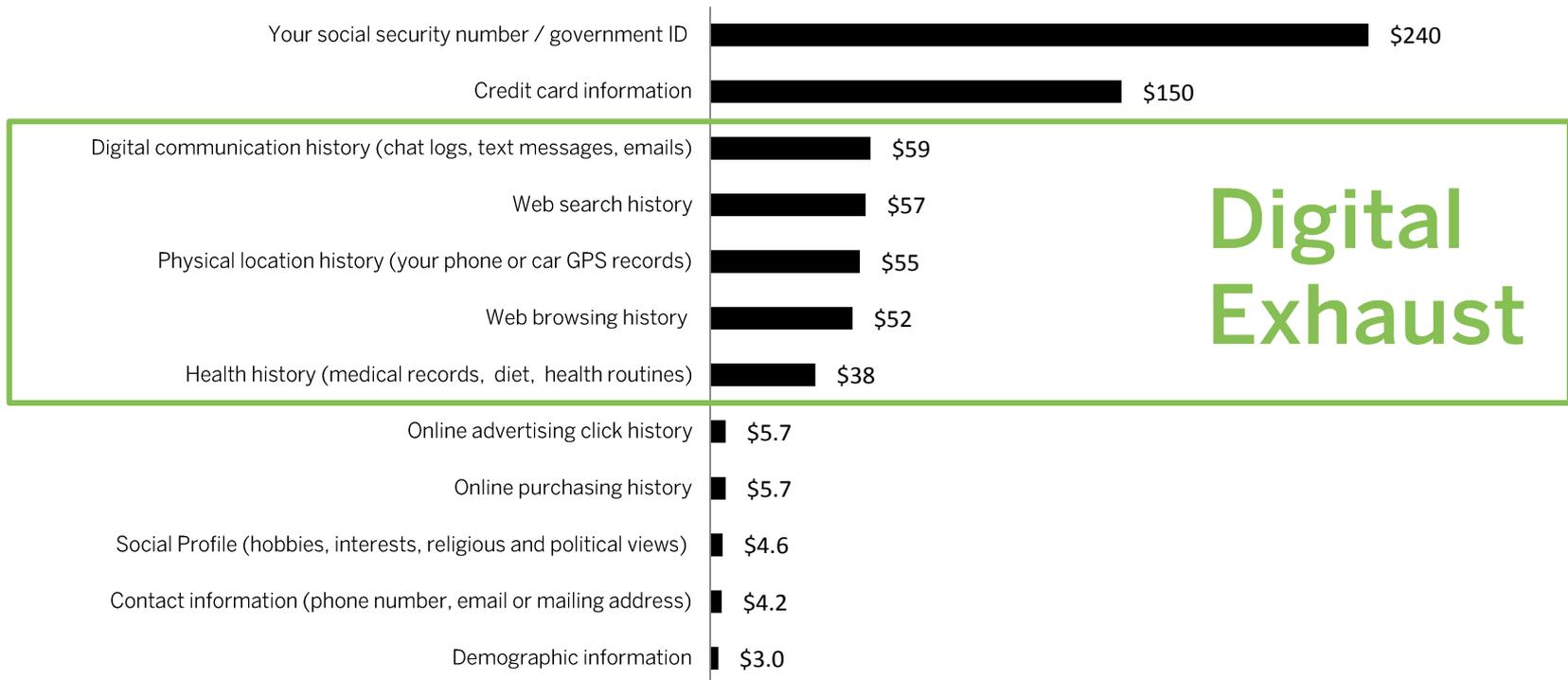
Source: frog design, primary research 2011

US\$/Year, median value, n=180

# Value of Personal Data: US

**Digital exhaust** is the data that is automatically generated simply by using the Internet or connected devices. It contains “histories” as opposed to purposeful, “opt-in” moments like online purchases.

## Revealed Value of Personal Data.



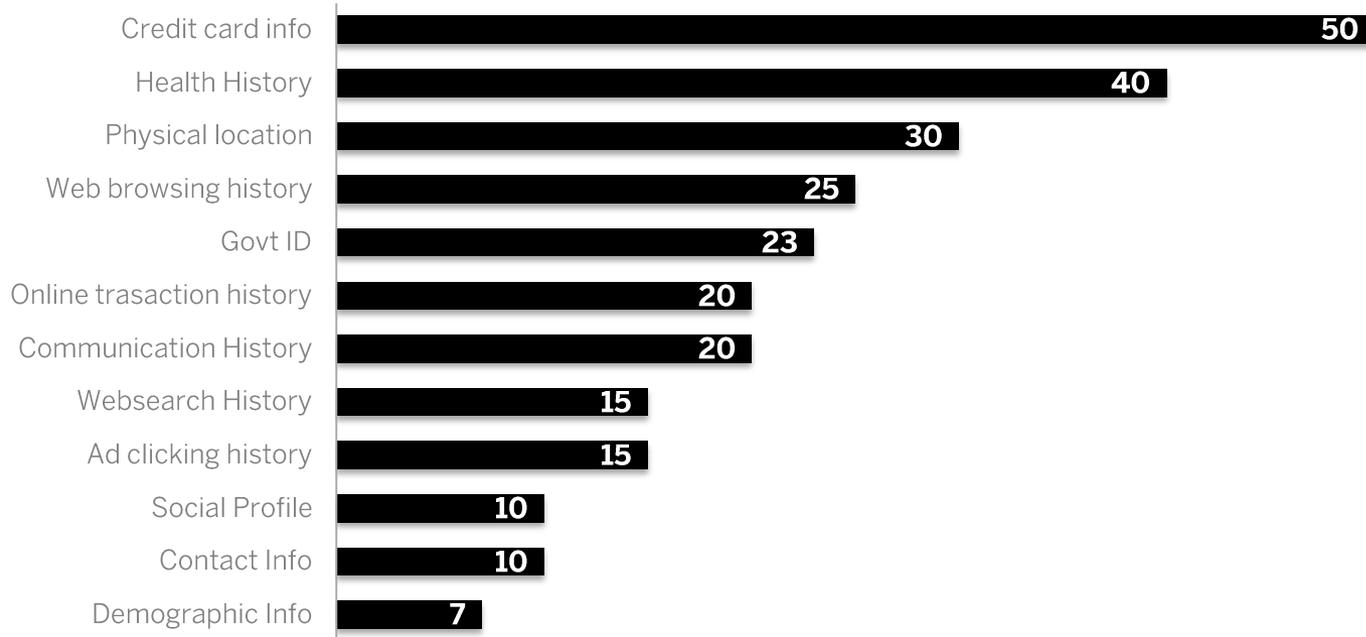
**Digital Exhaust**

Source: frog design, primary research 2011

US\$/Year, median value, n=180

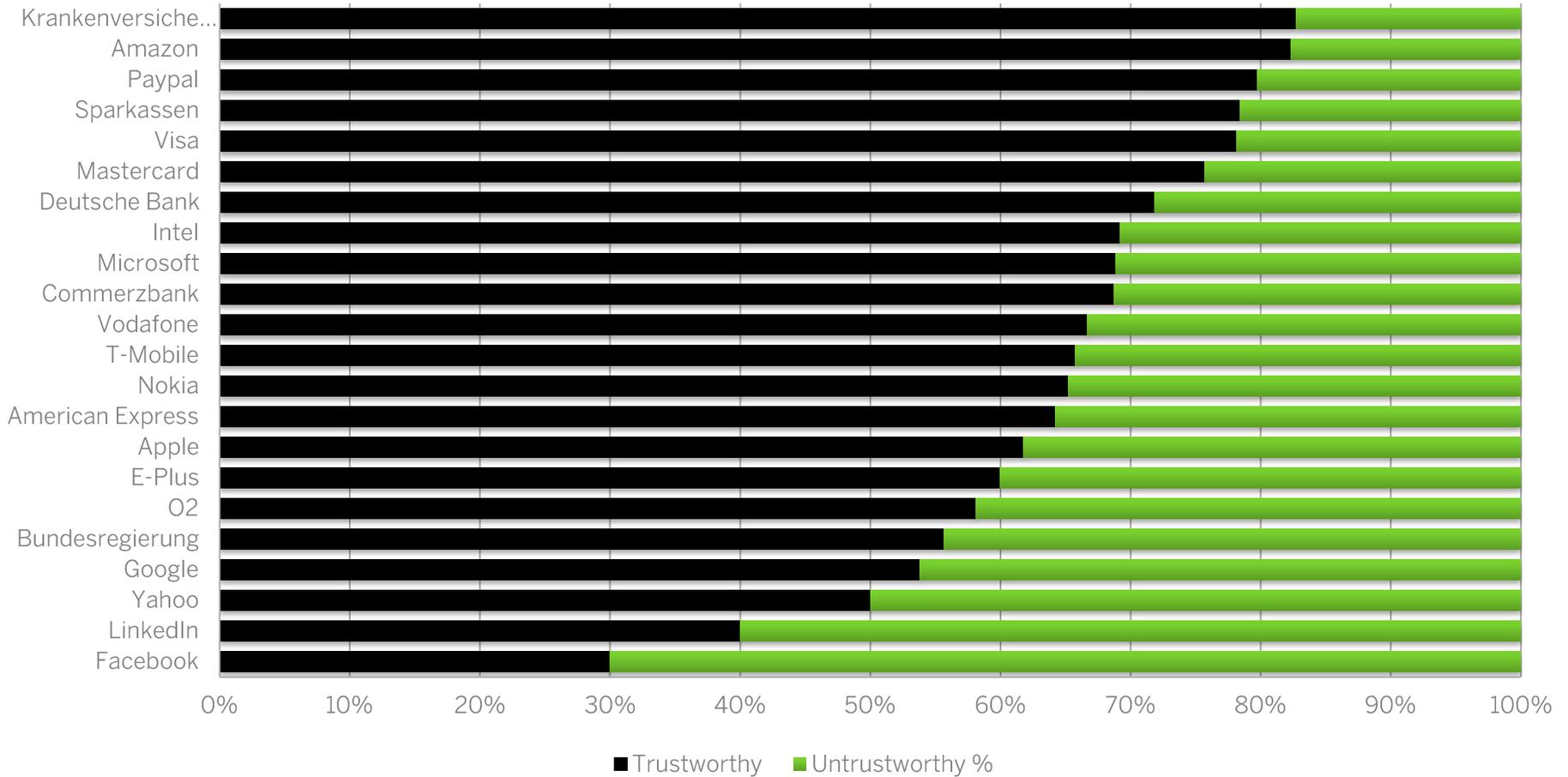
# What would be a fair price for data?

## Median fair price (EUR) to share data with trusted brand



n=180, all respondents reside in Germany

## Who do Germans trust?



N=180 German residents, , calculated as a percentage of respondents who know the brand and classed is as trustworthy or untrustworthy

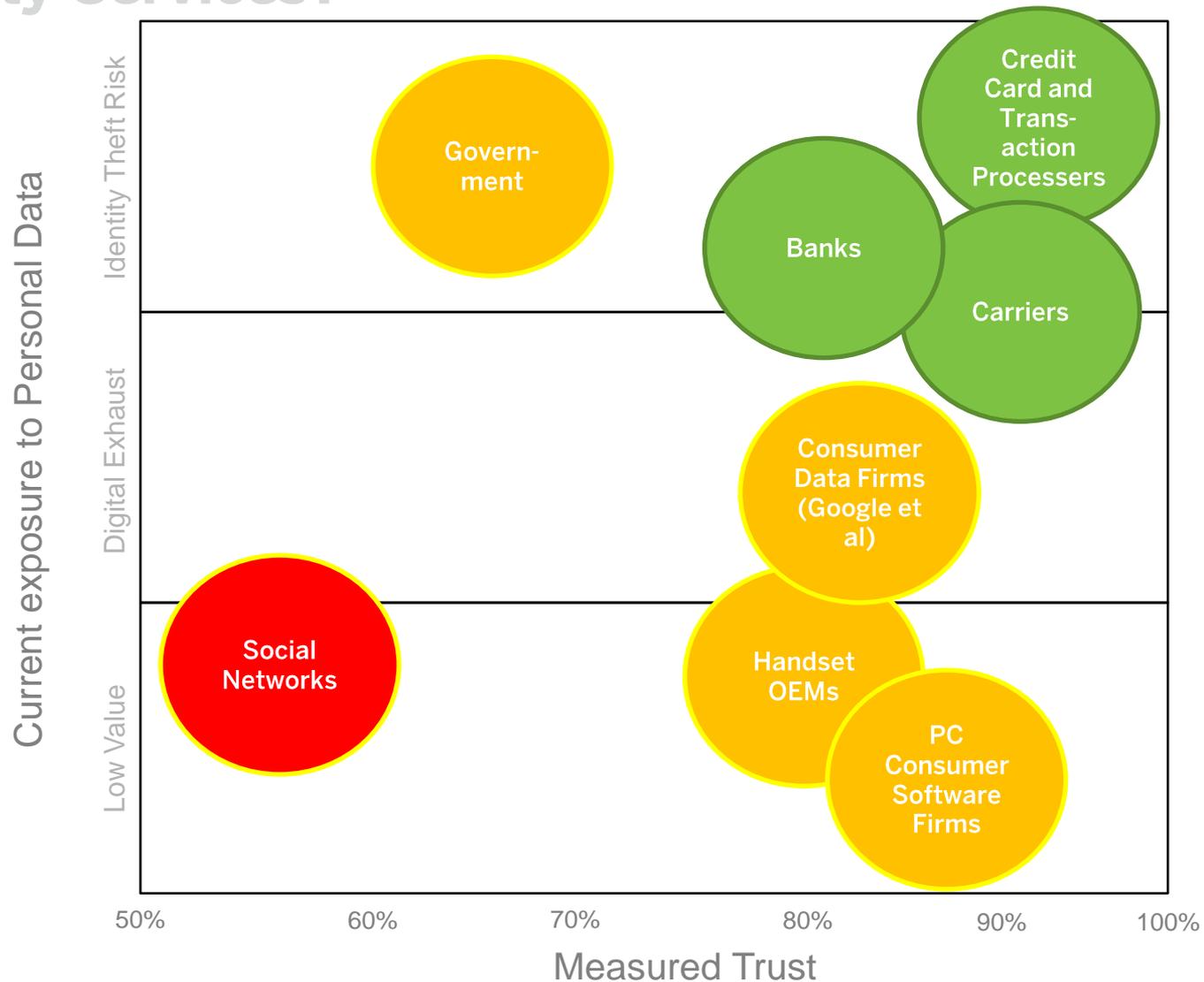
But that's not the whole story on trust. Qualitative research revealed the importance of **context**.

A man with short brown hair, wearing a dark blue t-shirt, is shown in profile, looking intently at a laptop screen. He is sitting at a table in what appears to be a home or office environment. In the background, a dining table with a patterned tablecloth and wooden chairs is visible. The lighting is soft and natural, suggesting an indoor setting with windows. The overall mood is focused and professional.

“I’m more trusting of Southwest because I know they are going to do something with the information to improve their services.”

- Dave W.

# What types of providers are best positioned to deliver Identity Services?



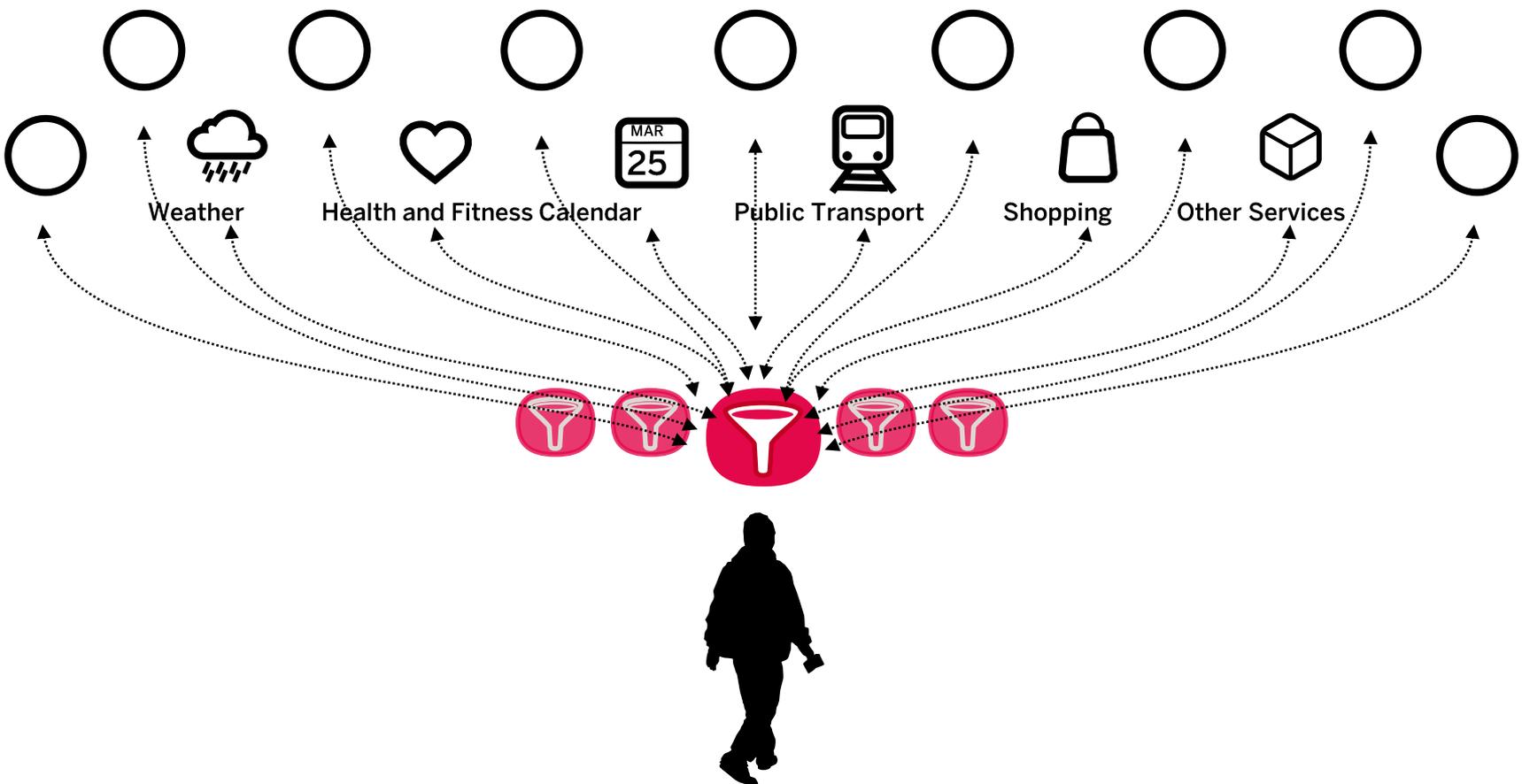
# Summary

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- Global consumers are often unaware that they are “making a choice” to share their personal data.
  - Brands with business models based on collecting and monetizing data run the risk of alienating consumers, who may end up feeling duped.
  - These concerns will only increase as personal data proliferates.
- Revealed value indicates a middle tier of digital “exhaust.”
  - Business models that depend on this type of data need to provide clear benefits to users that are contextually relevant and commensurate with the value of the data.
- Many established brands, including mobile carriers are well-positioned to extend their relationships with consumers into trust services or identity management.

# How Personal Data is re-shaping businesses and brand experiences...

The third wave is going to be about managing our personal data and will require new strategies for products, services and branding which will be driven by new economics



ATM   
DEUTSCHE BANK

CHARGING 



# frog

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