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# Turning bits into dollars The potential of the data economy in the GCC

November, 2019

**INSEAD**

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# Agenda

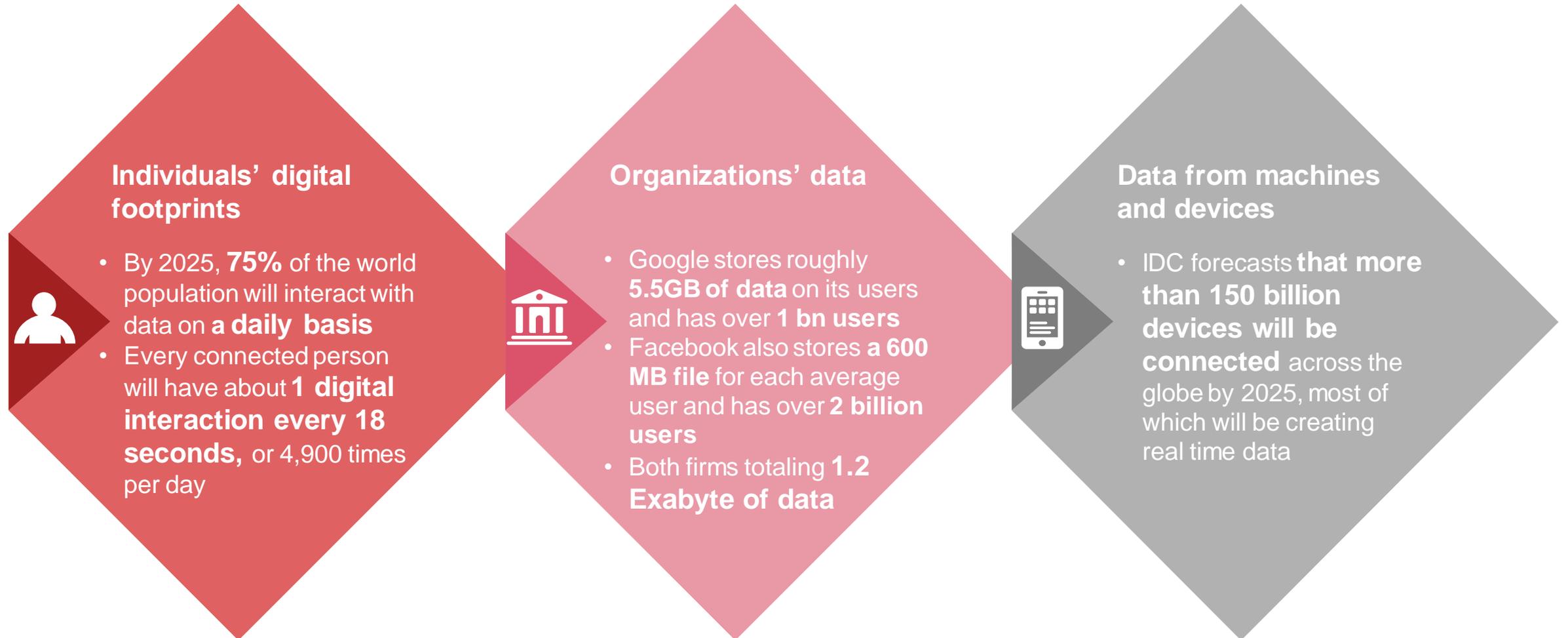
Let's get started

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1. **What is the data economy**
2. How are companies embracing the data economy globally
3. How can the GCC unleash its data economy

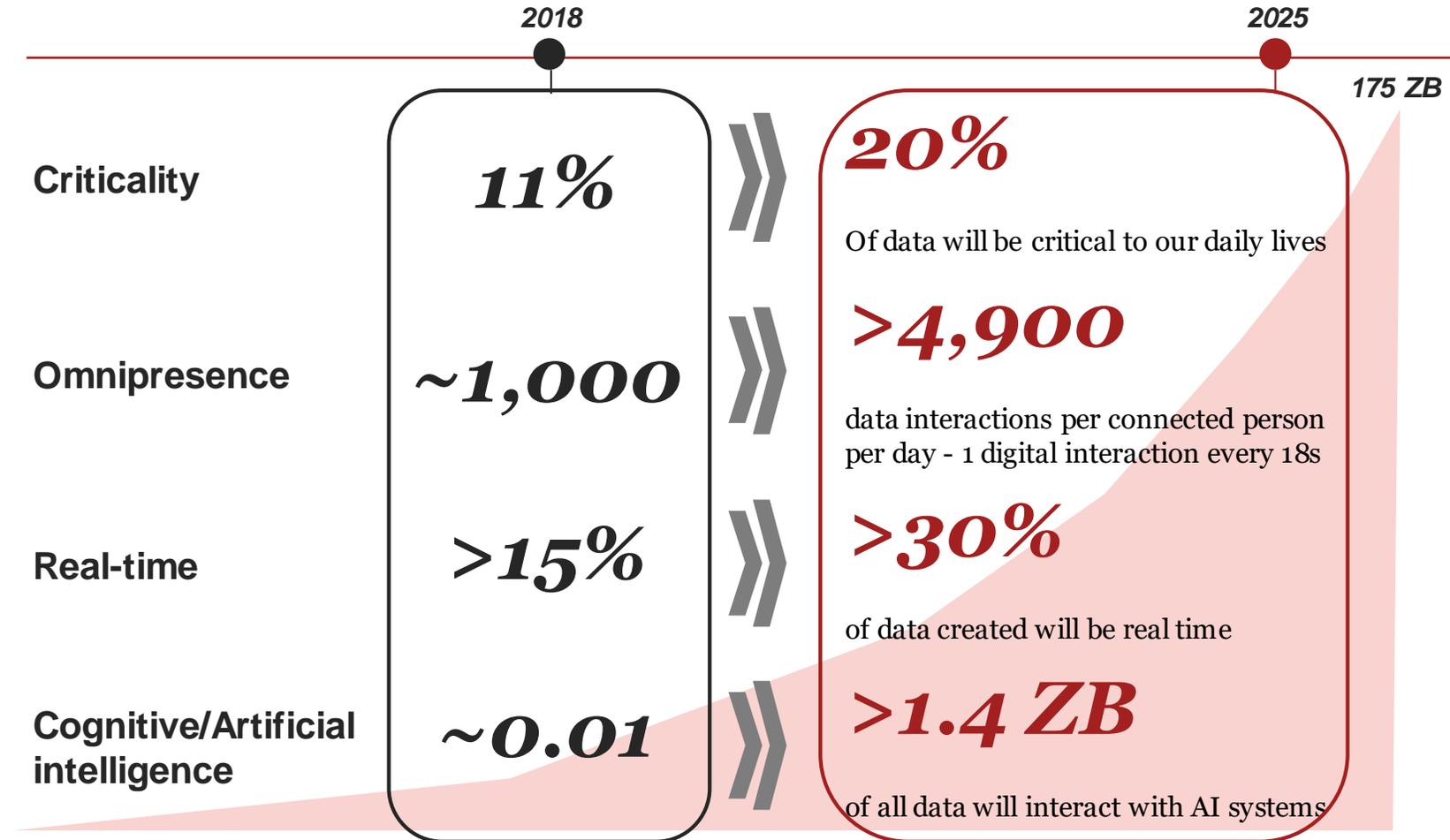
# The volume of data is growing rapidly driven by underlying growth in the three main sources of data

## Main sources of data



# The total size of global data generated in 2025 is expected to be 175 zettabytes, more than five times the volume in 2018

## The datasphere in 2025: key trends and estimations



## Penetration in the GCC

- These trends are visible in the GCC, thanks to the widespread use of smartphones and investments in “smart cities”
- For example, the UAE smart homes market is expected to grow rapidly by 14.8% per year from 2016 to 2022
- GCC is expected to be a significant market for the wearables, which are forecast globally to more than double their sales from 2016 to 2020

# Four main players contribute to value creation in the data economy, these include producers and consumers of data

**Data consumers** are companies and government agencies which use data insights to guide internal business decisions

**Ad-driven online platforms** use insights from data gathered from online users to for improved targeted advertising services

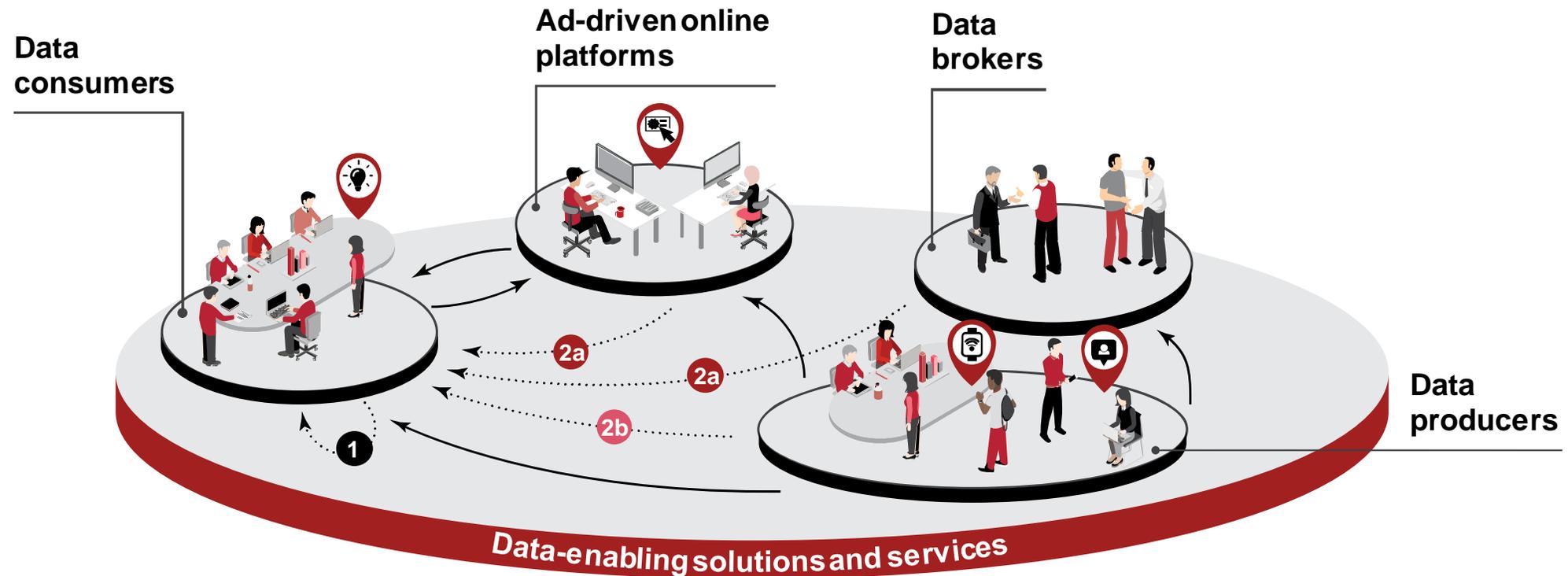
**Data brokers** collect information about consumers and sell it as raw data or as analyzed information



**Data producers** are individuals, companies, and government agencies, and data-producing machines which create a digital footprint

# The value of the data economy is driven by companies using data to derive insights, and from the increasing exchanges

→ Value flows      ····→ Data flows



**1 Business optimization** is the value unlocked from using data to increase revenue, or reduce expenses and risks within a business

**2a Indirect data sales and analytics** is the value associated with data sale and analytics offered by brokers and platforms to consumers

**2b Direct data sales and analytics** is the value associated with the sale of data by those producing it to data consumers

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## 1 Business optimization

# Globally, data-derived insights are the new standard among companies, with select building new business models

## Business optimization use cases across industries

OPTIMIZED PROCESSES		FACILITATED DECISION MAKING	
 <b>Telco</b>	AT&T uses <b>predictive analytics</b> to send maintenance crews out proactively rather than reactively leading to a <b>40% reduction in repair dispatches</b>	 <b>Financial services</b>	Morgan Stanley is using Hadoop to process large datasets and improve investment portfolio returns; <b>insights that used to take months to spot are now seen in real-time</b>
 <b>Healthcare</b>	Bangkok hospital uses <b>ERM big data to drive patient care and improve outcomes</b>	 <b>Tech</b>	Microsoft uses Cosmos software to generate <b>datasets to evaluate its products and services</b>
 <b>Oil and gas</b>	Shell uses <b>data collected from IoT devices to monitor oil fields and automate manual processes</b> , this resulted in more than \$1 million in savings in Nigeria	 <b>Retail</b>	Walmart uses big data to <b>drive intelligent product placement, personalize shopping experience, and improve checkout</b>
			
			
			

# Direct data sales is also on the rise especially within key data-driven sectors, such as financial services, automotive and retail

## Direct data sales

### Financial services

- In 2017, **Amex** launched Amex Advance platform. Building on its wealth of transaction and credit score data, **Amex offers marketers better target customers and personalize customer experiences.**
- Applying machine learning techniques, the platform **analyses both Amex data and publically available data to develop insights about consumer buying behaviors**



### Automotive

Otonomo platform **stores data of more than 2 million cars and sells it to automotive suppliers, retail, insurance, and fleet management companies** for marketing and product development purposes

Through partnerships with municipalities, **Uber shares travel data for improved city planning**



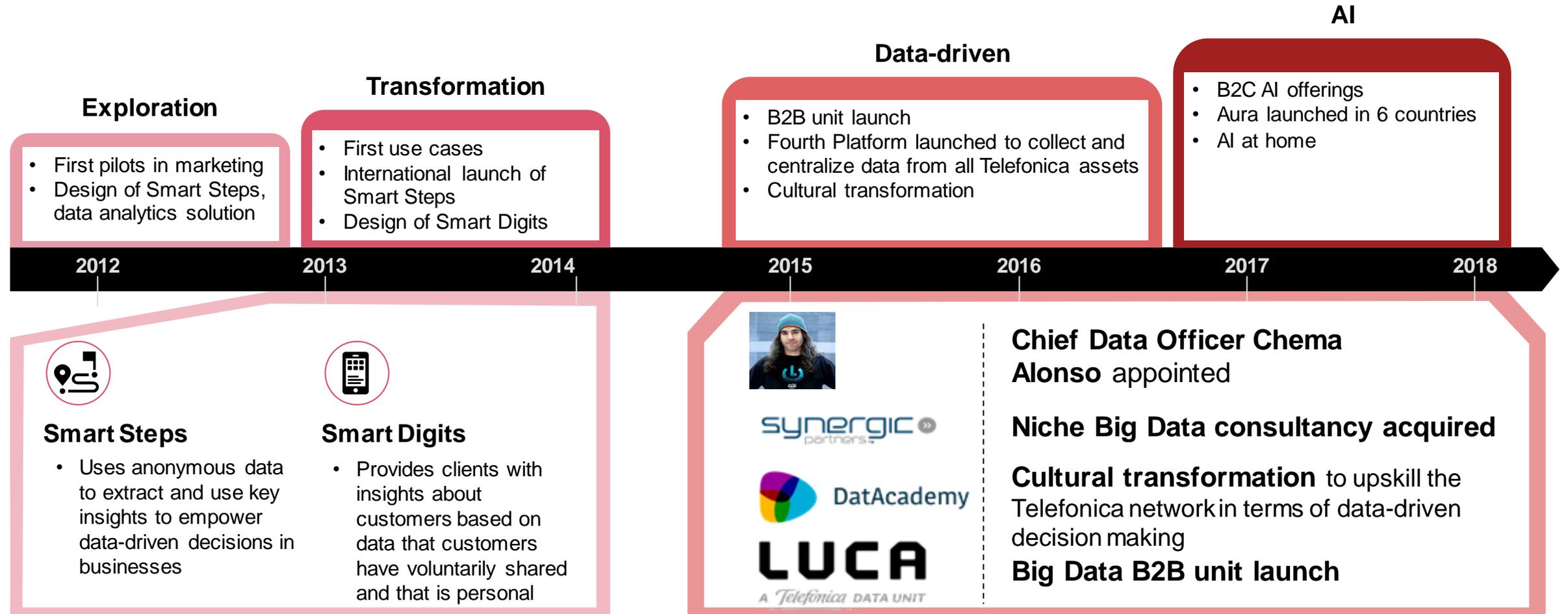
### Retail

**Walmart** introduced **Walmart Exchange**, with its strapline **“Using Data to Go from Retail to Media”** The platform allows suppliers to make use of customer data from Walmart stores and Walmart.com to **target, purchase, measure and optimize advertising**



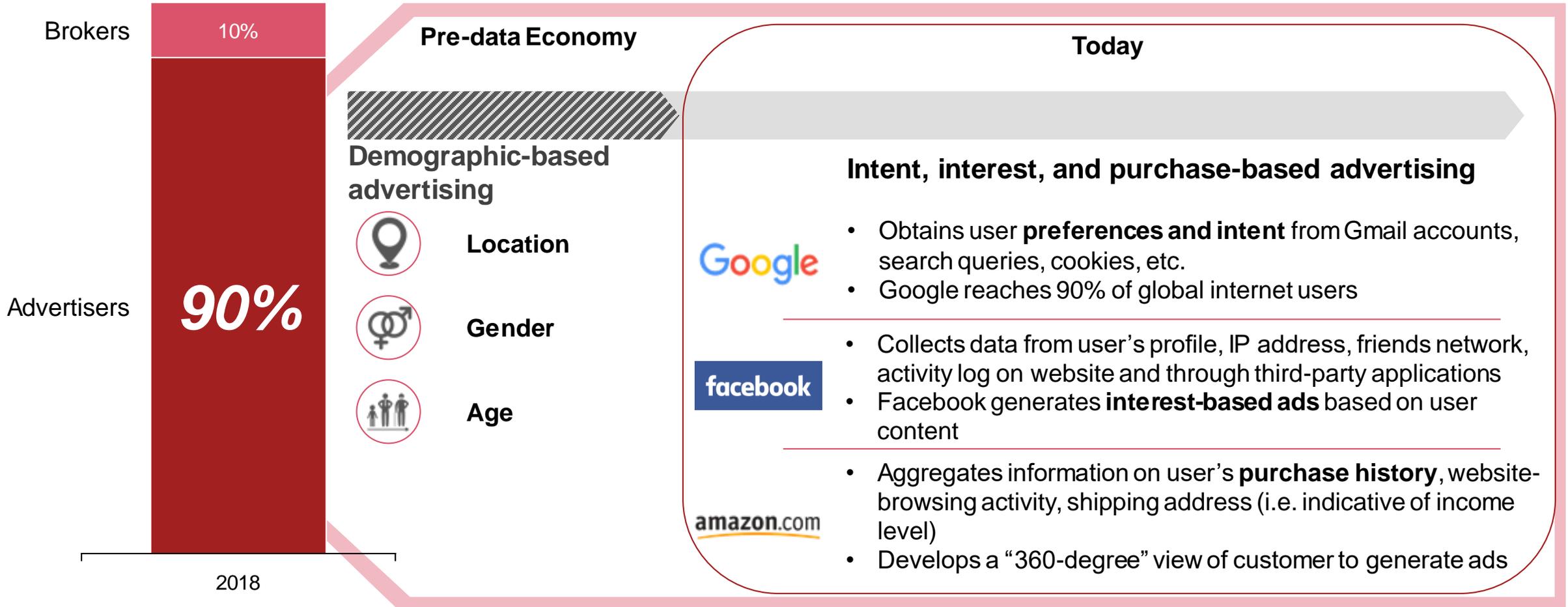
# In the telecom sector, LUCA has a comprehensive portfolio of data mining and analytics-based products and services

## Telefonica's data-driven journey



# With a shift from demographic based to more targeted advertising, advertisers are able to capture 90% of the market

## Indirect data sales and analytics



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# While GCC countries are producing increasing amounts of data, the economic return remains small

## Key statistics on the data economy in the GCC vs. global benchmarks



**35%**

Data consumption growth between 2014 and 2018 in KSA ...

VS

**24%**

Data consumption growth between 2014 and 2018 in UK...

... expected to grow between 2018 and 2022 at

**28%**

VS

... expected to grow in the UK between 2018 and 2022 at

**20%**

**\$54**

Digital advertising spending per capita in the UAE in 2019

VS

**\$41**

Digital advertising spending per capita worldwide in 2019

**22%**

Forecasted increase in online TV advertising in the UAE for the period 2018-2023 (according to PwC's Global Entertainment and Media Outlook)



**0.3%**

Contribution of the data economy to GDP in the GCC in 2018

VS

**2%**

Contribution of the data economy to GDP in the EU in 2016

# The data economy will only start realizing its full potential when stakeholders take active steps to encourage data use

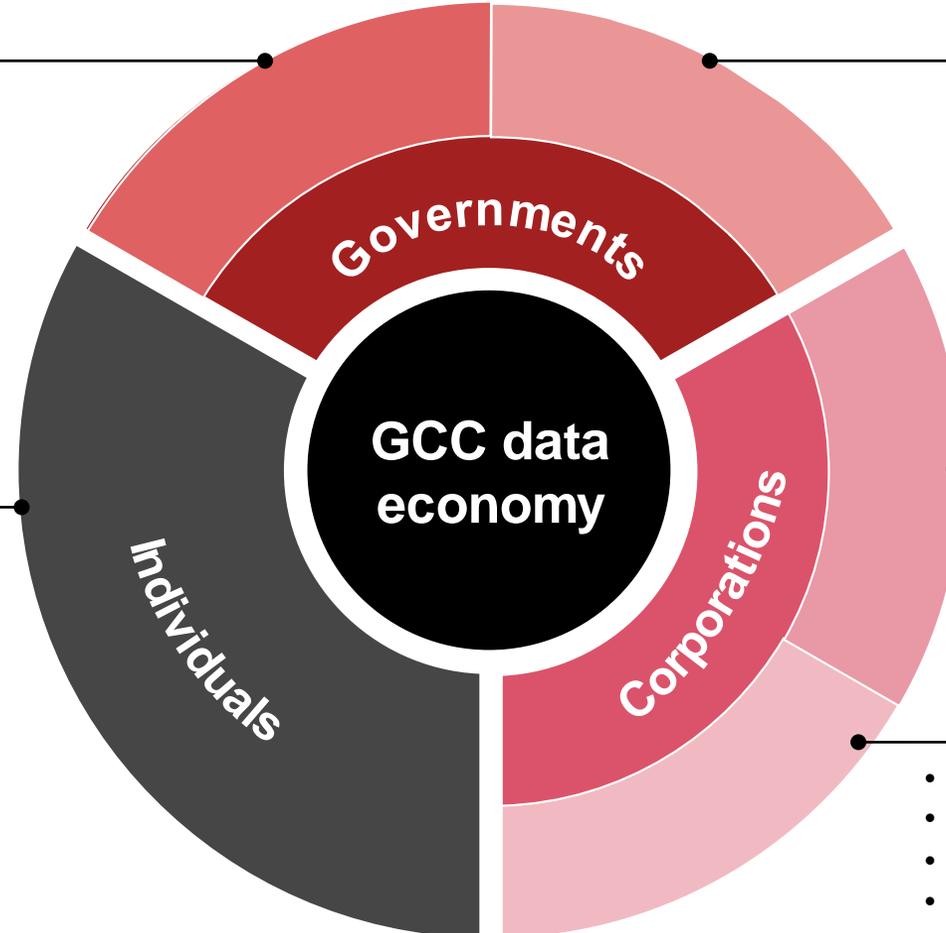
## Key imperatives for the data stakeholders

### Invest in the sector

- Incentivize key players to set shop in the GCC
- Invest in startups
- Facilitate trainings and re-skilling programs

### Carefully share and monetize data

- Increase awareness of own digital footprint
- Be mindful of privacy rules
- Consider data monetization



### Explore regulations

- Test innovative regulations through agile testing sandboxes along:
  - Ownership
  - Accountability
  - Benefits
  - Privacy
  - Security

### Start with pilots

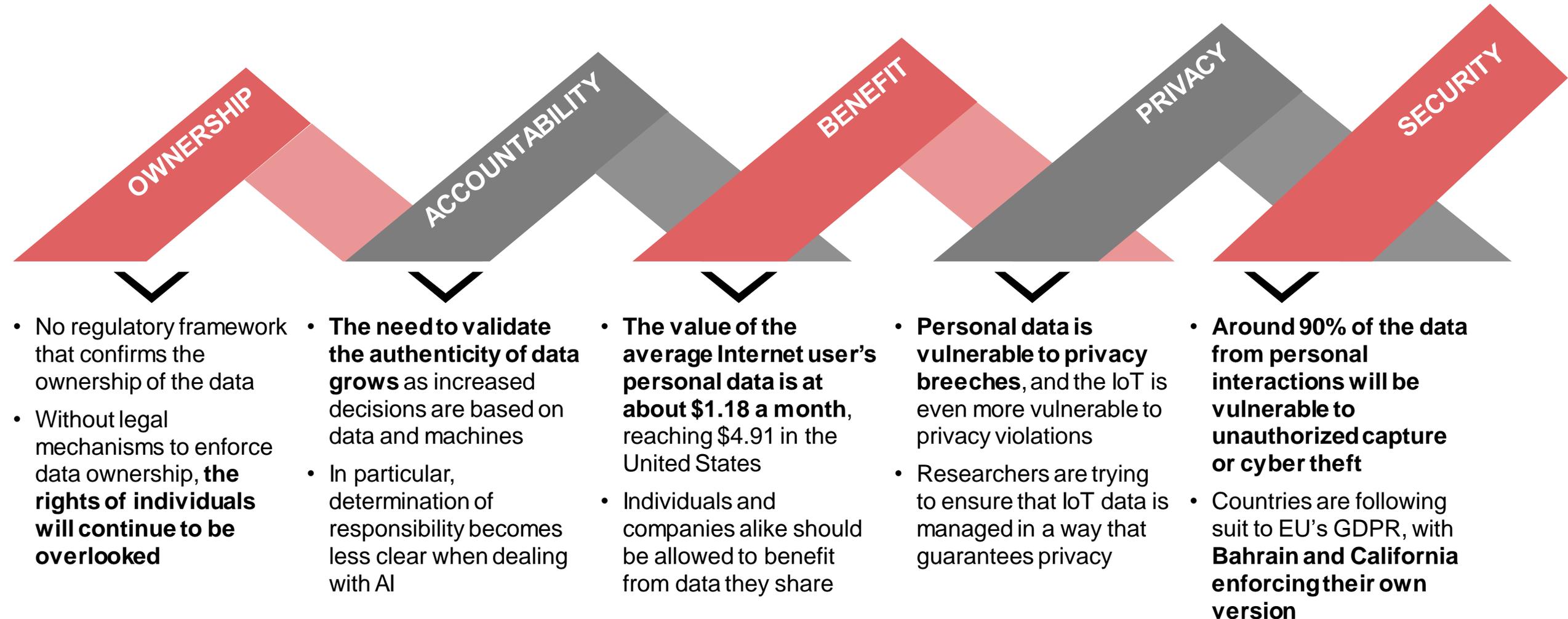
- Pilot special data projects through cross functional teams

### Build the data culture and governance

- Embed an ambitious data culture
- Empower employees to use data
- Established data center(s) of excellence
- Continuously be on the lookout, and invest in tools to improve data usage

# First, policy makers and regulators should carefully assess the key issues hindering the development of a data economy

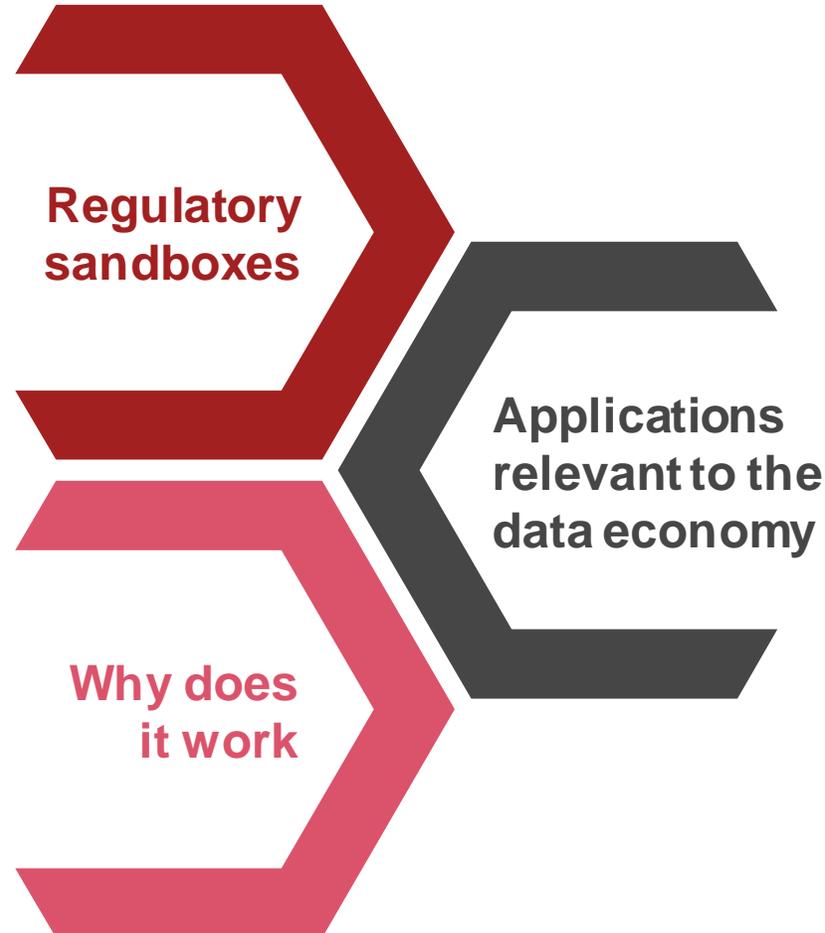
## Underlying uncertainties of the data economy



# Innovative regulations can be put to practice in testing environments to assess their merit in addressing the issues

## Supporting regulations

- Regulatory sandboxes are used to test new ideas in a safe environment, **enabling institutions and start-ups to conduct live experiments**
- They also give regulators an opportunity to learn the risks associated with new technologies and **right-size regulation** accordingly
  
- Firms do **not need to fully meet the relevant regulatory requirements**
- Experiments are conducted within **agreed boundaries**, such as the number of clients and activity scope
- Experiments are **time-bound**



## Regulations for privacy

Regulations for protecting individuals' privacy have already been implemented, such as EU's **GDPR**, **California Consumer Privacy Act**, and **Bahrain's Personal Data Protection**

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## Distributed data ledger for data authenticity

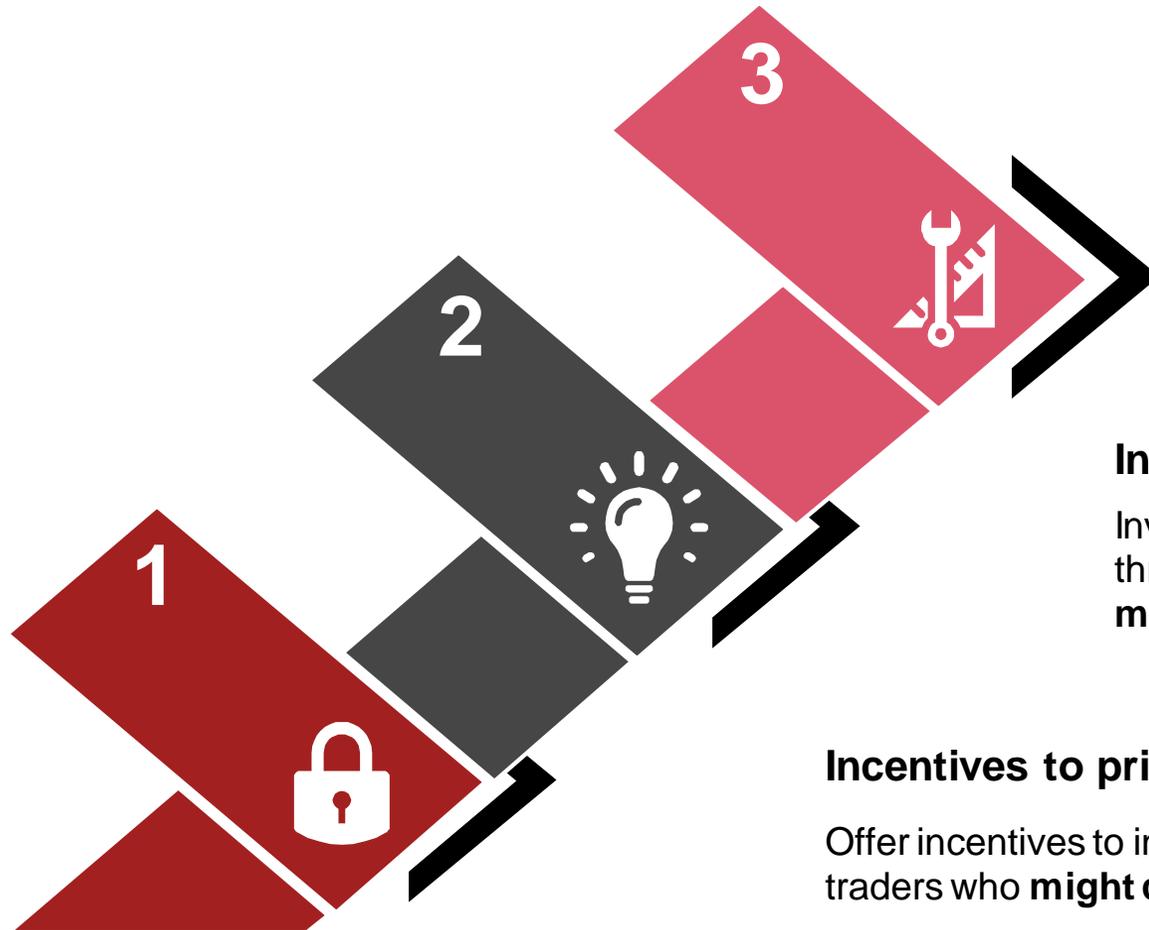
Estonia has gradually moved all of its citizen **identification data onto a distributed ledger system**

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## Mandatory data sharing for competitiveness

Germany requires that **insurers make available a set of statistics** which smaller firms would not be able to compile on their own

# Governments should also invest in the sector either directly or through incentives and trainings for data-based companies



## Training and re-skilling programs

Promote training and re-skilling programs to **equip companies and governments with the required digital skills**

## Investments in startups

Invest in startups that support data democratization through **encryption, distributed ledger, data marketplaces, cryptocurrencies, and others**

## Incentives to private companies

Offer incentives to infrastructure and solution providers, or data traders who **might consider setting up a business in the GCC**

# Second, corporations have a role to play, starting with a mindset shift, followed by data-driven projects

## Role of corporations

### What companies think embracing data means

- ✘ Full data monetization focused
- ✘ Comprehensive Big Data strategy
- ✘ Excessive time effort to identify all data available
- ✘ Concentrated within a “data” department

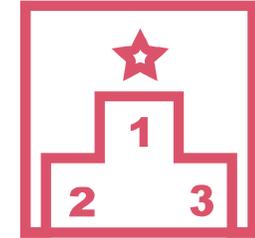
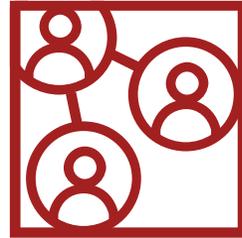
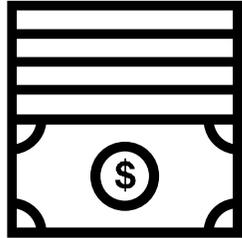
V.S

### What it should be

- ✓ Led by cross-functional teams with strong project management
- ✓ Business-focused and use-case driven project
- ✓ Partnering to bridge digital skill gap
- ✓ Data-driven culture across the organization

# Majid Al Futtaim embarked on an Advanced Analytics transformation in 2016

## Key achievements of the Advanced Analytics transformation



### Manage data as an asset

- Developed a data **strategy** and a robust data **governance** model
- **Invested in a data lake** that hosts 400+ data sources from 16 countries, and 13 million customers

### Enable transparency of information

- Created a **single view of data** and launched a business insights platform
- Built a **cross-group insights community** to mine data and share knowledge

### Drive change through pilots and experimentation

- Built a **roadmap of over 70 use cases** and delivered **more than 10 projects** with concrete financial impact
- Currently delivering analytical impact via machine learning models

### Empower employees to leverage data for decision making

- Incubated knowledge within a **centralized Centre of Excellence**, and now disseminating it to each business unit
- Launched **Majid Al Futtaim School of Analytics and Technology** in 2017 with 40 modules and 1,500 trainees

# To proactively manage data as a new asset class, Majid Al Futtaim distinguishes three use cases for data

## Data use cases – A Majid Al Futtaim case study

### 3 Market currency

To build and enable new business models

- Majid Al Futtaim is at the **early stages of leveraging data to incubate new business opportunities** through insights and analytics

### 2 Stakeholder currency

To drive engagement with its ecosystem of partners



- The Group **shares anonymized data with government entity Smart Dubai and leading academia** including Wharton Customer Analytics Initiative to engage in joint analytics projects
- The company also **shares anonymized data with its tenants** via an online analytics portal to build mutually beneficial practices

### 1 Internal currency

To drive business optimization



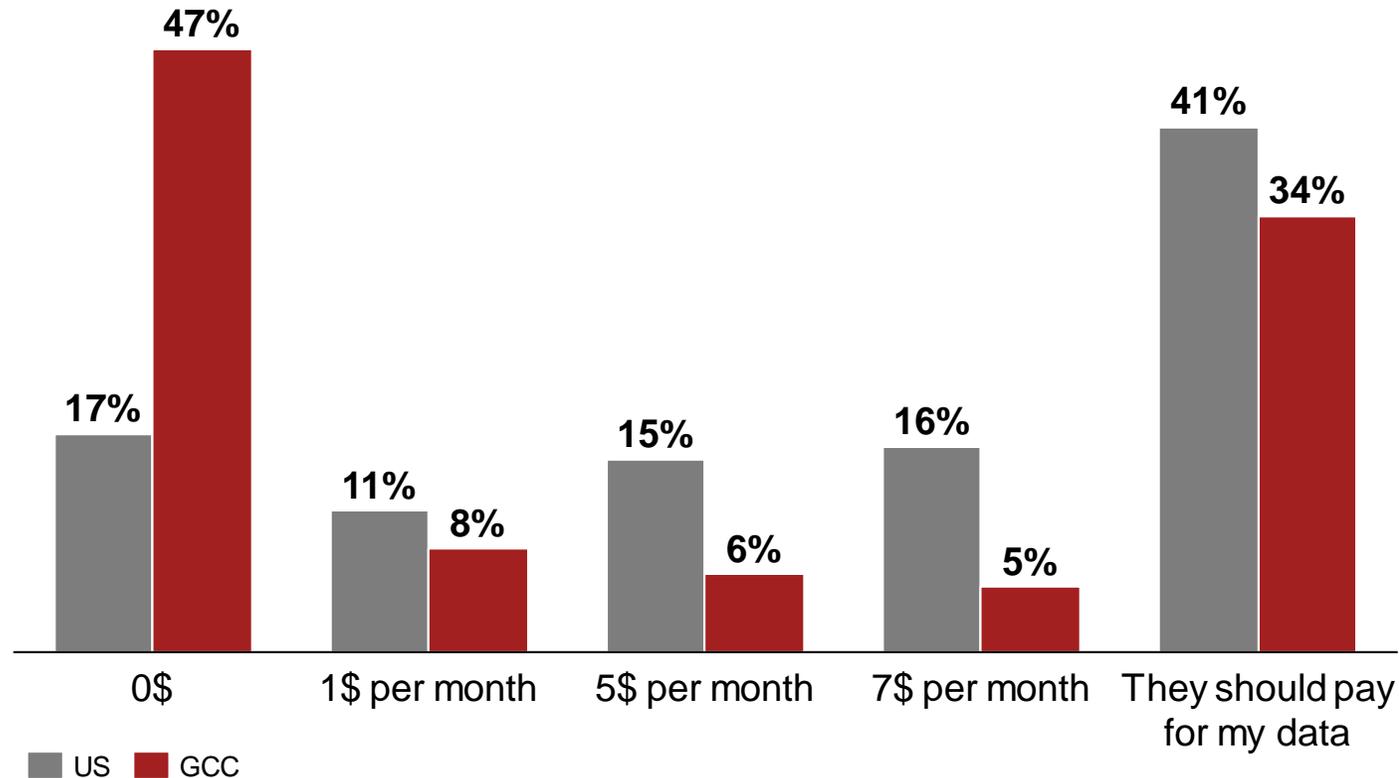
- Carrefour, a MAF business uses **purchase data collected from loyalty cards to optimize shelf assortment**, reducing time to adapt products to customers' taste, improving sales by 1 to 5%
- VOX Cinemas uses **machine learning to personalize its website via movie recommendations**, resulting in conversion rate increases between 15-30%
- Majid al Futtaim's shopping malls also **use data to optimize parking operations as well as its tenant selection and placement**



# Individuals continue to form their views on the value of their data, which might impact value distribution among local players

## Willingness to pay for social media

Responses when asked: Facebook would need \$7 per month from everyone in the US to maintain its current revenue from targeted advertising. How much would you pay: (N=2761 Washington Post readers vs. N=2755 GCC citizens)



## Discussion

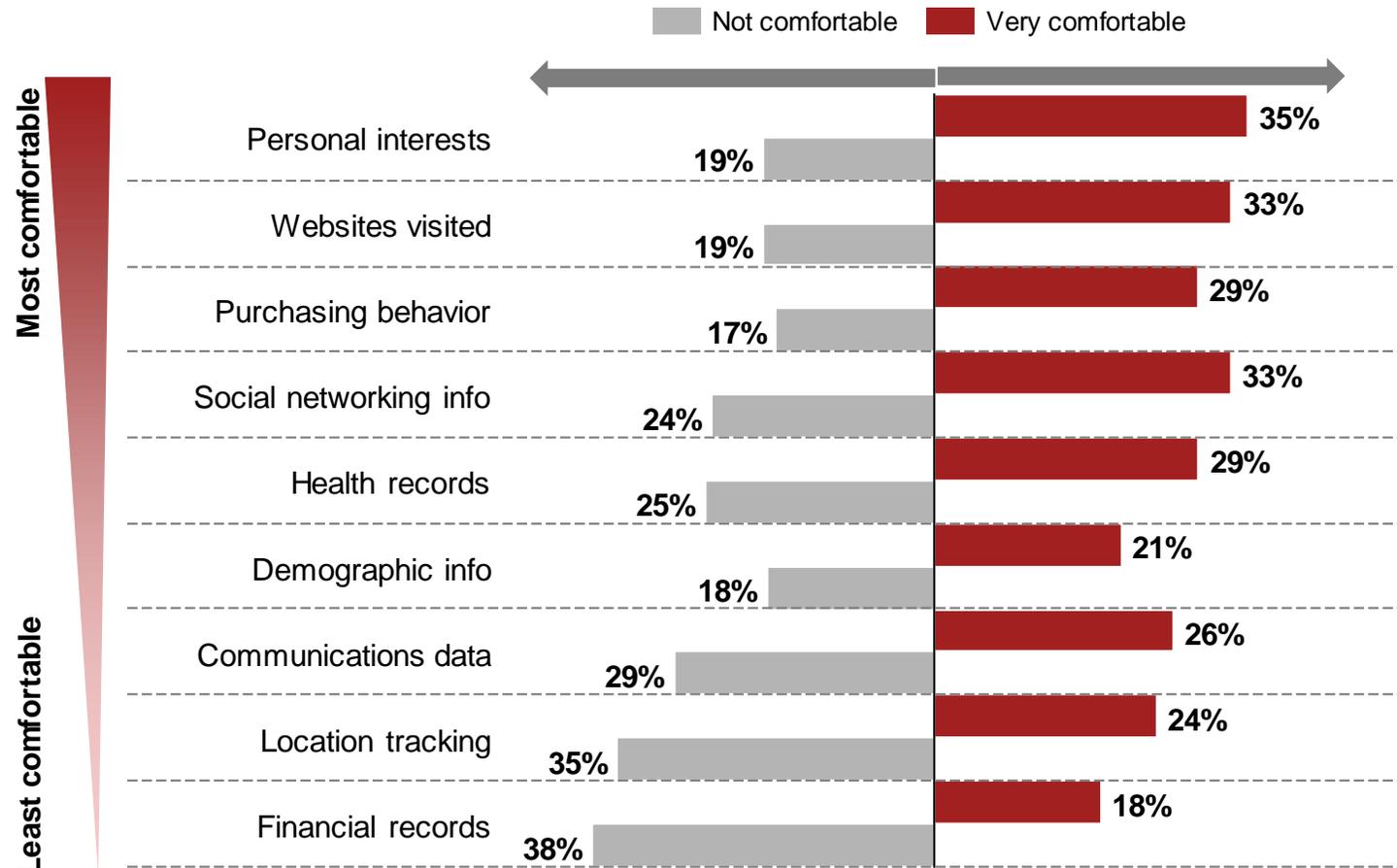
- More than a third of the GCC population is aware about the worth of their data
- Awareness in the region is relatively high comparable to the 41% in the USA
- Individuals are starting to demand a share of the value of their data

**>> This gives rise to new models of data sharing and new payment equations**

# Yet users are still reluctant to share their personal data, due to lack of control and monetization

## Comfort levels on data sharing

Data types respondents are most comfortable sharing (% of respondents, N=2755)



## Additional insights

- GCC citizens are least comfortable sharing telecom-related (location-tracking and communications data) and financial services-related data, both are important parts of the global data trade
- **23%** of GCC respondents would be willing to share more data if they were in control of it
- **19%** would share more data if they were getting paid for it or if they understood better how their data is used
- **34%** of people in the GCC know the worth of their data, compared to **41%** in the U.S.

# With great potential comes great responsibilities: Governments should create the right conditions to unleash the value of data

1 GCC countries are producing increasing amounts of data, yet the economic return remains small – Around 0.3 percent of regional GDP in 2018

2 Main challenges hindering the data economy in the GCC are

- Lack awareness of the value of their data
- Limited government policies and regulations to safeguard data use
- Shortage of the necessary human and technical capabilities to support further expansion

3 To develop the data economy in their region

- Governments must put in place the right enablers and regulations to safeguard data's use
- Companies should venture in analytics through project-based pilots
- Individuals should actively manage their privacy; and demand a share of the value

# Thank you

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