

# Big Data and AI in Finance:

## BigData and Cybersecurity for Digital Finance - session conclusions

Cinzia Rubattino, 15<sup>th</sup> October 2019

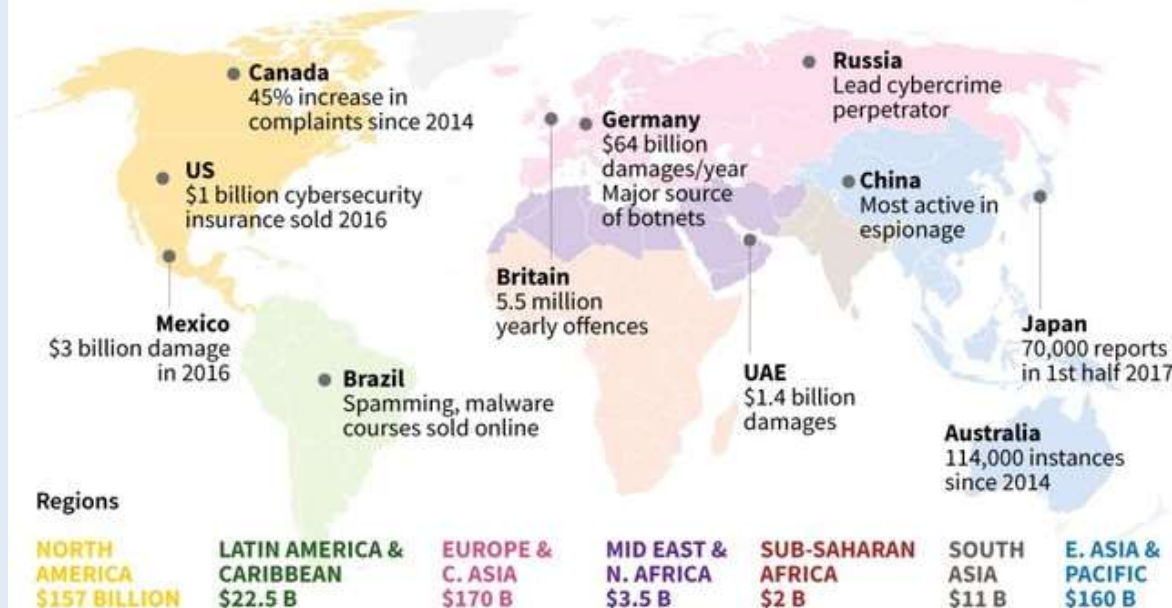
# Cybercrime Overview

## Cybercrime highlights

Economic impact: McAfee report, February 2018

Estimated annual global cost: \$600 billion

Selected highlights

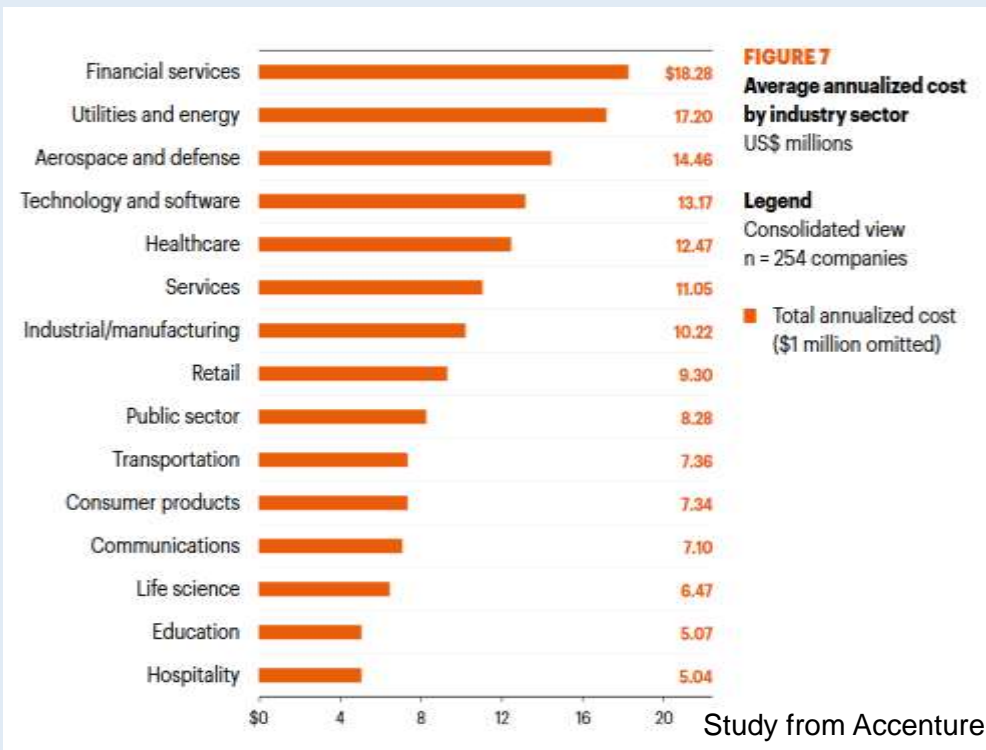


- Worldwide and very broad problem
- Spreading and becoming more costly.

Examples:

- The 2017 data breach at Equifax - more than **140 million consumers**.
- The Swift attack against the Bangladesh Bank robbery in February 2016 led to an illegally transfer of close to **US \$1 billion**

# Cybercrime costs



# Financial Institution Specificity

Reason:

- **Money**, because of that cyber attackers can directly monetize from each single attack.
- **Reliance on critical infrastructure** (including payment systems, trading platforms, central securities depositories and so on).
- **Highly interconnected networks.**

Typologies and consequences:

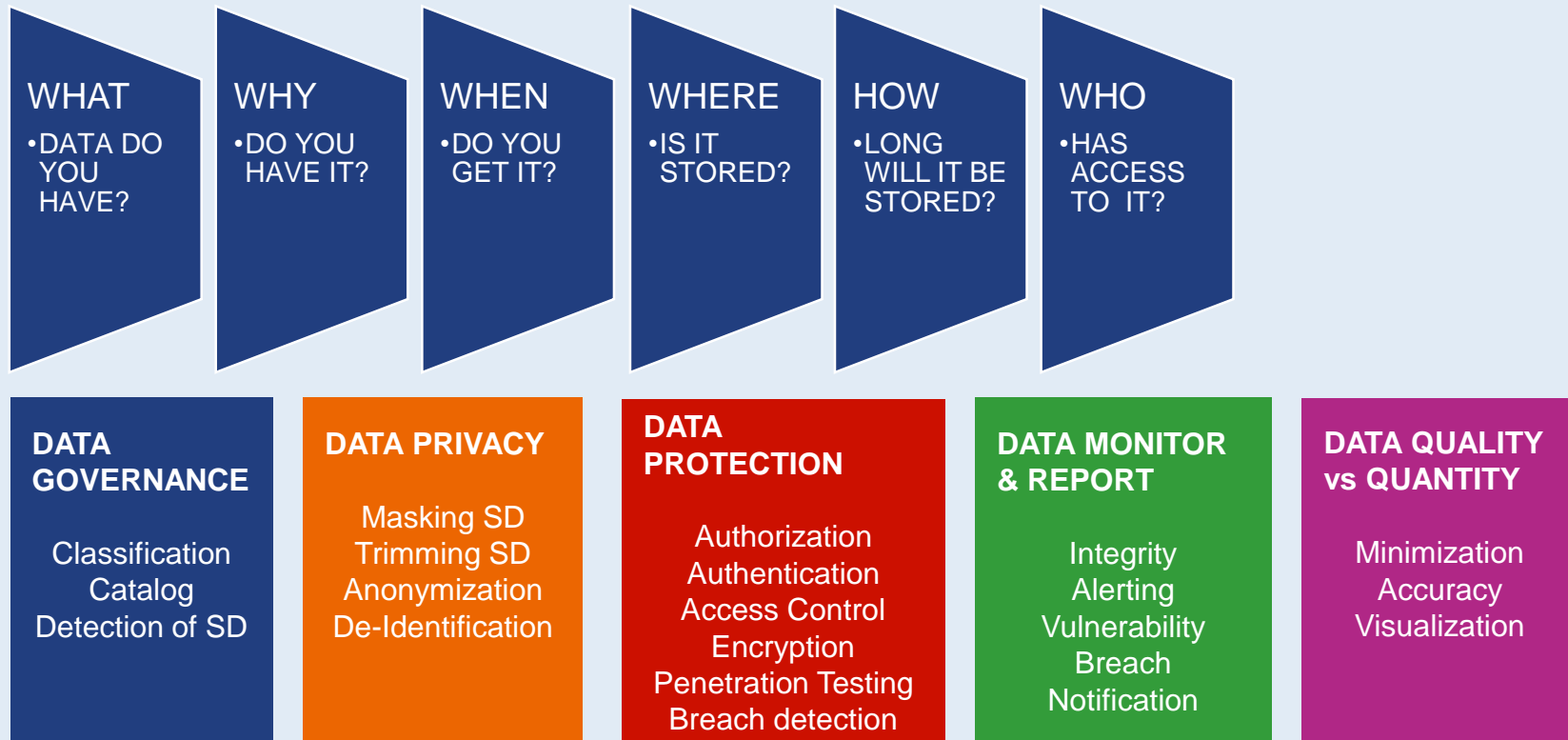
- **Data breaches:** the release of private information, resulting in loss of reputation and money. Third-party services are one of the main cause of this attack.
- **Business Disruption:** system failures that can prevent firm from operating.
- **Frauds:** resulting in financial losses.

Targets:

- Banks account with the bulk of the attacks of **91%**
- Insurance companies with **7%**.



# Regulation I – GDPR impact on Big Data



## Regulation II – Open Banking and PSD2

**Open Banking** intends to:

- Foster competition in Banking Industry
- Improve customer experience by offering more services

The **Second Payment Services Directive (PSD2)** aims to:

- Encourage development and use of innovative payments
- Enhance consumer protection against fraud
- Strengthen liability & accountability
- Make cross-border European payment services safer



# A comprehensive strategy for FI innovation





# GFT Helix: Disruption and efficiency at work

## CUSTOMER CENTRICITY

- Front-end modern architectures
- Design thinking | Digital product design
- Customer life journeys (bus. service design)
- User experience (UX)

## COLLABORATION

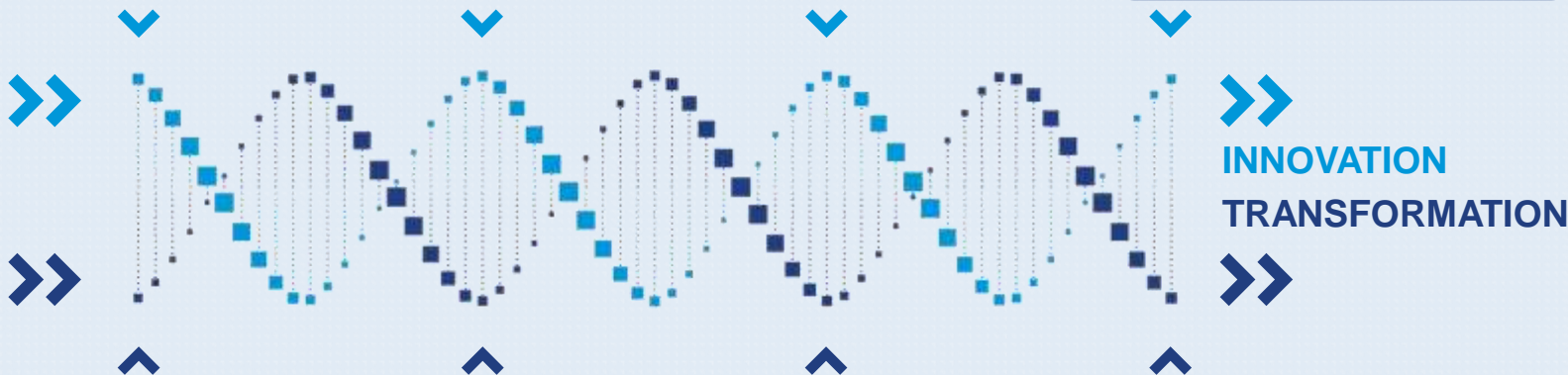
- Open APIs | Internal APIs
- Business as a platform
- Modular architectures
- Ecosystems (rebundling)

## AUTOMATION

- Robotic & intelligent process automation (RPA | IPA)
- Bots | Virtual assistants
- User & operational analytics | KPIs

## GAME CHANGERS

- Artificial intelligence (AI) | Machine learning (ML)
- Natural language processing (NLP)
- Distributed ledger technologies (DLT)
- Augmented, virtual & mixed reality (AR | VR)



## INNOVATION TRANSFORMATION

## PLATFORM ENGINEERING

- Agile & DevOps transformation
- Core platform optimisation & management
- Replatforming | Platform development
- Vendor solutions
- Microservices

## DATA ENGINEERING

- Data architecture & reengineering
- Data governance & quality
- Data lineage & insights
- Data lakes

## REGULATORY, RISK & COMPLIANCE SERVICES

- Compliance & risk control / visualisation
- Regulatory automation
- Business continuity

## CLOUD ENGINEERING

- Cloud assessment & preparation
- Migration & optimisation
- DevOps & CloudOps
- Native cloud development



# GFT Innovation Actions



GFT is Activity Leader and partner of EIT-Digital initiatives, with strong investments in development and product launch activities as Business Champion.



Teichos is a **penetration testing tool** to support security analysts in verifying the reliability of digital finance **server side components** to rise cyber-security awareness. Because of the rising complexity of the regulatory environment and standards such as **PSD2**, financial institutions are more *vulnerable*.

ARTIFICIAL INTELLIGENCE



DATA ANALYTICS



OPEN APIs



CYBERSECURITY



STAnD (API-ASSISTANT Innovation Action) boosts a **software assistant for mobile app developers**, aiming to rise Cyber-Security awareness, as a key enabler for GTM strategies and innovation. Another primary objective is the mitigation of threats in **API-based mobile apps**. The solution provides an effective toolkit and a managed security service, handling **GDPR** as well.

OPEN APIs



CYBERSECURITY

# GFT H2020 projects



Horizon 2020  
European Union Funding  
for Research & Innovation

GFT acts as Coordinator and strategic partner within various H2020 projects, with System Integration, Impact Management and Pilot management roles.



GFT is Coordinator

FINSEC is a flagship project to develop, demonstrate and launch to the market an integrated, intelligent, collaborative and predictive approach to the security of critical infrastructures in the financial sector.

CYBERSECURITY

BLOCKCHAIN & DLT



GFT is Coordinator

INFINITECH is a joint effort of global leaders in ICT and finance towards lowering the barriers for BigData/IoT/AI driven innovation, boosting regulatory compliance and stimulating additional investments. The project's results will be validated in the scope of 14 high impact pilots providing a wide sector's coverage.

ARTIFICIAL INTELLIGENCE



IoT

BIG DATA



BigDataStack delivers a complete high-performant stack of technologies addressing the emerging needs of data operations and applications. The stack is based on a frontrunner infrastructure management system that drives decisions according to data aspects thus being fully scalable, runtime adaptable and performant for big data operations and data-intensive applications.

BIG DATA

INSURANCE



AEGIS brings together the data, the network & the technologies to create a curated, semantically enhanced, interlinked & multilingual repository for public & personal safety-related big data.

BIG DATA

DATA ANALYTICS



INSURANCE

BLOCKCHAIN & DLT



# Shaping the future of digital business

**Thank you!!!**

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