Competency Cluster AnigeD - Anonymization for Integrated and Georeferenced Data

- Evaluation of anonymization methods using legal criteria

- Potential of anonymization by synthetic data

- Anonymization of georeferenced data

- Testing of software tools for the efficient analysis and provision of anonymized, georeferenced data
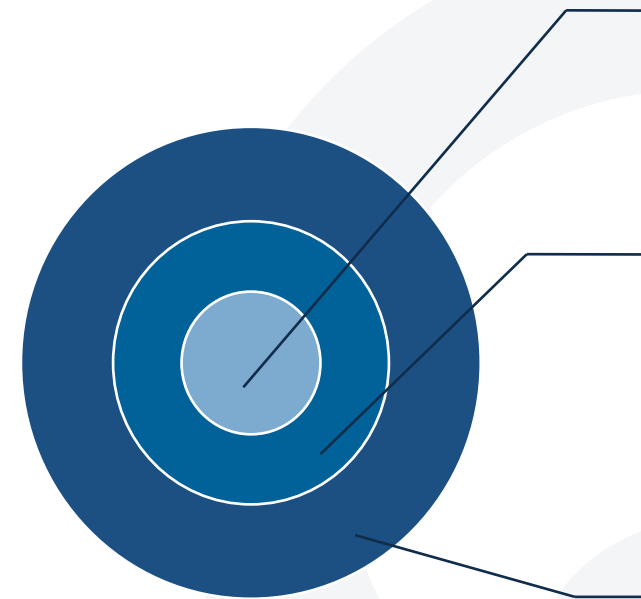
5 Project partners:
Destatis as cluster coordinator

6 Associated partners:
e.g. T-Systems International GmbH

Other research projects:
AnGer, DARIA, GANGES

AnigeD@destatis.de

SPONSORED BY THE

Federal Ministry of Education and Research

Funded by the European Union
NextGenerationEU

AnigeD

Motivation

- Mobile network operator (MNO) data is being analysed worldwide as a potential source for official statistics

- High level of coverage:
  - 98,1 % of households in Germany own a mobile phone
  - 1,87 devices per household

- Versatile subject areas:
  - Population
  - Tourism
  - Mobility

Quelle: Statistisches Bundesamt, Laufende Wirtschaftsrechnungen (LWR), Ausstattung privater Haushalte mit Informationstechnik 2022

SPONSORED BY THE

Federal Ministry of Education and Research

Funded by the European Union
NextGenerationEU

AnigeD

MNO Data Processing as Black Box Problem

- In the past, DESTATIS has produced several promising experimental statistics based on MNO data
  - Successfull cooperation with 2 out of 3 MNO's in Germany

- DESTATIS only used aggregated products based on confidential processing
  - MNO's use confidential informations like cell tower locations and local market shares for geolocation and upscaling

- Official Statistics require transparency!

AnigeD@destatis.de

Project in Cooperation with T-Systems

- Project aims to open black box of MNO data processing by achieving the following goals:

1. Create a standardized processing method for MNO data

2. Evaluate anonymization needs and ensure privacy conformity of MNO data processing

3. Create secure interfaces for regular access to MNO data

AnigeD@destatis.de

SPONSORED BY THE

Federal Ministry of Education and Research

Funded by the European Union
NextGenerationEU

AnigeD

Cooperation with Private Data Holders

Official Statistics

» Duty to employ transparent methods and processes

» Expertise in Statistics

- High Expertise in Data Privacy

- Interest in tapping the potential of MNO data

Private Data Holders

» Interest in the protection of business secrets

» Expertise in Mobile Network Operation

» Project is also supposed to identify possibilities for future cooperations

AnigeD@destatis.de

EUROPEAN CONFERENCE ON QUALITY IN OFFICIAL STATISTICS
2024 ESTORIL - PORTUGAL

INSTITUTO NACIONAL DE ESTATÍSTICA
Statistics Portugal

eurostat

The conference is partly
financed by the European Union

Work Package 1

- Establishment of a secure development environment in the T-Systems infrastructure as well as secure access for DESTATIS

- „Supporting Workpackage"
  - Necessary to reach goals in the other workpackages

Work Package 2

- Define and implement the necessary interfaces for regular access to MNO data

- Compliance with IT and data protection regulations!

AnigeD@destatis.de

SPONSORED BY THE

Federal Ministry
of Education
and Research

Funded by
the European Union
NextGenerationEU

AnigeD

Work Package 3

- Develop and implement standardized methods/algorithms for preparation and processing of MNO data

- Leans heavily on work conducted in the ESSnets *Big Data I + II* and work currently being conducted in ESSnets *Multi-MNO* and *MNO-Minds*

Work Package 4

- Development of a flexible anonmyization procedure for processing of MNO data and products derived from MNO data

- Requires identification of anonymization needs in both products and processing

AnigeD@destatis.de

Project Status and Next Steps

- First big step already taken
  - Both corporate security of T-Systems and the Federal Commissioner for Data protection and Freedom of Information have accepted data protection plan

- Next steps
  - Design and set up of the development environment in the T-Systems infrastructure
  - Establishment of a method for secure access to the development environment

AnigeD@destatis.de

EUROPEAN CONFERENCE ON
QUALITY IN OFFICIAL STATISTICS
2024 ESTORIL - PORTUGAL

INSTITUTO NACIONAL DE ESTATÍSTICA
STATISTICS PORTUGAL

eurostat

The conference is partly
financed by the European Union

Contact

Lorenz Ade – lorenz.ade@destatis.de

Maurice Brandt – maurice.brandt@destatis.de

D STATIS
Statistisches Bundesamt

AnigeD@destatis.de

SPONSORED BY THE

Federal Ministry
of Education
and Research

Funded by
the European Union
NextGenerationEU

AnigeD

EUROPEAN CONFERENCE ON QUALITY IN OFFICIAL STATISTICS

2024 ESTORIL - PORTUGAL

AnigeD@destatis.de