



# Data anonymization: becoming GDPR compliant in the era of AI and Big Data

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# Outline

1. GRADIANT
2. INFINITECH H2020
3. Data anonymization & GDPR
4. Data anonymization in Big Data
5. GRADIANT @ INFINITECH H2020



# GRADIANT

Since 2008, focused on technological development and knowledge transfer to industry

**135**

Professionals

**6M€**

Revenue in 2021

**68%**

Contracted  
companies

**32%**

Competitive public  
funding

**20+**

European  
projects

**2**

Cervera network  
projects

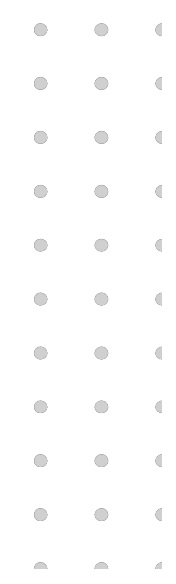


# INFINITECH H2020

Tailored IoT & BigData Sandboxes and Testbeds for Smart, Autonomous and Personalized Services in the European Finance and Insurance Services Ecosystem



# Data Anonymization for GDPR compliance



## General Data Protection Regulation

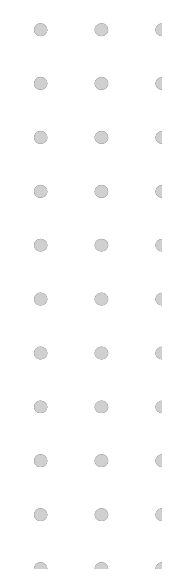
- In place since May 2018
- Security & Privacy by Design
- Anonymization allows to process data without having to follow the GDPR

## Data Anonymization

- Transforming personal data to irreversibly **prevent identification**
- Robustness of anonymization techniques
  - Possible to identify a single person
  - Link different records regarding the same individual
  - Quantity of information that can be inferred regarding the data subject



# Anonymization Operations



## Randomization

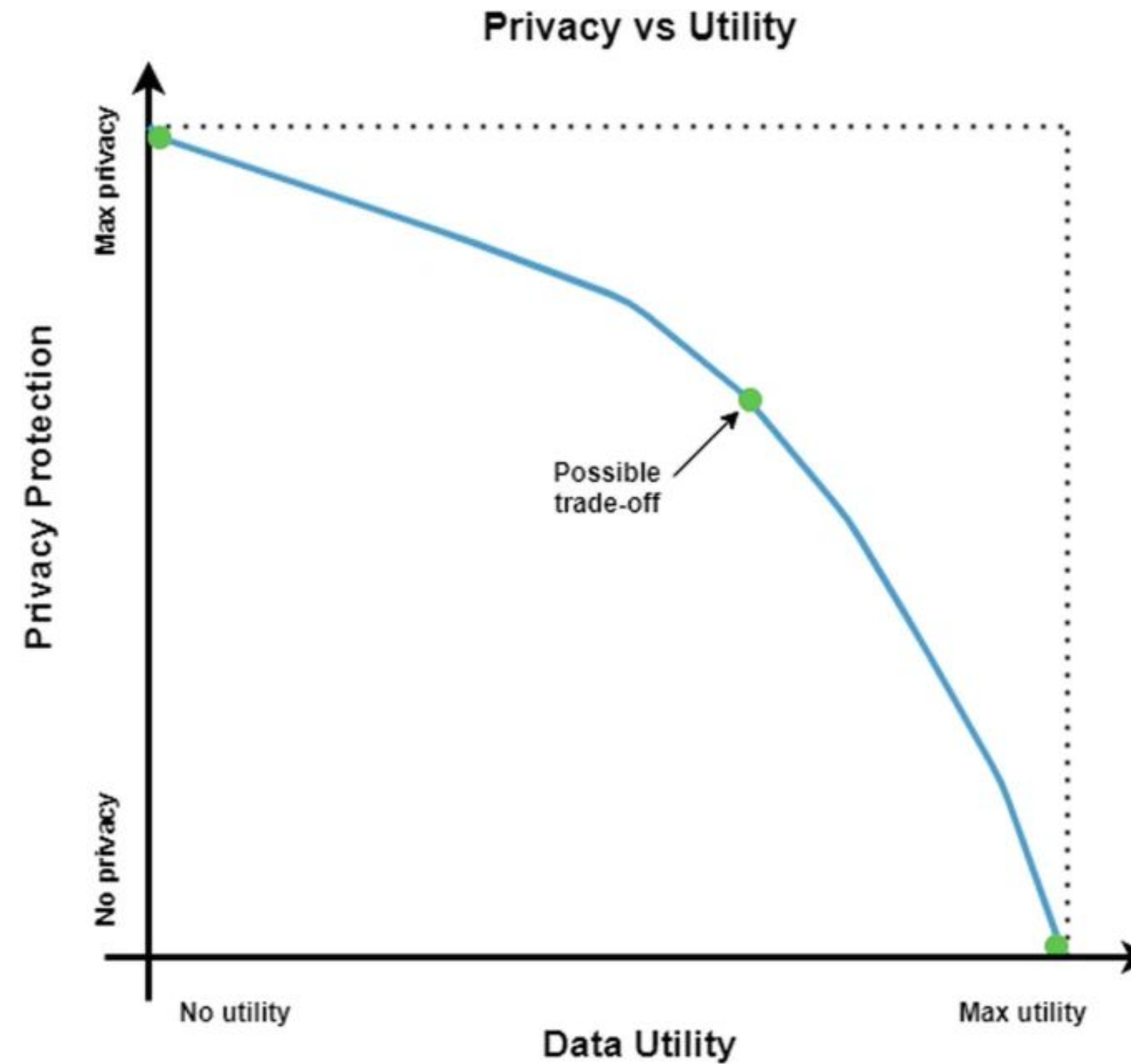
- Noise addition
- Permutation techniques
- Differential privacy

## Generalisation

- k-anonymity
- l-diversity
- t-closeness



# The privacy / utility trade-off



# Data Anonymization in Big Data: challenges

- Increment in data volume
- Data variety
- Classical anonymisation techniques such as k-anonymity need to be adapted
- Real-time constraints





# GRADIANT @ INFINITECH H2020

- ✓ We are designing and developing an advanced **data anonymization** tool
- ✓ Analyze + Anonymize: **risk-driven approach**  
Help customers find the best set of anonymization operations to fit their privacy and utility goals
- ✓ Data anonymization in disruptive scenarios
  - Connected vehicles (GPS data anonymization)
  - Health insurance





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