



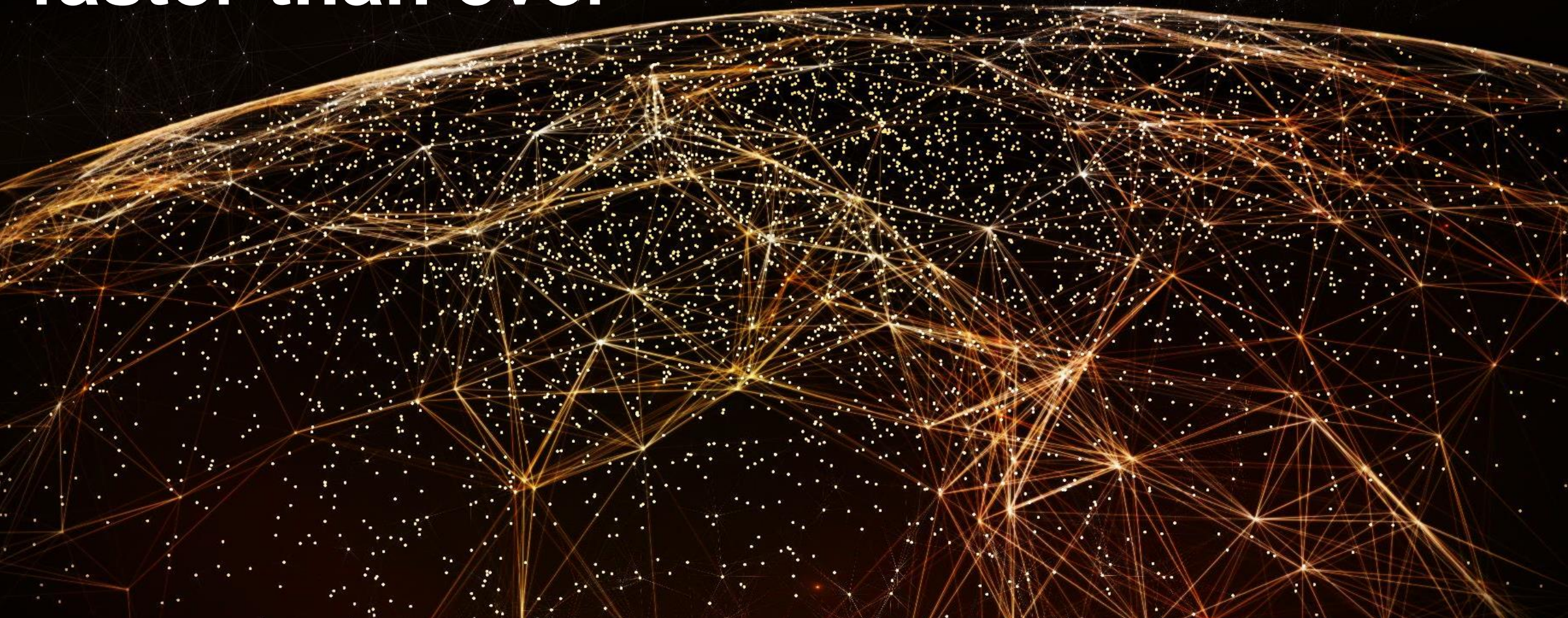
# DATA PROTECTION FOR PUBLIC SERVICE INDUSTRY IN THE ERA OF BIG DATA

Clas Neumann

Senior Vice President, SAP



**Digitalization**  
**changes everything**  
**faster than ever**







Dramatic increase in the **Value** of data

**\$2.8 trillion**

GDP increase from online data flows



Exponential **Volume** of data

**521.000 PB**

of data storage capacity to be shipped by 2020



Increasing **Vulnerability** of endpoints

**50 billion**

devices connected by 2020



Sheer number and **Sophistication** of attacks

**65%**

of companies surveyed experienced more advanced persistent threats and attacks



# INCREASING COST OF CYBERCRIME

2019 北京网络安全大会  
2019 BEIJING CYBER SECURITY CONFERENCE

The increase in security breaches

**130**

Average number of security breaches in 2017



**145**

Average number of security breaches in 2018

**+11%**

Increase in the last year

**=67%**

Increase in the last 5 years

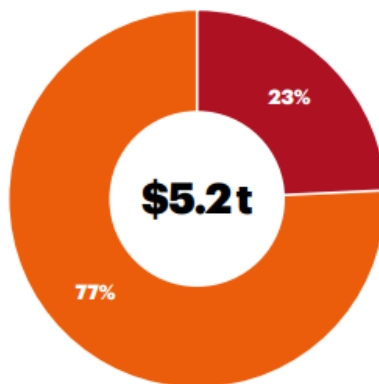


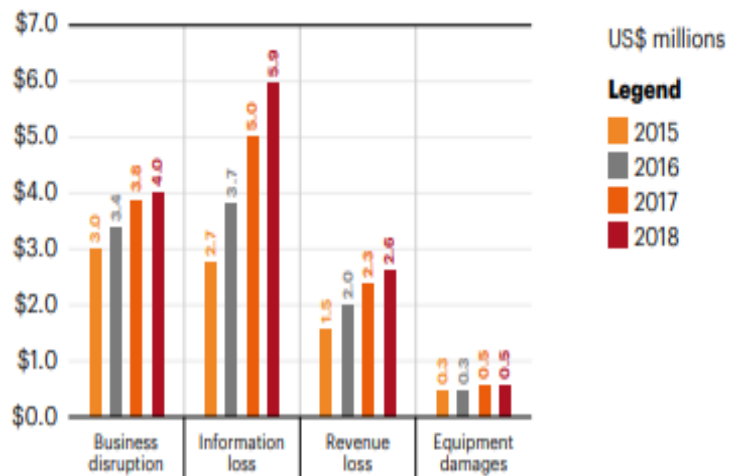
FIGURE 5

Value at risk globally from direct and indirect cyberattacks (Cumulative 2019 to 2023)

Legend

Value at risk from direct attacks  
Value at risk from indirect attacks

Average annual cost of cybercrime by consequence of the attack (2018 total = US\$13.0 million)



The increase in the annual cost of cybercrime

**\$11.7m**

Average cost of cybercrime in 2017



**\$13.0m**

Average cost of cybercrime in 2018

**+12%**

Increase in the last year

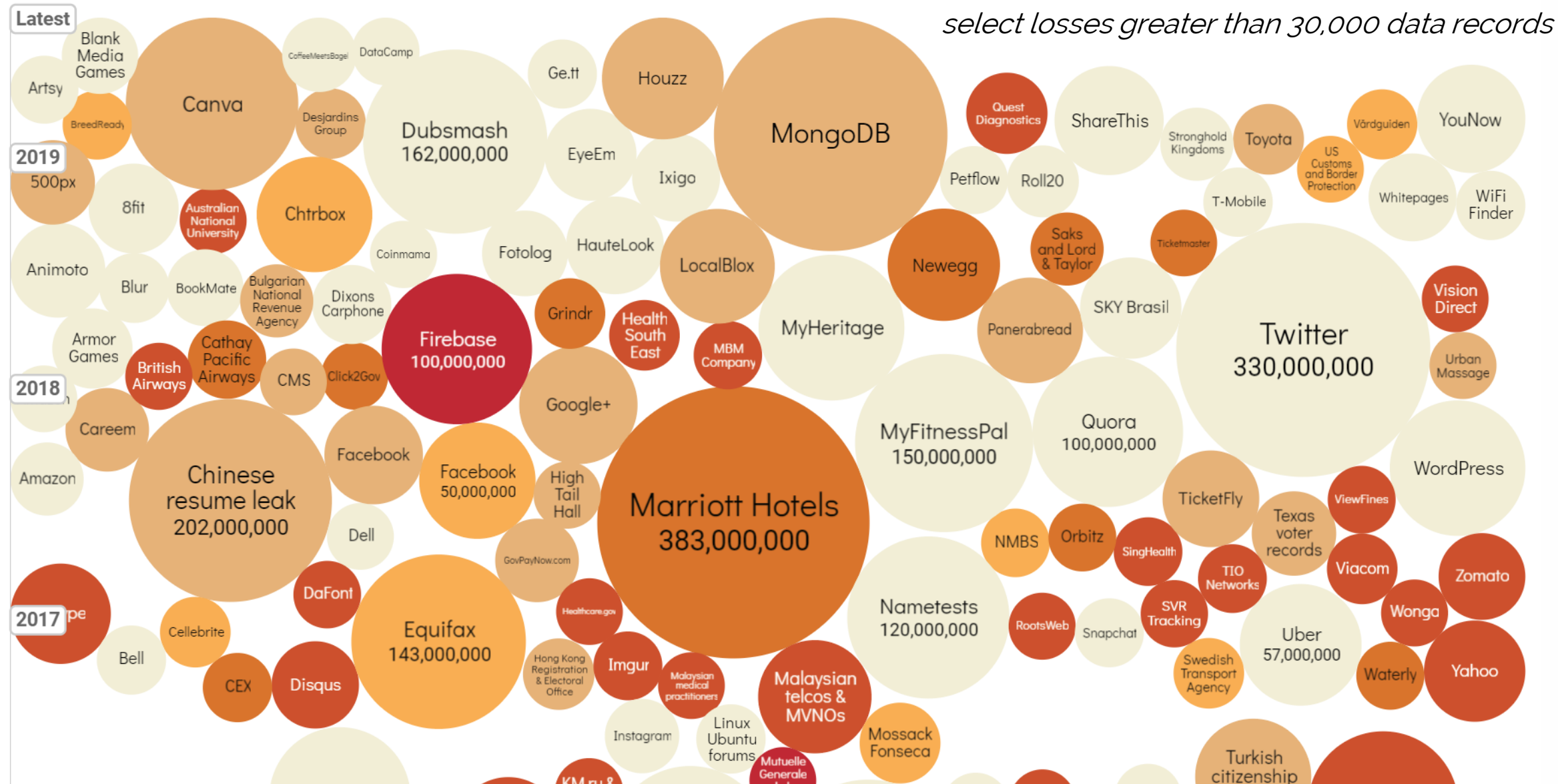
**=72%**

Increase in the last 5 years

# WORLD'S BIGGEST BREACHES

2019 北京网络安全大会

2019 BEIJING CYBER SECURITY CONFERENCE

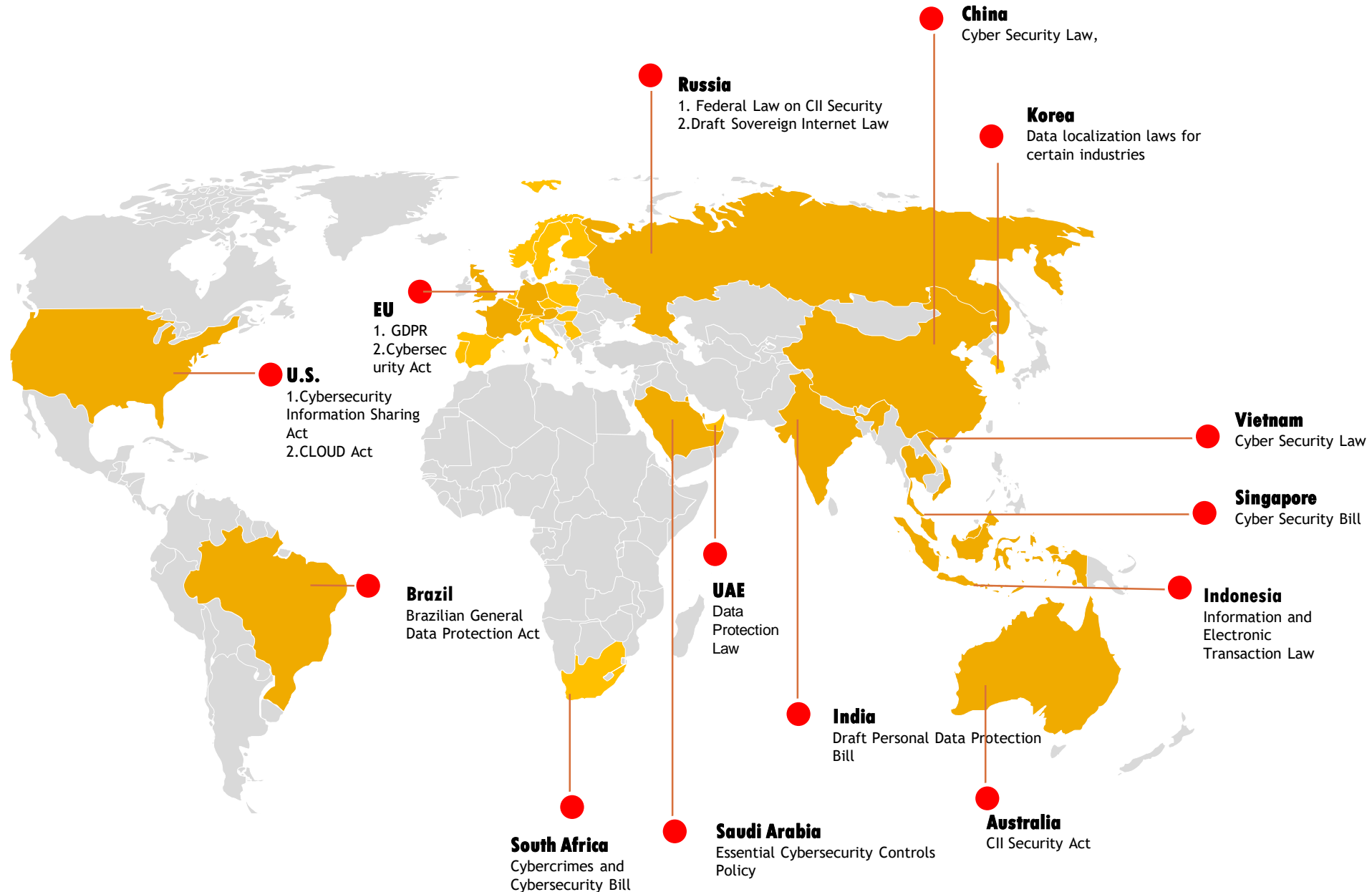




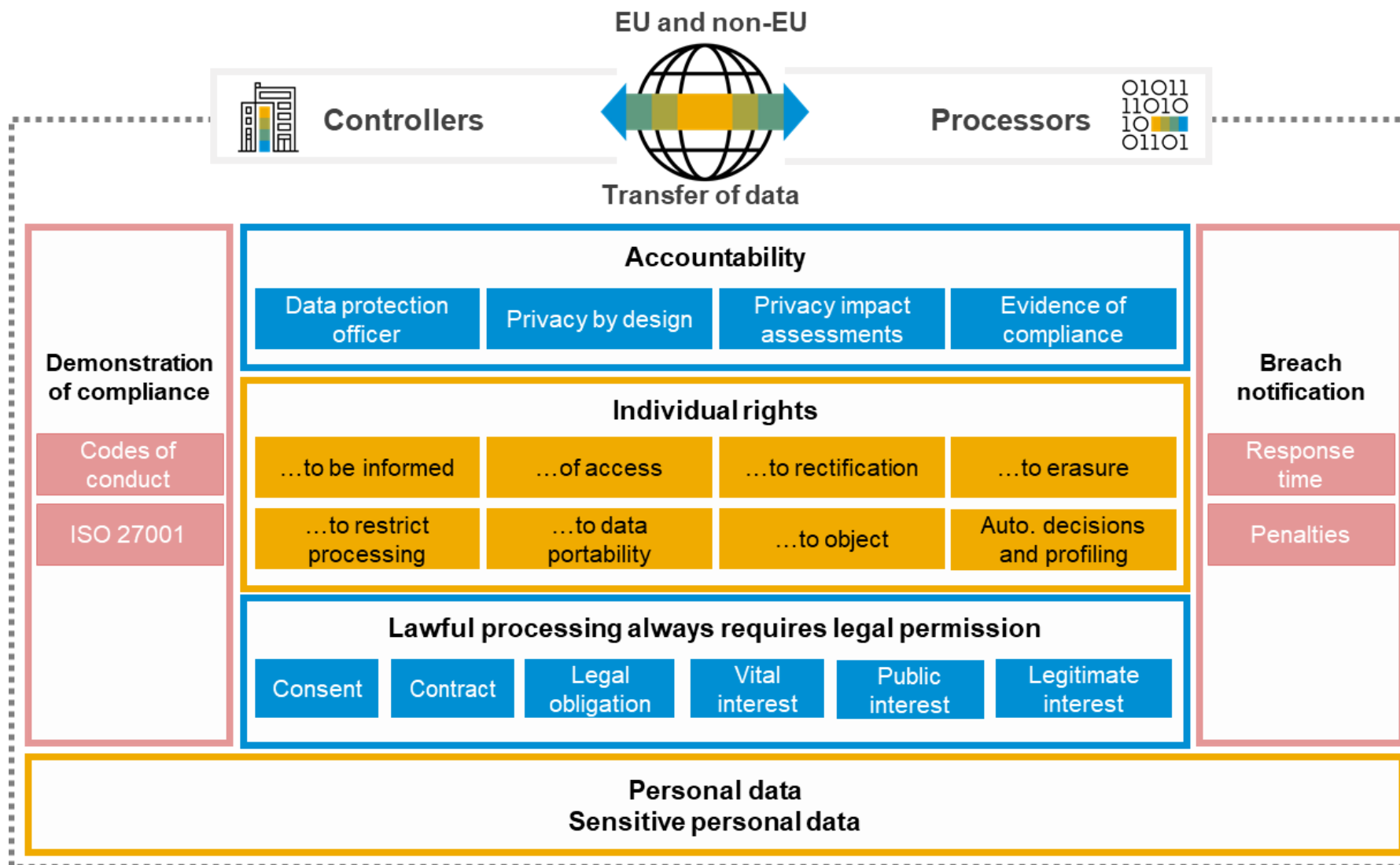


# Secure Data Protection with Regulatory Compliance and Frameworks

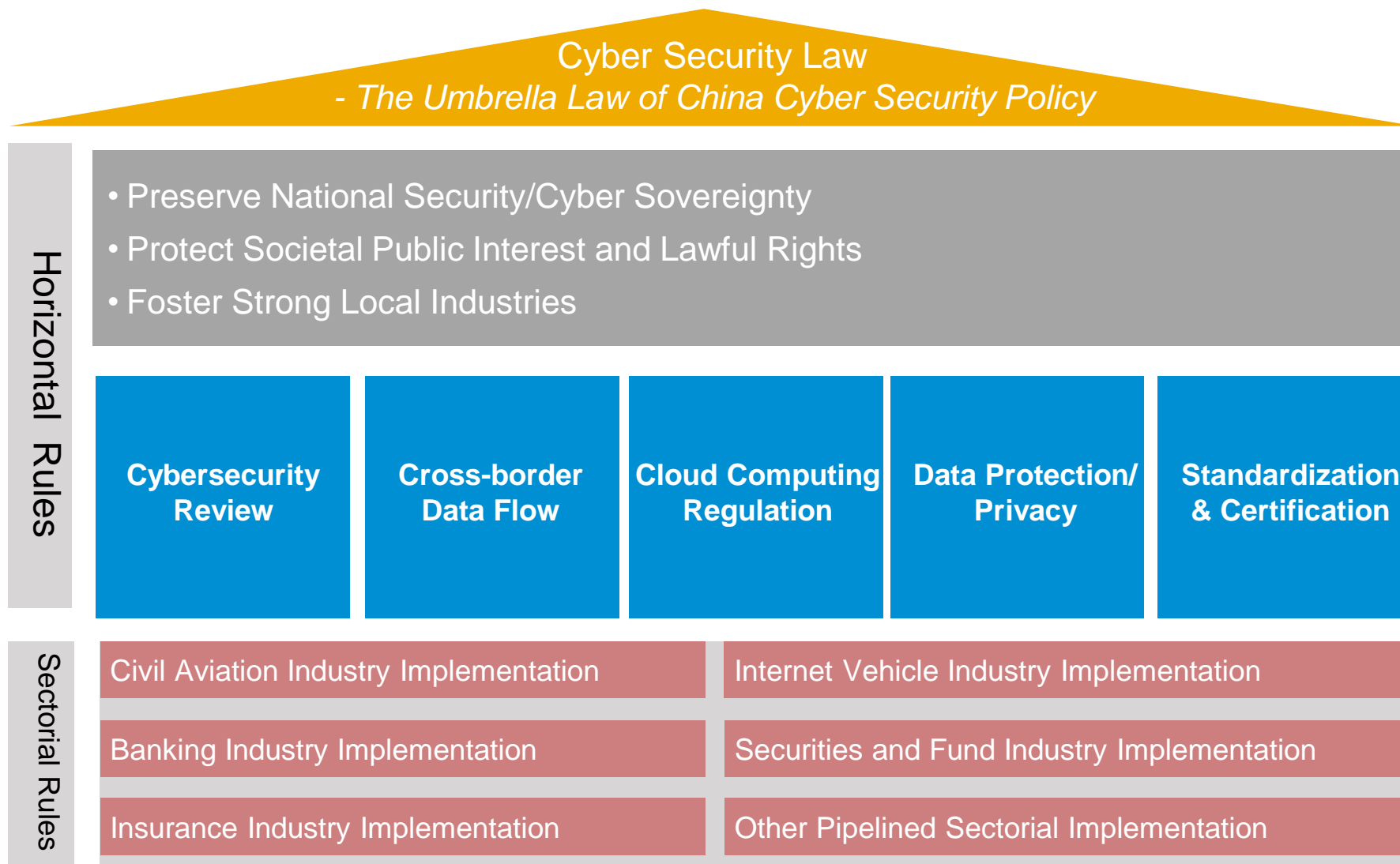
数据保护合规与最佳实践



The General  
Data  
Protection  
Regulation  
(GDPR) gives  
**Individuals**  
**Control** and  
**Protection** of  
**Personal**  
**Data**







**Personal Information  
Protection Specification  
(PISS 1.0)**

Came into force 1<sup>st</sup>  
May 2018

**Guideline on Personal  
Information Security  
Protection  
(MPS Guideline)**

Came into force 16<sup>th</sup>  
April 2019

**Personal Information  
Protection Specification  
(PISS 2.0)**

Draft released on 2<sup>nd</sup>  
Feb 2019

**Personal Information  
Protection Law**

First draft to be  
released in 2020

## Timeline

## Advocacy Guideline

Ensure transparency and industry participation in creation and drafting of privacy and personal data protection measures for China



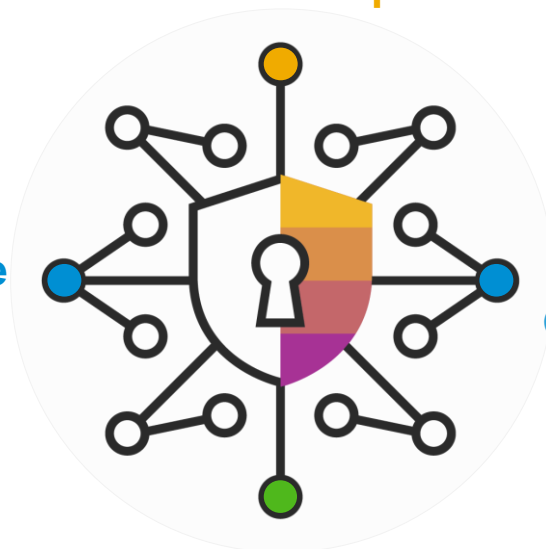
## Best Practice in the Journey to Protect Data and Privacy

**Increase trust with your customer**  
Empower user transparency & control to build trust

### Trusted Relationships

**Foundation for data protection and privacy**  
Ensure your systems meet data protection and privacy standards

### Modernize Systems



### Optimize Governance

**Data management and operational governance**

Protect the business, establish economies of scale, mitigate compliance risk and build trust into the foundation of your operations

### Continuous Assessment

**Visibility on your data privacy landscape**

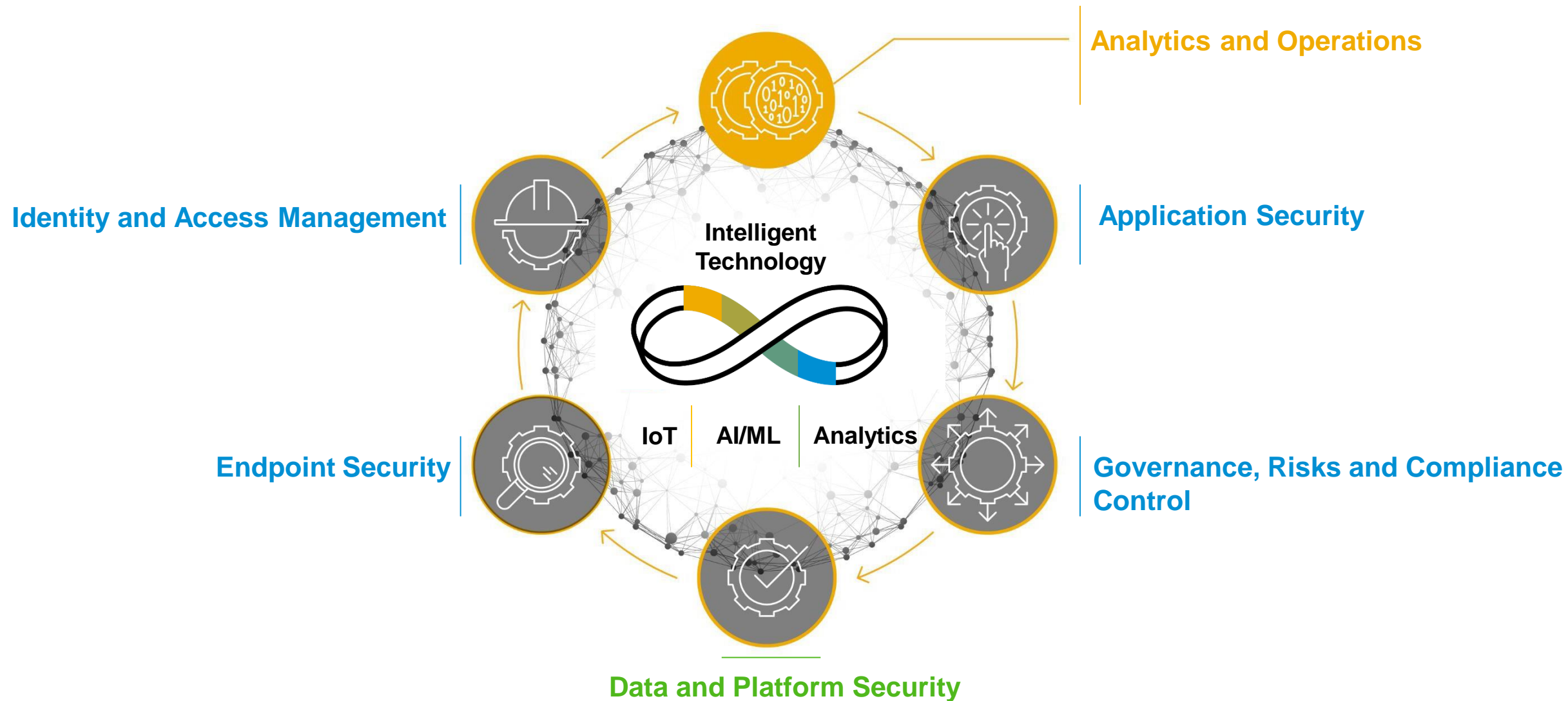
Uncover any risk exposure and areas to improve people's experience in your current data protection and privacy systems, processes and governance



# Safeguards Cybersecurity with Technology and Solutions

运用科技与解决方案  
保护网络安全





# How Can IoT Help Turn a Famous Resort Town into a **Smarter** City?

“Without **data protection**, you cannot scale an IoT deployment into production. But with the **security system** in place that we and SAP developed, we can **detect any intrusion and receive an alarm** in real time.”

Patrick Duverger, CIO, City of Antibes



**200**

Miles of water pipeline



**2,000**

Sensors



**15,000**

Data points per hour







# How Is a Biopharma Company Keeping Data and Systems Safe for Staff, the Business, and Customers?

“We have a lot of users on our SAP systems, so **maintaining security** is a top priority. SAP provided us with detailed reports on how to reduce the number of users by giving required authorizations. We now have a solid security strategy in place to **protect our users, our business, and our customers.**”

Nevenka Voutchkova-Kadurina, IT SAP Security and Authorizations Lead, UCB S.A.

**55%** Security setting improvement

**70%** manual effort reduced to  
verify security compliance



## Transparency

**Security incorporated into applications,**  
delivering ultimate protection for content and transactions



**End-to-end secure cloud operations,**  
defense of customer data and business operations

Security-aware staff, end-to-end physical security of assets, and a comprehensive business continuity framework



Security Culture



Secure Environments



Business Continuity



Security by Default



Intelligent Infrastructure Protection



Perceptive Data Shield



Security Shielded Ecosystem



Security by Default



Zero Vulnerability

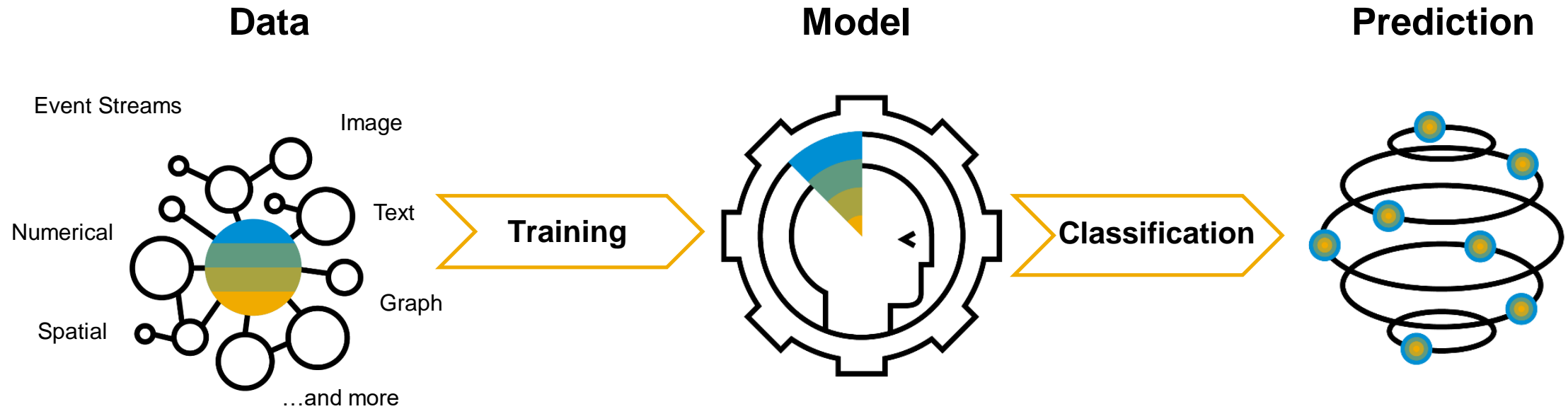


Defendable Application



Zero Knowledge





## Machine Learning in **Prediction** vs. **Manipulation**



PANDA



GIBBON

# Trust and Trusted Data is the Ultimate Shield

数字时代基于信任





We can't expect people to actively support the digital transformation if we cannot **TRUST** in the security of data and networked systems.



**Charter  
of Trust**  
charter-of-trust.com

Source: Chart of Trust (2019)

## Make Security a Top-Tier Responsibility

01 Ownership of cyber and IT security

02 Responsibility throughout the digital supply chain

03 Security by default

04 User-centricity

05 Innovation and co-creation

06 Education

07 Certification for critical infrastructure and solutions

08 Transparency and response

09 Regulatory framework

10 Joint initiatives



AIRBUS



Atos



DAIMLER

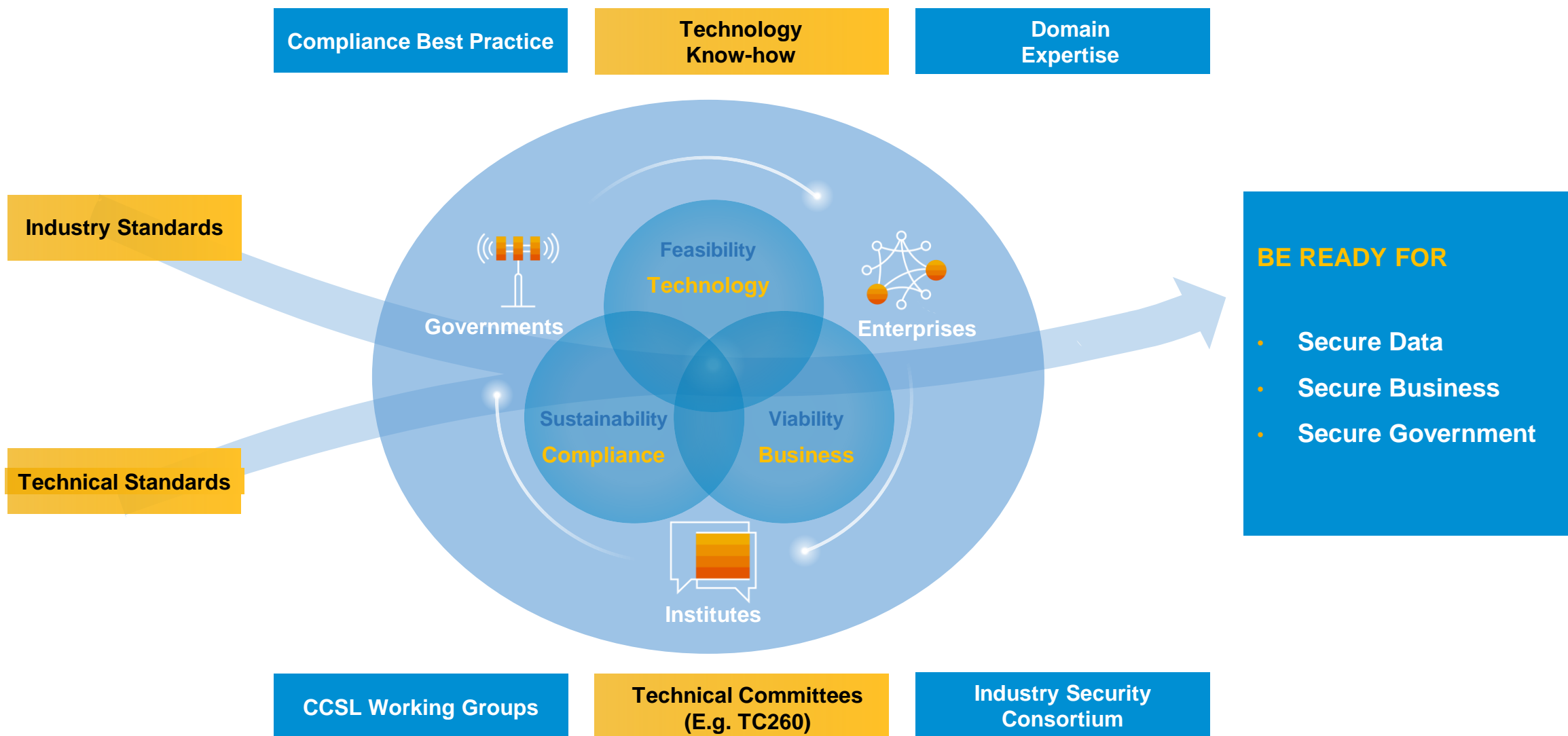


MSC



SIEMENS







**SECURE  
DIGITAL  
TRANS-  
FORMATION**

保障安全的  
数字化转型

**INVEST IN REGULATORY COMPLIANCE AND  
DEVELOP BEST PRACTICE FRAMEWORKS**

投入网络安全合规，探索最佳业务实践

**APPLY TECHNOLOGY AND SECURITY SOLUTION  
ADVANCEMENT**

运用科技与网络安全方案的最新发展

**BUILD TRUSTED DIGITAL ECONOMY**


建立可信任的数字经济



**让世界运转更卓越  
让人们生活更美好**

**Help the World Run Better  
Improve People's Life**



The background is a solid blue color with a subtle, abstract pattern of thin, light blue lines that form a grid or mesh-like structure, creating a sense of depth and movement.

# THANKS

**2019 北京网络安全大会**  
2019 BEIJING CYBER SECURITY CONFERENCE