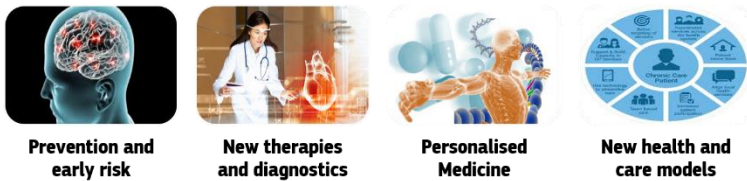# eHealth and Smart Home Data Protection

Peter Wintlev-Jensen

DG CONNECT- E4 Internet of Things Unit

European Commission

The potential is enormous

Prevention and early risk detection

New therapies and diagnostics

Personalised Medicine

New health and care models

Data-driven innovation

High-performance computing

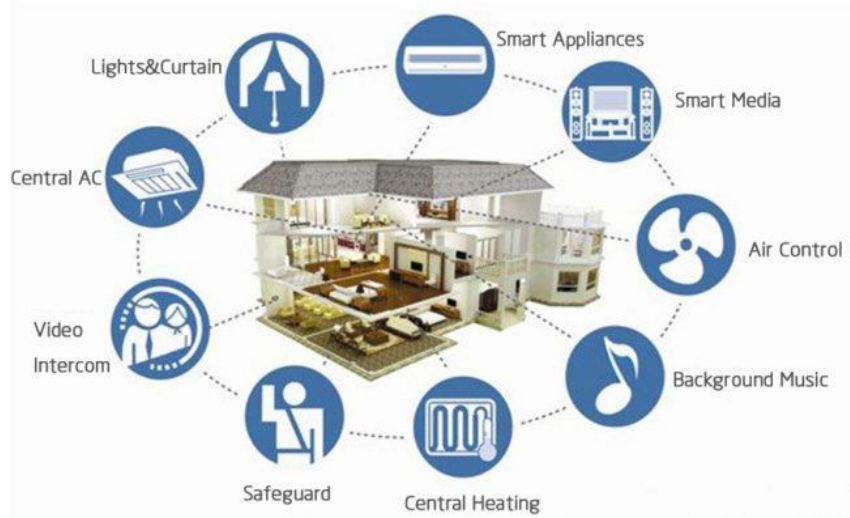*Advanced Data-Analytics*

Artificial Intelligence

4G/5G

Cloud computing

Internet of Things (IoT)

mHealth

Wearables

Telehealth

But major security/privacy risks

Eugene Kim | @eugenekim222
Published 4:54 PM ET Thu, 24 May 2018 | Updated 7:58 AM ET Fri, 25 May 2018

CNBC

Amazon responds to claim that device sent private conversation
7:59 AM ET Fri, 25 May 2018 | 04:10

Healthcare IT News

TOPIC

OCR investigating Banner Health for 2016 breach of 3.7 million patient records

The Arizona health system is cooperating with the investigation but expects to receive negative findings and a potential fine.

By Jessica Davis | March 21, 2018 | 12:34 PM

Banner Desert Medical Center in Mesa, Arizona. Credit: Google Maps

Main EU Security/Privacy Policy Framework

European Commission

General Data Protection Regulation GDPR

EU regulation setting out the rules for protection of personal data across the EU

Network & Information Security Directive NIS + Cyber Security Act

Security response teams ENISA Cybersec Agency Security certification

EU Blockchain Observatory and Forum

Highlight key developments of the blockchain technology, promote European actors and reinforce European engagement
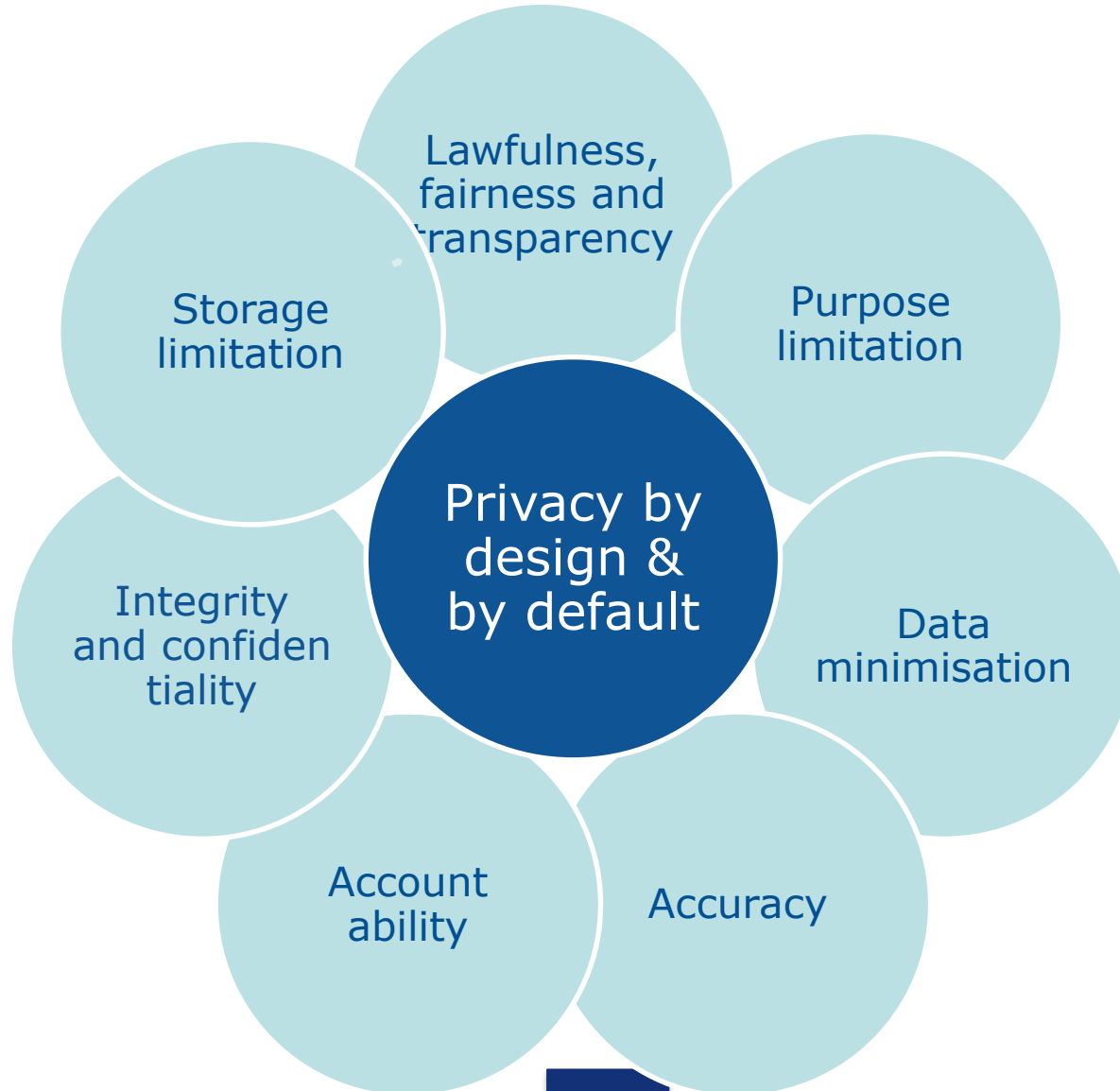
EiDAS Regulation

Electronic identification and trust services for electronic transactions Mutual recognition of electronic signatures

ePrivacy proposal

EU proposal setting out the rules for privacy in electronic communications

Main GDPR Principles

Automated decision making & profiling

WP29 Opinion 8/2014 on Internet of Things

WP29 Guidelines on Automated individual decision-making and Profiling (wp251rev.01) 13/02/2018

"Whenever I walk in a room, everyone ignores me."

WP29 Opinion

European Commission

General Guidelines
- Privacy Impact Assessments
- Early data aggregation
- Privacy by Design/Default Principle
- User Empowerment

OS/Device Manufacturers
- Inform about data collected
- Granular choices
- Minimise tracking and inform about security risks
- User access to data in standard data formats

Application Developers
- Facilitate users exercise of rights to data access, delete, transfer
- Apply data minimisation principle

Social Platforms based on IoT
- ask users to review, edit and decide on information generated by their device before publication on social platforms
- Information published by IoT devices on social platforms should, by default, not become public or be indexed by search engines

IoT Device Owners/ Additional recipients
- Consent to the use of a connected device and to the resulting data processing must be informed and freely given
- Users should not be economically penalised or have degraded access if they decide not to use the device or a specific service
- The data subject whose data is being processed in the context of a contractual relationship with the user of a connected device (i.e. hotel, health insurance or a car renter) should be in a position to administrate the device.

Standards Bodies/ Platforms
- Promote portable and interoperable as well as clear and self-explanatory data formats
- Not only focus on the format for raw data but also on the emergence of formats for aggregated data
- Promote data formats that contain as few strong identifiers as possible in order to facilitate the proper anonymisation of IoT data
- Work on certified standards that would set the baseline for security and privacy safeguards for data subjects
- develop lightweight encryption and communication protocols adapted to the specificities of IoT

Relevant EU IoT Activities

- *Large Scale Pilots under Horizon 2020*
  - Workshop on experience on GDPR compliance planned
  - Contributing to privacy by design and standards experience
  - Further pilots launching in 2019
- *New cluster of IoT security/privacy projects launched*
  - Blockchain/DLTs
- *AIOTI WG3 on standardisation*
- *ENISA planning to look at IoT trust*
- *FP9/Next Generation Internet*

Further Information

- *EU Activities on IoT*
  https://ec.europa.eu/digital-single-market/en/internet-of-things

- *General Data Protection Regulation*
  https://ec.europa.eu/info/law/law-topic/data-protection_en

- *Network and Information Security Directive*
  https://www.enisa.europa.eu/topics/critical-information-infrastructures-and-services/cii/nis-directive

- *ePrivacy proposal*
  https://ec.europa.eu/digital-single-market/en/proposal-eprivacy-regulation

- *EU Blockchain Observatory*
  https://ec.europa.eu/digital-single-market/en/news/eu-blockchain-observatory-and-forum-call-contributors