

# Insurance regulators' role in managing data risks and protecting consumers

# Presenters

## Technical expert



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Case study 1: BaFin, Germany  
Case study 2: IRA, Kenya

Speakers:  
Kathleen Koehn, BaFin  
Elias Omondi, IRA

# Enter the code and participate!

Go to [www.menti.com](https://www.menti.com) and use the code 58 69 85

# Big Data

**40 ZETTABYTES**  
 ( 43 TRILLION GIGABYTES )  
 of data will be created by 2020, an increase of 300 times from 2005



## Volume SCALE OF DATA

It's estimated that **2.5 QUINTILLION BYTES** ( 2.3 TRILLION GIGABYTES ) of data are created each day



Most companies in the U.S. have at least **100 TERABYTES** ( 100,000 GIGABYTES ) of data stored

The New York Stock Exchange captures **1 TB OF TRADE INFORMATION** during each trading session



## Velocity ANALYSIS OF STREAMING DATA

By 2016, it is projected there will be **18.9 BILLION NETWORK CONNECTIONS** - almost 2.5 connections per person on earth



Modern cars have close to **100 SENSORS** that monitor items such as fuel level and tire pressure



# The FOUR V's of Big Data

From traffic patterns and music downloads to web history and medical records, data is recorded, stored, and analyzed to enable the technology and services that the world relies on every day. But what exactly is big data, and how can these massive amounts of data be used?

As a leader in the sector, IBM data scientists break big data into four dimensions: **Volume, Velocity, Variety and Veracity**

Depending on the industry and organization, big data encompasses information from multiple internal and external sources such as transactions, social media, enterprise content, sensors and mobile devices. Companies can leverage data to adapt their products and services to better meet customer needs, optimize operations and infrastructure, and find new sources of revenue.

By 2015 **4.4 MILLION IT JOBS** will be created globally to support big data, with 1.9 million in the United States



As of 2011, the global size of data in healthcare was estimated to be

**150 EXABYTES**  
 ( 161 BILLION GIGABYTES )



**30 BILLION PIECES OF CONTENT** are shared on Facebook every month



## Variety DIFFERENT FORMS OF DATA

By 2014, it's anticipated there will be **420 MILLION WEARABLE, WIRELESS HEALTH MONITORS**

**4 BILLION+ HOURS OF VIDEO** are watched on YouTube each month



**400 MILLION TWEETS** are sent per day by about 200 million monthly active users



**1 IN 3 BUSINESS LEADERS**

don't trust the information they use to make decisions



**27% OF RESPONDENTS**

in one survey were unsure of how much of their data was inaccurate

## Veracity UNCERTAINTY OF DATA

Poor data quality costs the US economy around **\$3.1 TRILLION A YEAR**



Technology has allowed businesses to better understand and serve consumers through the collection and analysis of big data.

# Current Insurtech innovation landscape



But innovations, and specifically the use of consumer data, also leave consumers vulnerable

# Where data leaves consumers vulnerable

## Personal data of a billion Indians sold online for £6, report claims

Newspaper says it bought access to details from world's largest biometric database, used to administer public services



The Guardian (04.01.2018)

BBC  
WORLD  
SERVICE

## Business Daily

Listen now

### Could Big Data Kill Off Health Insurance?

As US health insurers ask customers to wear fitness trackers, are they opening a Pandora's Box of ethical dilemmas and business threats?

Available now  
18 minutes

Ed Butler speaks to Brooks Tingle, chief executive of insurer John Hancock, which has been pioneering the controversial policy of rewarding customers willing to demonstrate that they exercise more.

BBC World Service (01.11.2018)

For example, **Tala**, a firm that offers microloans in Kenya using a smartphone app to evaluate applicants' credit risk, gathers various types of data, including where loan applicants spend their time, how many people they communicate with every day, how often they call their parents (by [searching call logs for the word "mama"](#)) and, less surprisingly, whether they pay their bills on time.

CGAP blog (11.12.2018)



**Data protection says:** “Collect and use only that information which is necessary to serve the immediate purpose.”

**Big data says:** “Give us everything you have and we’ll see if we can find a purpose for it.”

# Key consumer data risks affecting the insurance industry

## Drivers

- Failure of controls
- Error
- Obstructed consent
- Unauthorized collection, storage and use
- Data breaches

## Negative consumer outcomes

### Address negative outcomes directly

Onus on providers to operate in consumers' best interest

### Example:

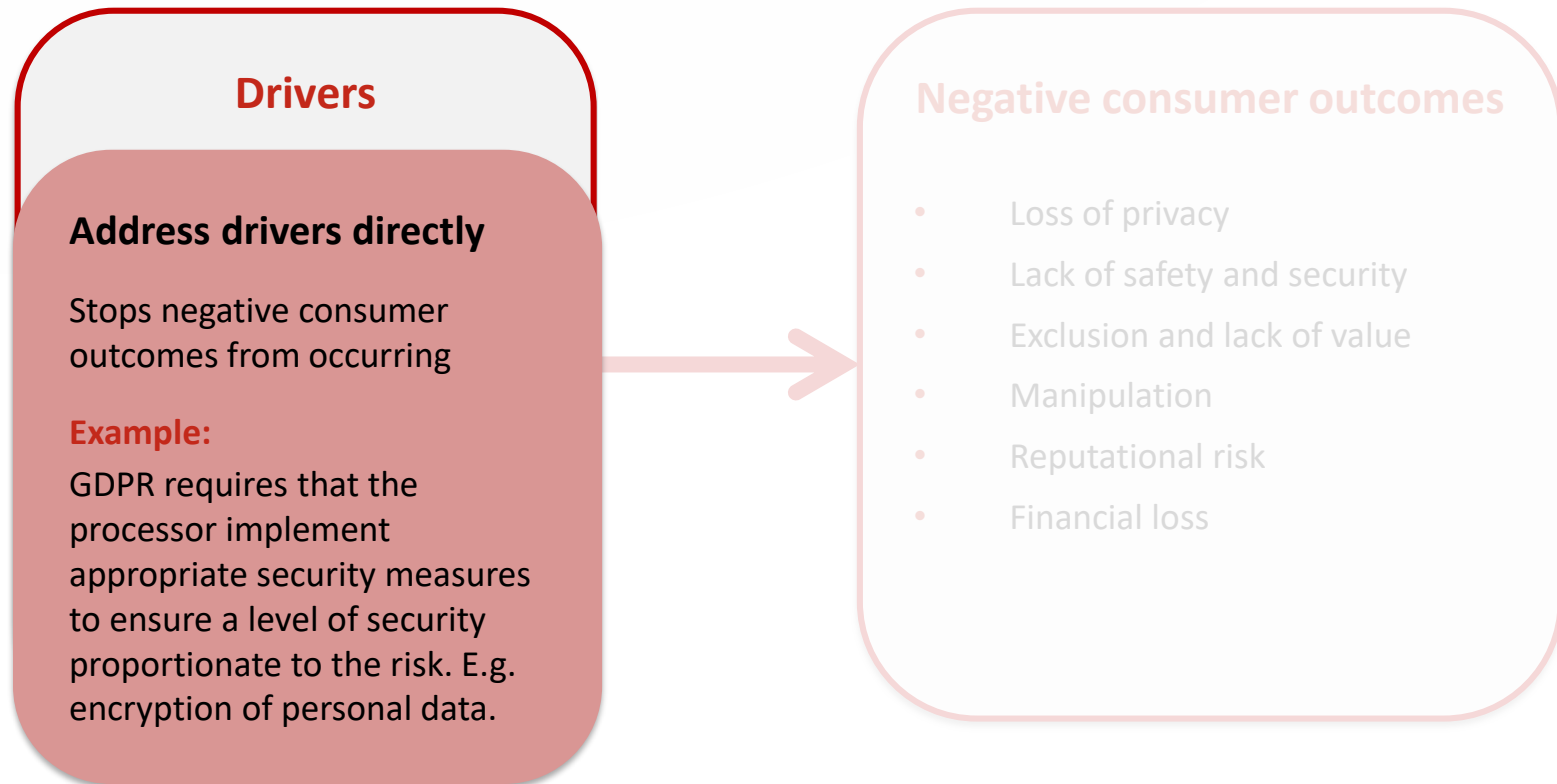
Treating Customers Fairly (TCF) in South Africa

Regulators can hold firms accountable for consumer harm due to inappropriate data collection, storage or use.

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How high or low do you assess consumer data risks in your jurisdictions? Very high – high – low – very low

# Key consumer data risks affecting the insurance industry



**Source:** Based on IAIS (2016), IAIS (2018a), IAIS (2018b), Institute of Actuaries of Australia (2016), McKee *et al.* (2015), The Smart Campaign (2016), The World Bank Group (2017), BaFin (2018) and stakeholder interviews (2018)

But data and data risks are pervasive and seldom affect only one sector

# Legislative approaches

## Omnibus regulation

Cross-cutting data protection regulatory framework

Often also has a dedicated regulatory authority

E.g. EU, South Africa, New Zealand and Argentina

## Sectoral regulation

No overarching national/regional data protection legislation

Each sectoral regulator is responsible for addressing data protection and privacy

E.g. USA, India and China

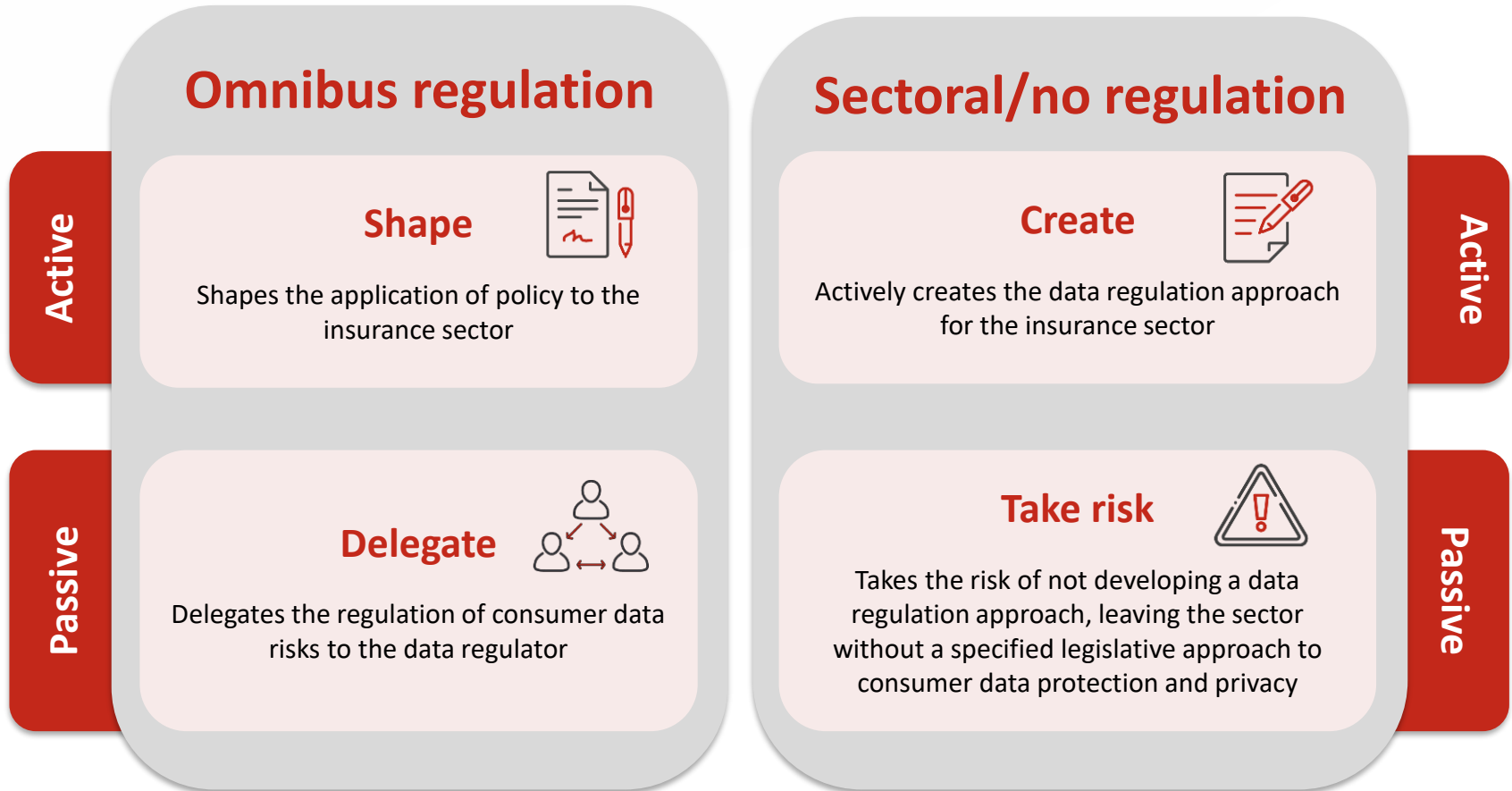
## No regulation

No laws/regulation governing consumer data protection in place

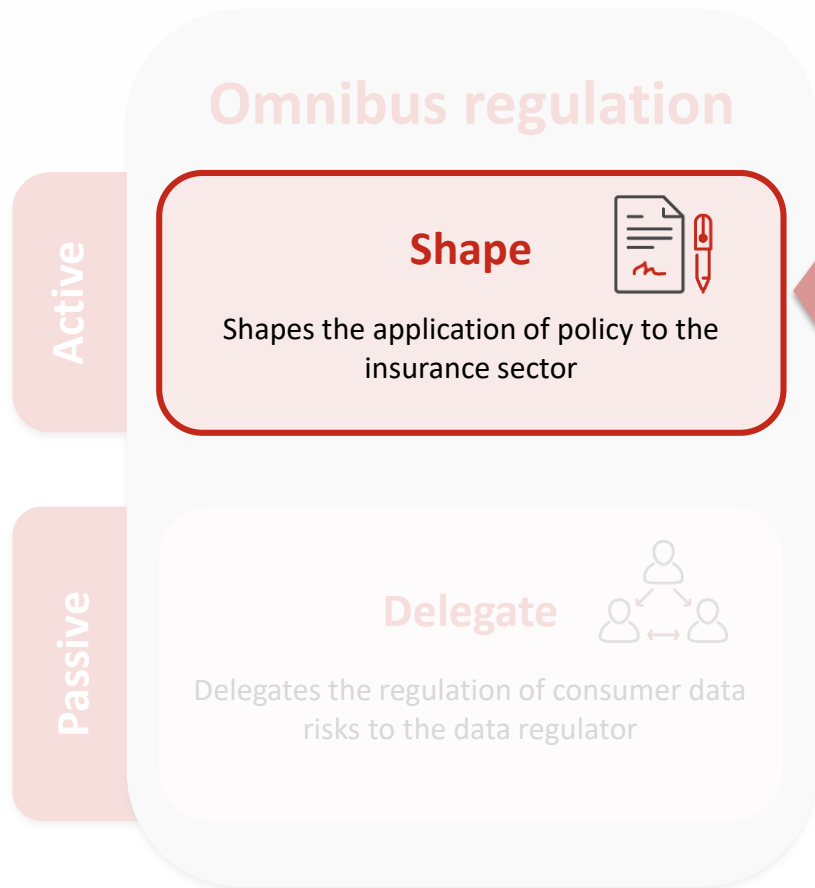
E.g. Kenya

Countries falling into a particular category may have draft or pending legislation, which once in operation, may change the applicable framework category.

# Overall implementation strategies



# Overall implementation strategies



## E.g. BaFin (Germany)

Employs regulatory and supervisory tools to augment the existing omnibus legislative framework

### Tools employed:

- *Regulate*: Data protection requirements beyond GDPR
- *Supervise*: Supports BfDI (Federal Commissioner for Data Protection) in implementing/enforcing data protection laws
- *Advise*: Assists firms with compliance with GDPR (innovation hub)



# Overall implementation strategies

## E.g. IRA (Kenya)

Data protection and privacy legislative framework absent; IRA has amended regulation to deal with data-related risks to consumers.

### Tools employed:

- *Regulate*: Amending and reinterpreting existing market conduct guidelines to ensure appropriate consumer protection against arising data risks; Explicit consideration of harmonisation with pending data regulations and global guidelines

## Sectoral/no regulation

### Create



Actively creates the data regulation approach for the insurance sector

Active

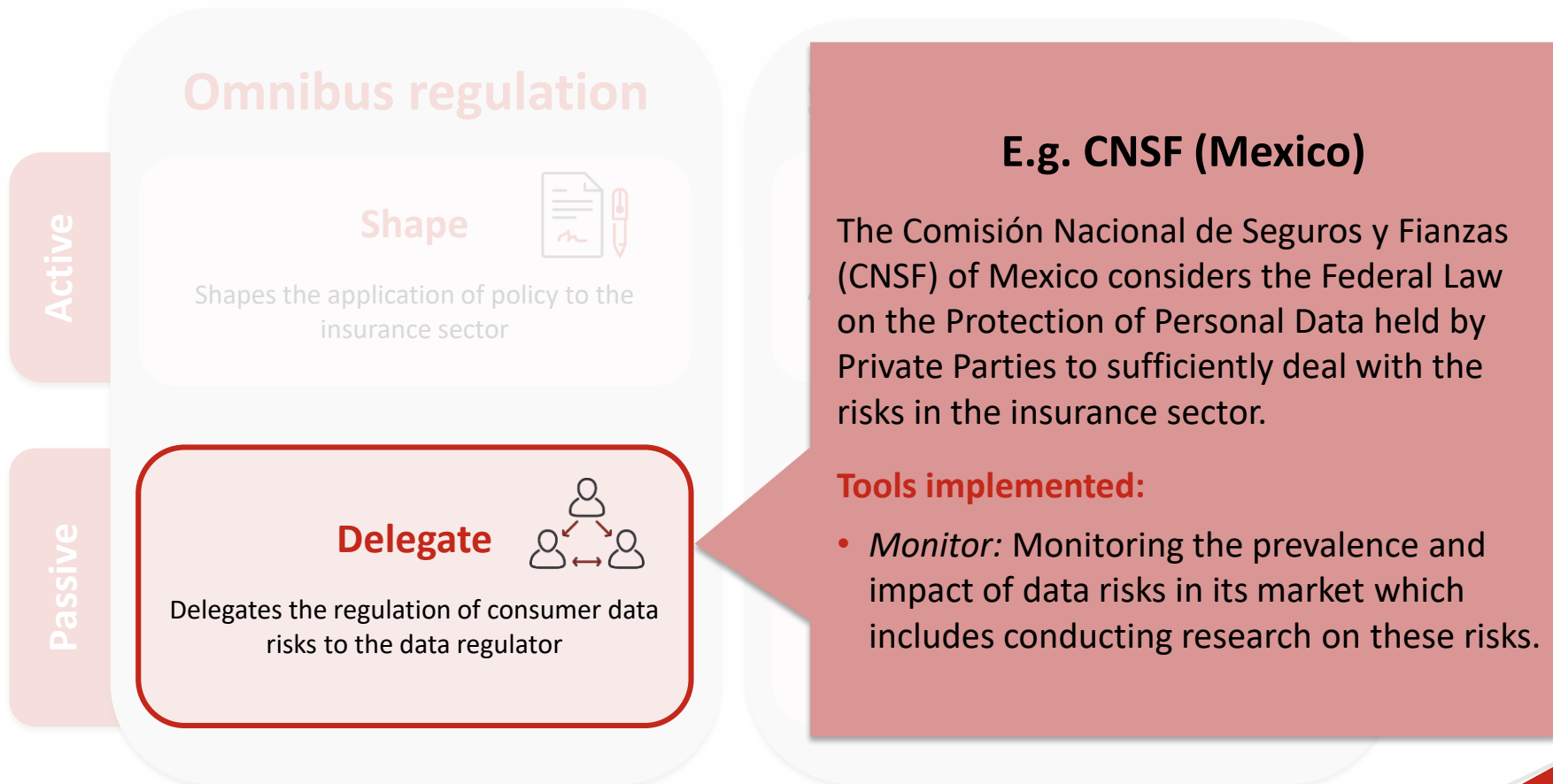
### Take risk



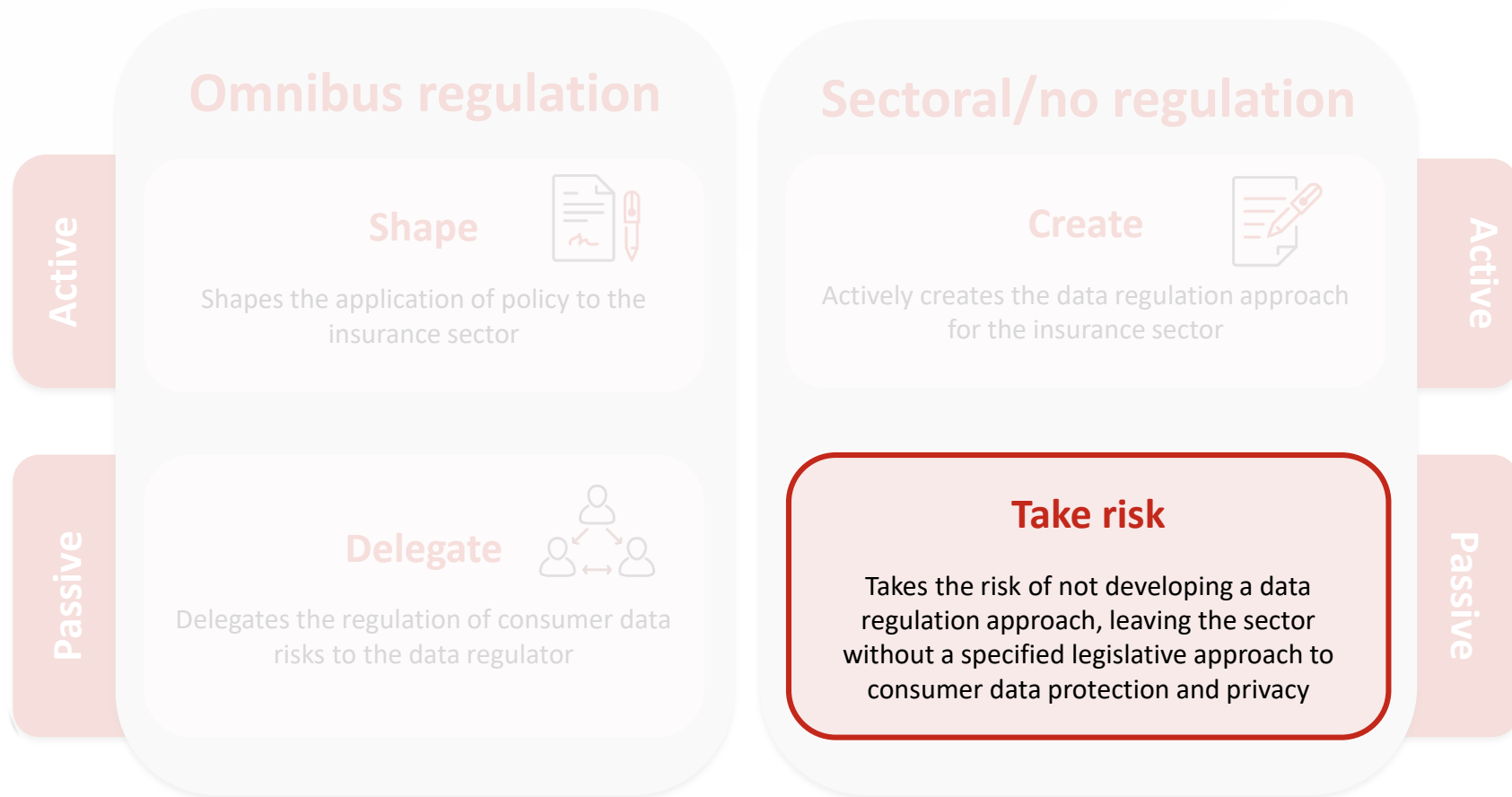
Takes the risk of not developing a data regulation approach, leaving the sector without a specified legislative approach to consumer data protection and privacy

Passive

# Overall implementation strategies



# Overall implementation strategies



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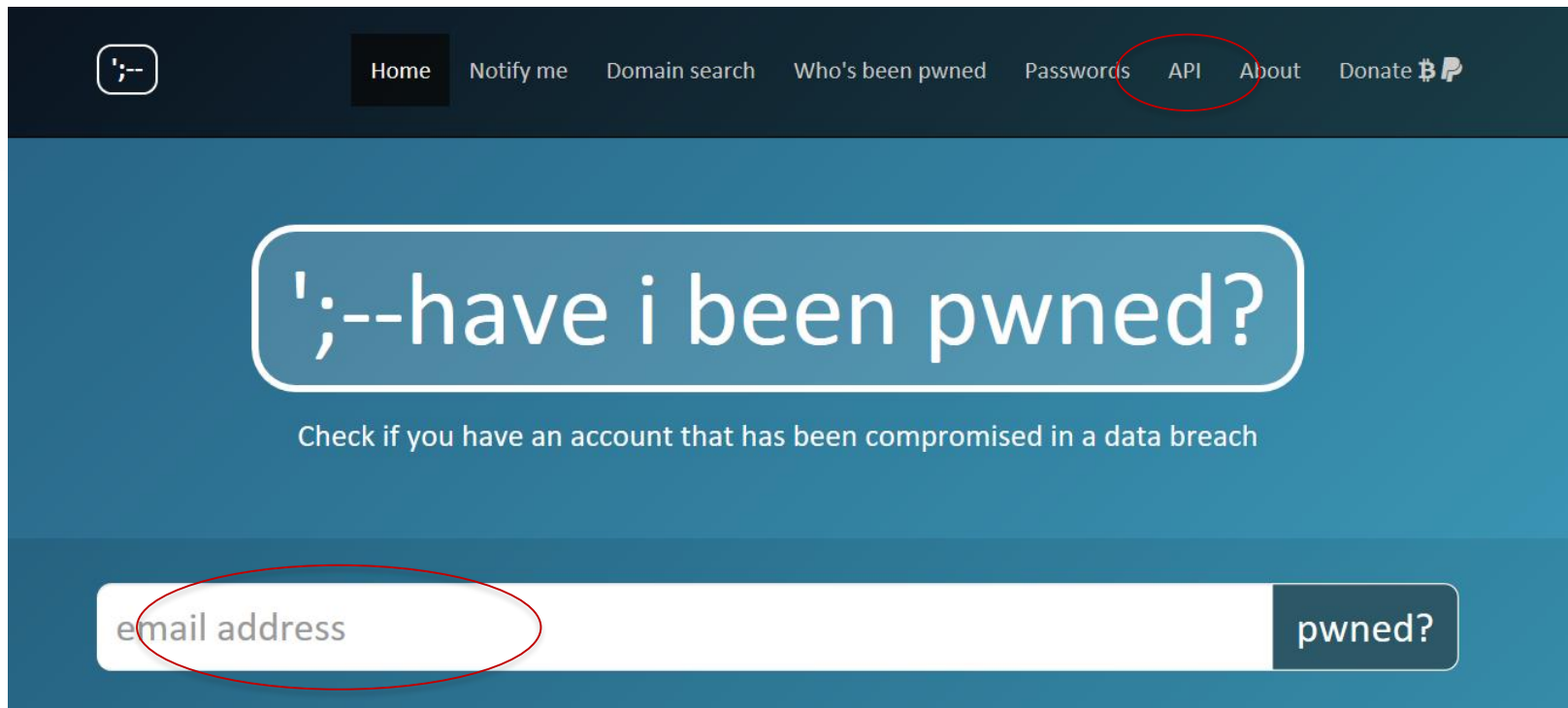
Has your authority taken an active approach on data regulation (“shapes” or “creates” data regulation)? yes/no

Do you think your authority should become more active in data protection? Yes/no

# Test it yourself!

Check if your data has been compromised in a data breach

<https://haveibeenpwned.com/>



The screenshot shows the homepage of the 'Have I Been Pwned' website. The navigation bar at the top includes links for Home, Notify me, Domain search, Who's been pwned, Passwords, API, About, and Donate. The 'API' link is circled in red. The main content area features a large white rounded rectangle containing the text '';--have i been pwned?'. Below this, a subtitle reads 'Check if you have an account that has been compromised in a data breach'. At the bottom, there is a search form with a white input field containing the placeholder text 'email address' (circled in red) and a dark blue button labeled 'pwned?'.



# Big data meets artificial intelligence

Challenges and  
implications for the  
supervision and  
regulation of financial  
services

# The idea behind it: Bringing together experts from all fields

## Technology



## Market perspective

- Banks and financial service providers
- Insurance companies
- Capital markets



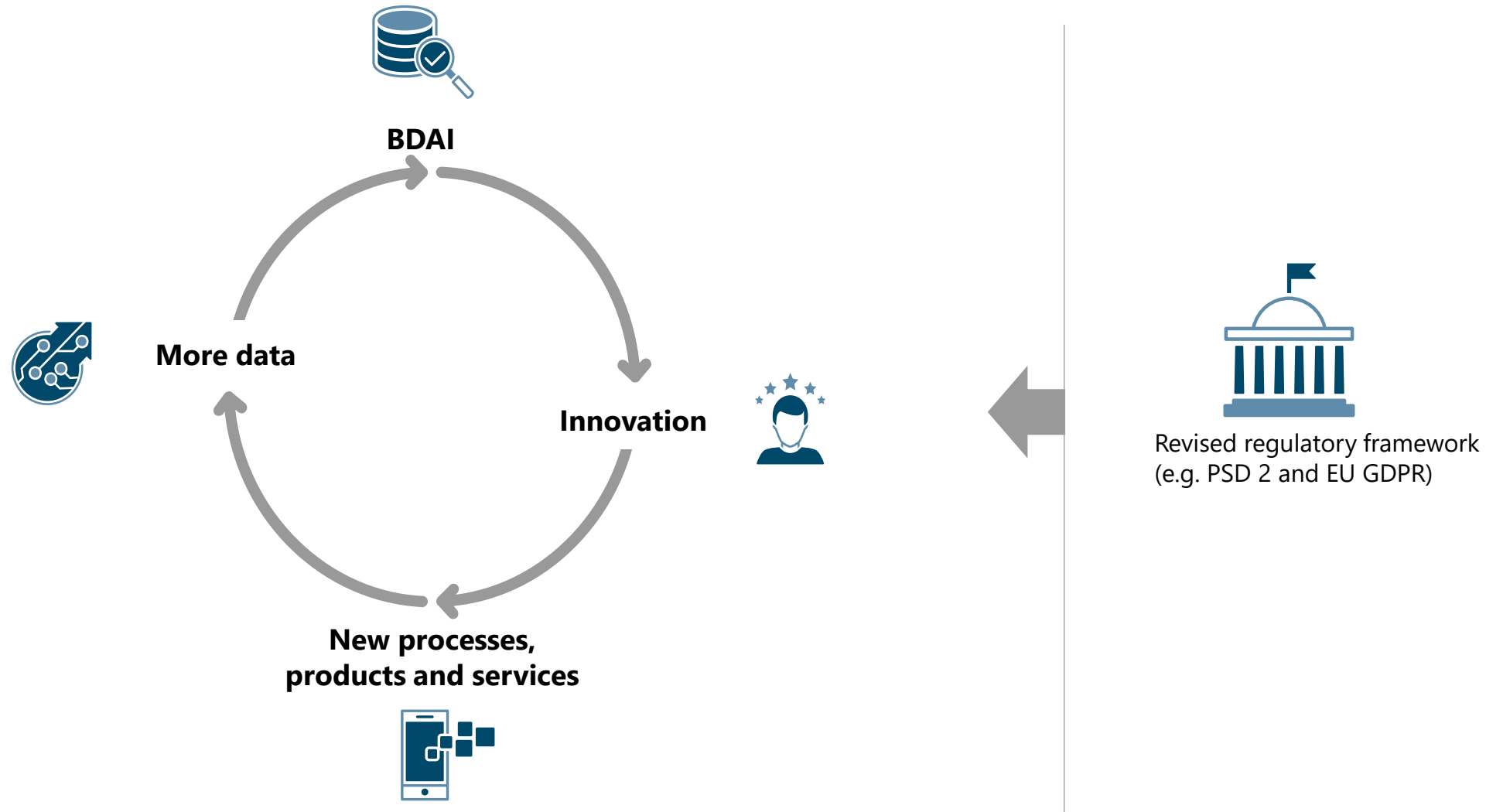
## Supervisory perspective

- Financial stability and market supervision
- Firm supervision
- Consumer protection



Link to the study: [https://www.bafin.de/SharedDocs/Downloads/EN/dl\\_bdai\\_studie\\_en.html](https://www.bafin.de/SharedDocs/Downloads/EN/dl_bdai_studie_en.html)

# Cycle of innovation requires early supervisory attention



Source graphic: BCG



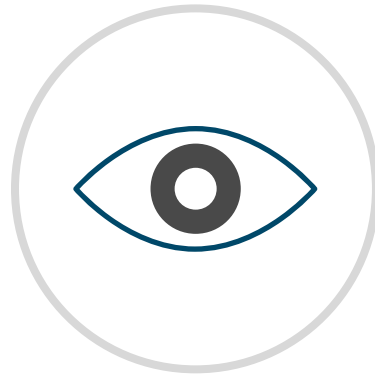
# Profound implications along three dimensions

## Financial Stability



- New forms of systemic importance
- Market structures change

## Microprudential Supervision



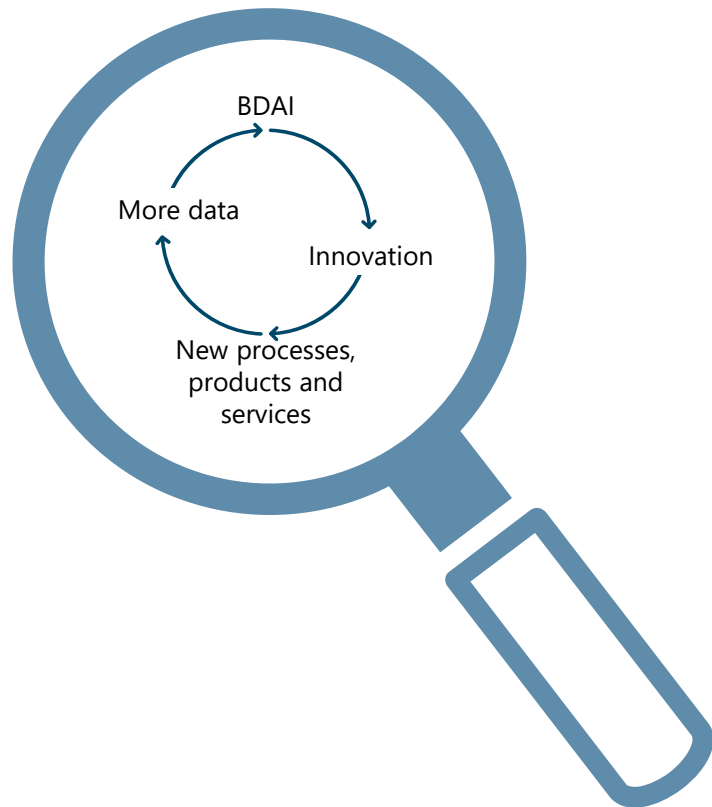
- Responsibility remains with people
- No black box excuses
- Detection of financial crime

## Consumer Protection



- Discrimination vs. differentiation
- Consumer sovereignty

# Basic regulatory principles should remain unchanged



Speed of innovation is increasing

## Regulatory principles

- Technology-neutral
- Principles-based
- Further strengthen international cooperation to reduce regulatory arbitrage
- Develop BDAI capabilities as a supervisor

**Thank you for your attention!**

# Role of the Regulator in managing data risks and protecting consumers

## “CREATE STRATEGY”



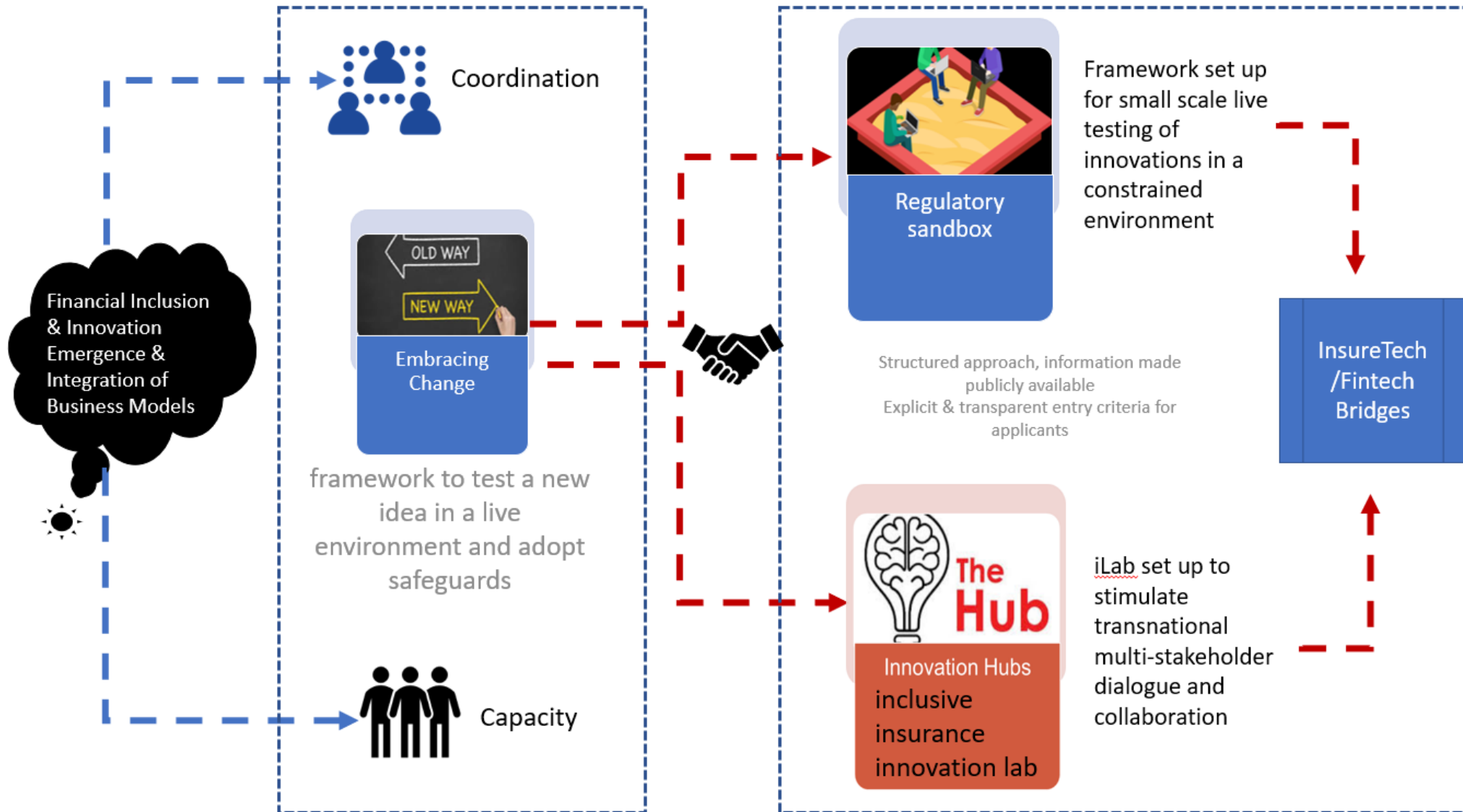
Elias Omondi  
Actuarial Associate  
Insurance Regulatory Authority - Kenya

# STATE OF PRIVACY?

- Constitutional privacy protections: Article 31 of the Kenyan Constitution specifically protects the right to privacy.
- Data protection law: Kenya does not currently have specific data protection legislation. However, a Data Protection bill was tabled in Parliament in 2015.
- Data protection agency: Kenya does not have a specific data protection authority. – To be set once the law is enacted
- The Integrated Population Registration System (IPRS) collects data from a dozen databases held by various government agencies.



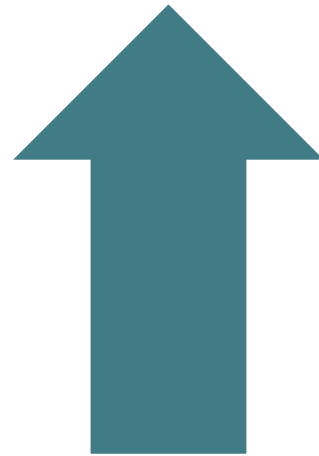
# WHY CREATE STRATEGY?



# RISKS VS BENEFITS



**Role 2:** protect the interest of the insurance policyholders and beneficiaries



## Consumer benefits

- Access to insurance
- Better alignment to customer needs
- Better risk pricing
- Potentially lowering cost



**Role 3:** promote the development of the insurance sector

**Role 1:** Maintenance of a fair, safe and stable insurance sector

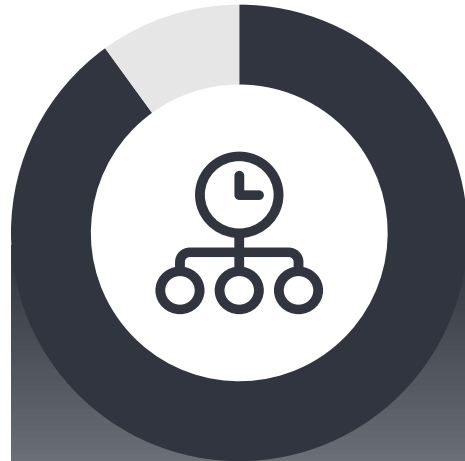
## Consumer risks

- Less personal interaction / consumer trust
- Privacy & cyber-risks
- Reduced risk pooling & risk of financial exclusion
- Reduced transparency (AI / machine learning)



# IMPLEMENTATION STRATEGIES

## MARKET CONDUCT GUIDELINES



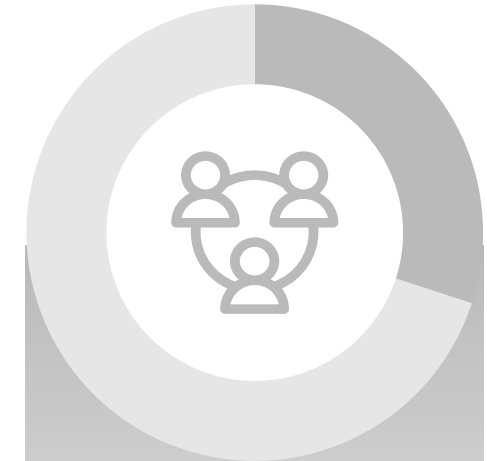
Amending and reinterpreting existing market conduct guidelines to ensure appropriate consumer protection against arising data risks

## TCF MODEL



TCF Model of Consumer Protection aims to raise standards in the way firms carry on their business by introducing changes that will benefit consumers and increase their confidence in the financial services industry

## REGULATORY SANDBOX



Framework employed to create experimental environment where FinTech/InsureTech can test new ideas and innovations in product design, product development and distribution with a leverage to contain the consequences of failure



# STRATEGIES

## MARKET CONDUCT GUIDELINE

- Policies and procedures for the protection of confidential information on customers.
- Board and Management required ensure that confidentiality of data as overall culture and strategy

## DRAFT REGULATORY SANDBOX POLICY

- provides appropriate regulatory support by relaxing specific legal and regulatory requirements.
  - “To Maintain” requirements on confidentiality of customer information, Fit and proper criteria particularly on honesty and integrity handling of customer’s moneys





**THANK YOU  
ASANTE!!**

[eomondi@ira.go.ke](mailto:eomondi@ira.go.ke)  
[omondieliaso@gmail.com](mailto:omondieliaso@gmail.com)

Thank you.

# Save the Date!

Next Consultation Call on **21 March, 2019**  
**RegTech and SupTech: Implications for Supervision**

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