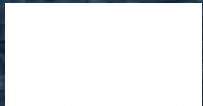
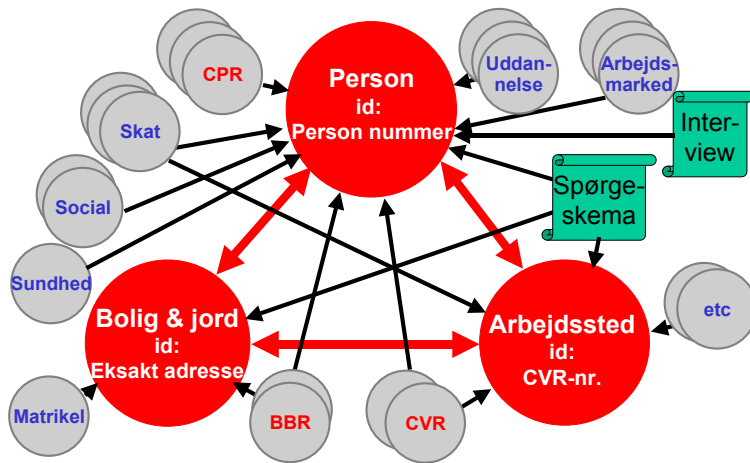


Access to micro data – Exploiting a Goldmine of Knowledge

Lars Thygesen
Director

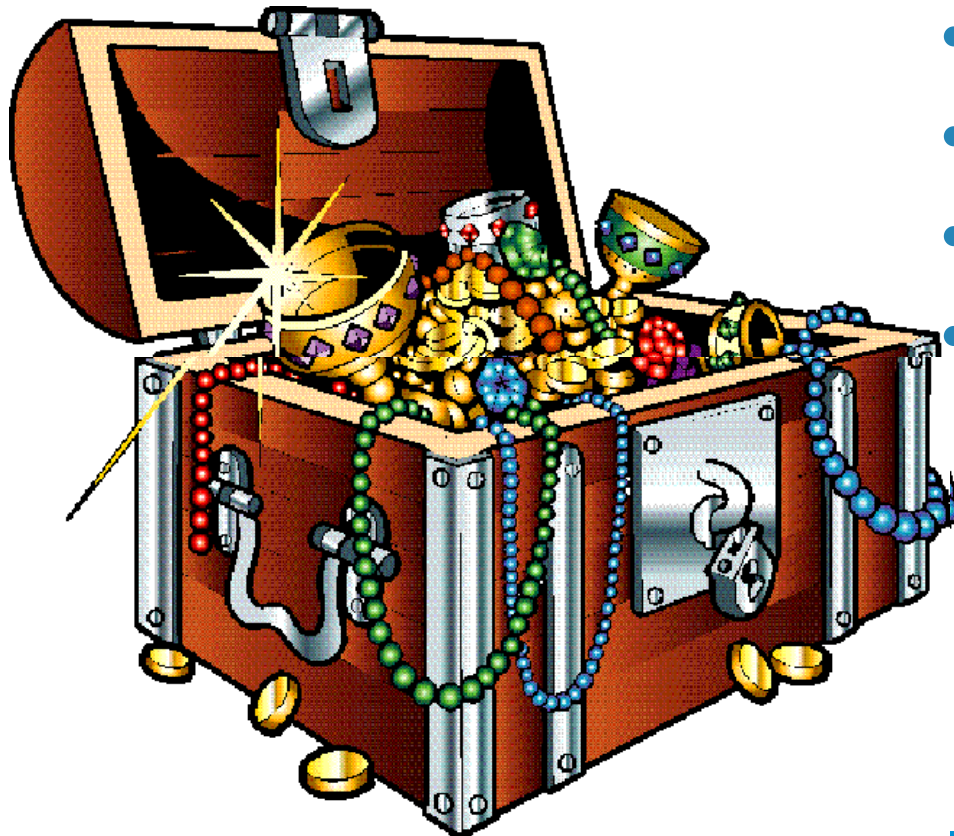


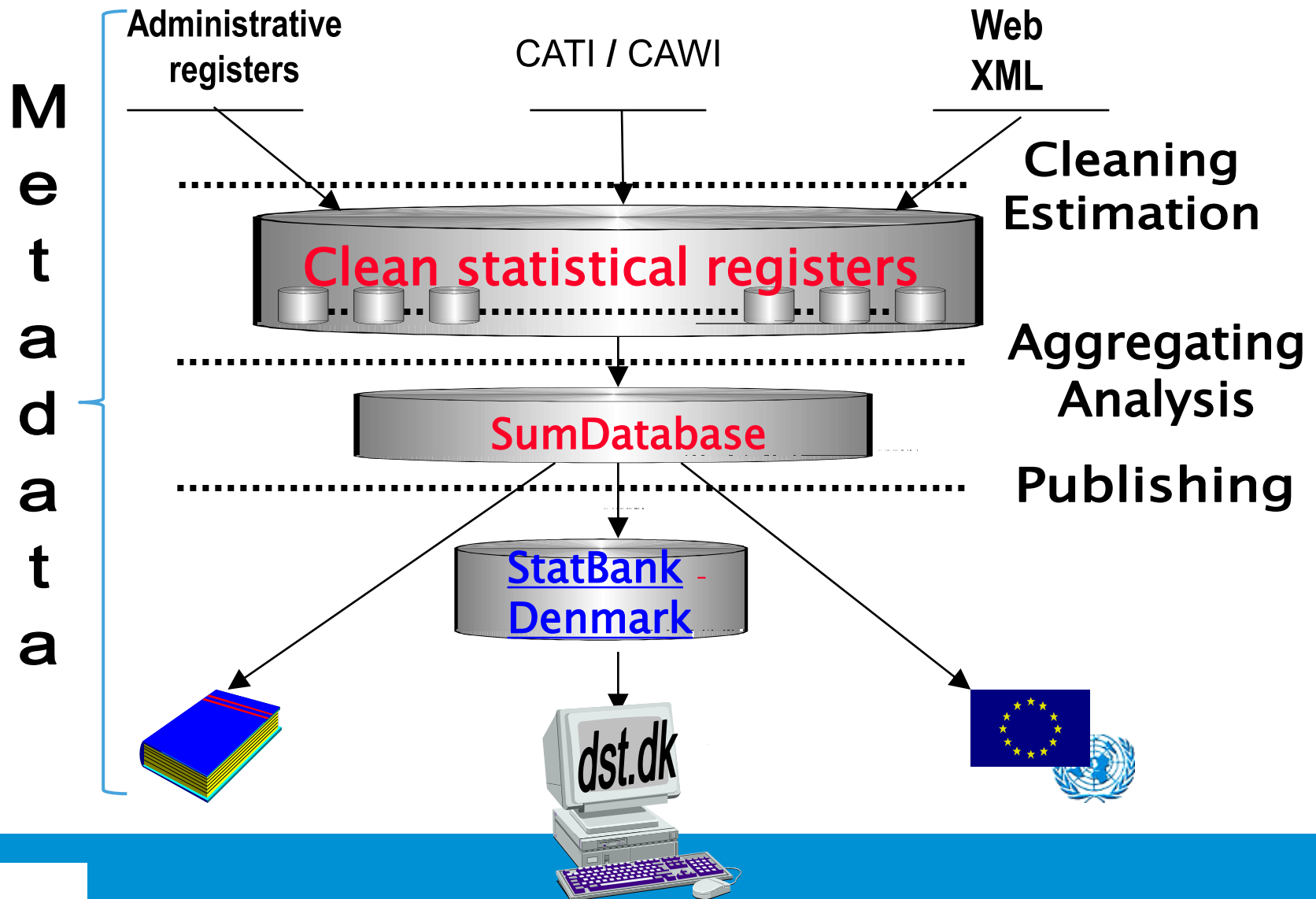


A treasure!

- High data quality
- Coverage
- Coherence
- Combining & linking
- Longitudinal studies
- World's first Census without questions

www.dst.dk/declarations





Who wants micro data

- Other statistical agencies
- International organisations
- Ministries
- Municipalities
- Business
- Organisations
- Research



Principles

- No identified micro data should be given to anyone
 - Because sooner or later a disaster will happen
- De-identified micro data should only be accessible to authorized organisations and in a very secure manner, under control
 - Because indirect identification will be possible
 - Trust and control necessary
- Even table cells have to be discretioned

See <http://dst.dk/ext/502998790/0/formid/Data-Confidentiality-Policy-at-Statistics-Denmark--pdf>



Register based research

- 1986:** Statistics Denmark starts “on-SITE” access for researchers.
- 1993-2000:** possibility to send programmes to Statistics Denmark and have the output sent back.
- 2000:** Statistics Denmark starts “on-LINE” access for researchers: Direct access to databases in Statistics Denmark from own computer
- 2002:** Ministry of Science starts supporting computer time for researchers in Statistics Denmark and update/documentation of selected databases



Researchers' access

- 1986: 2 researchers
- 1997: 71 researchers
- 2002: 151 researchers
- 2004: 277 researchers
- 2008: 667 researchers
- 2012: 1,000 researchers
- 2014: 1,400 researchers



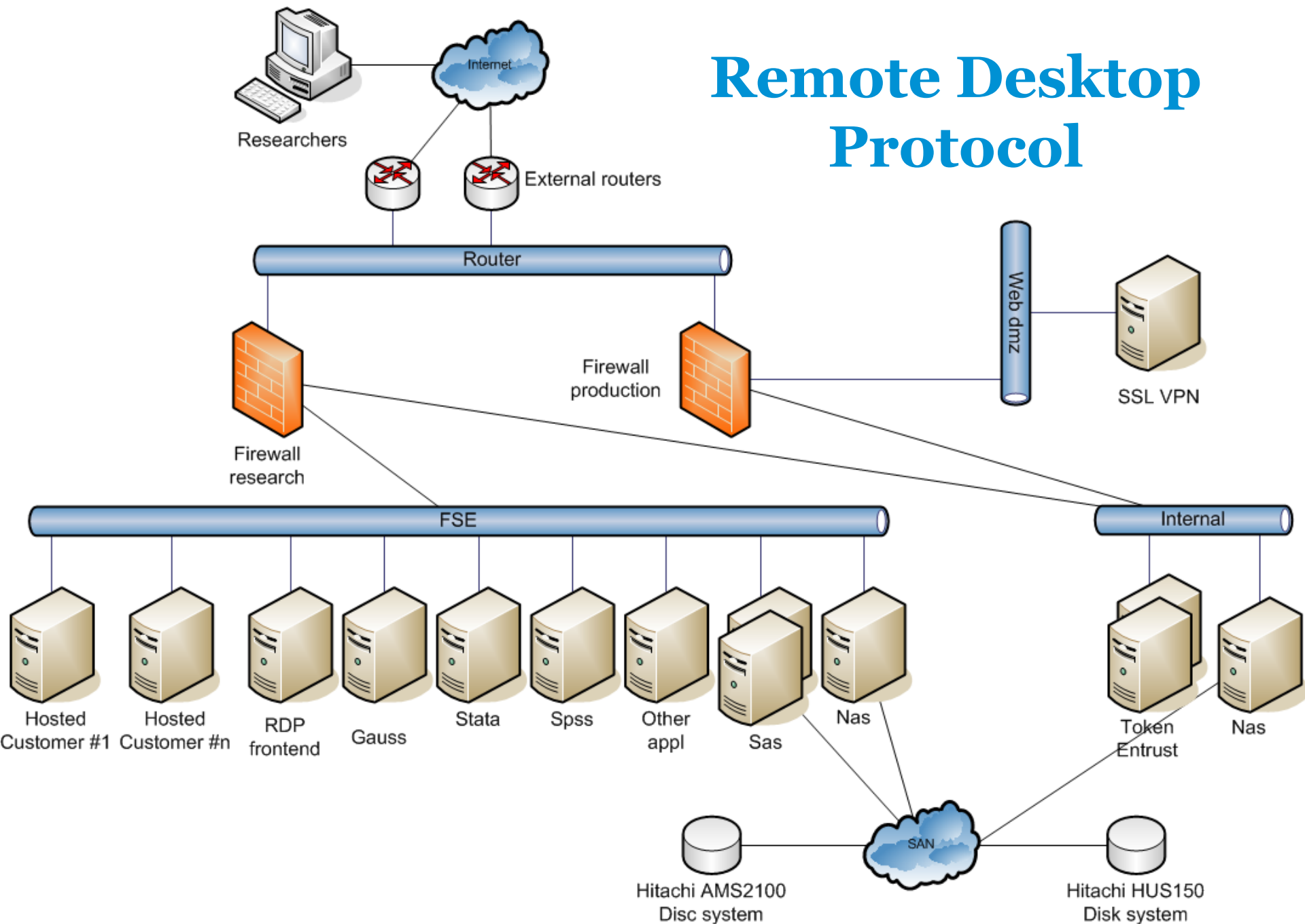
Online access to micro data

Balancing data protection and usefulness

- Only for researchers and analysts from authorized research and analysis environments
- Special servers separated from the statistical production
- The de-identified micro data (individuals and businesses) remain at Statistics Denmark
- Outputs with statistical results are forwarded by e-mail
- Strict data security measures and severe sanctions if the rules are not complied with



Remote Desktop Protocol



Organization of Research Services

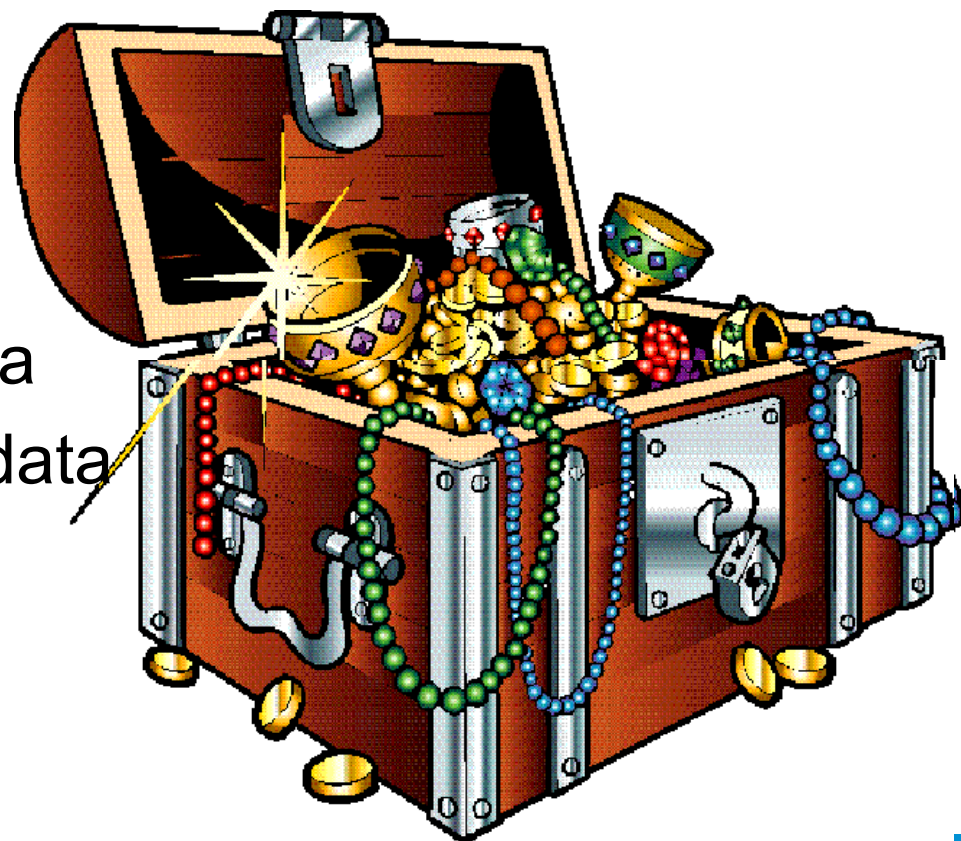
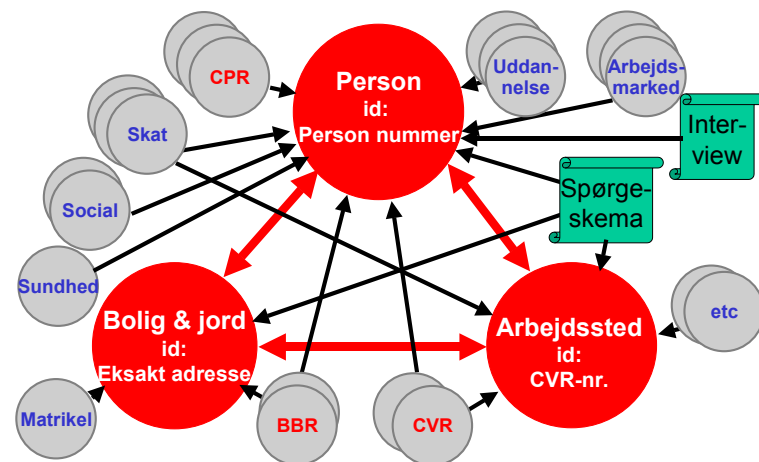
Data for research is handled by a specialized **Research Service Unit** at Statistics Denmark

- **Manage the remote access** arrangements and administer authorizations, contracts etc.
- **Coordinate data** from all divisions in Statistics Denmark
- **Deliver data** to all research projects
- **Give advice** to researchers – new and old projects
- **Do computer related work.** Update research databases



Why researchers use this facility

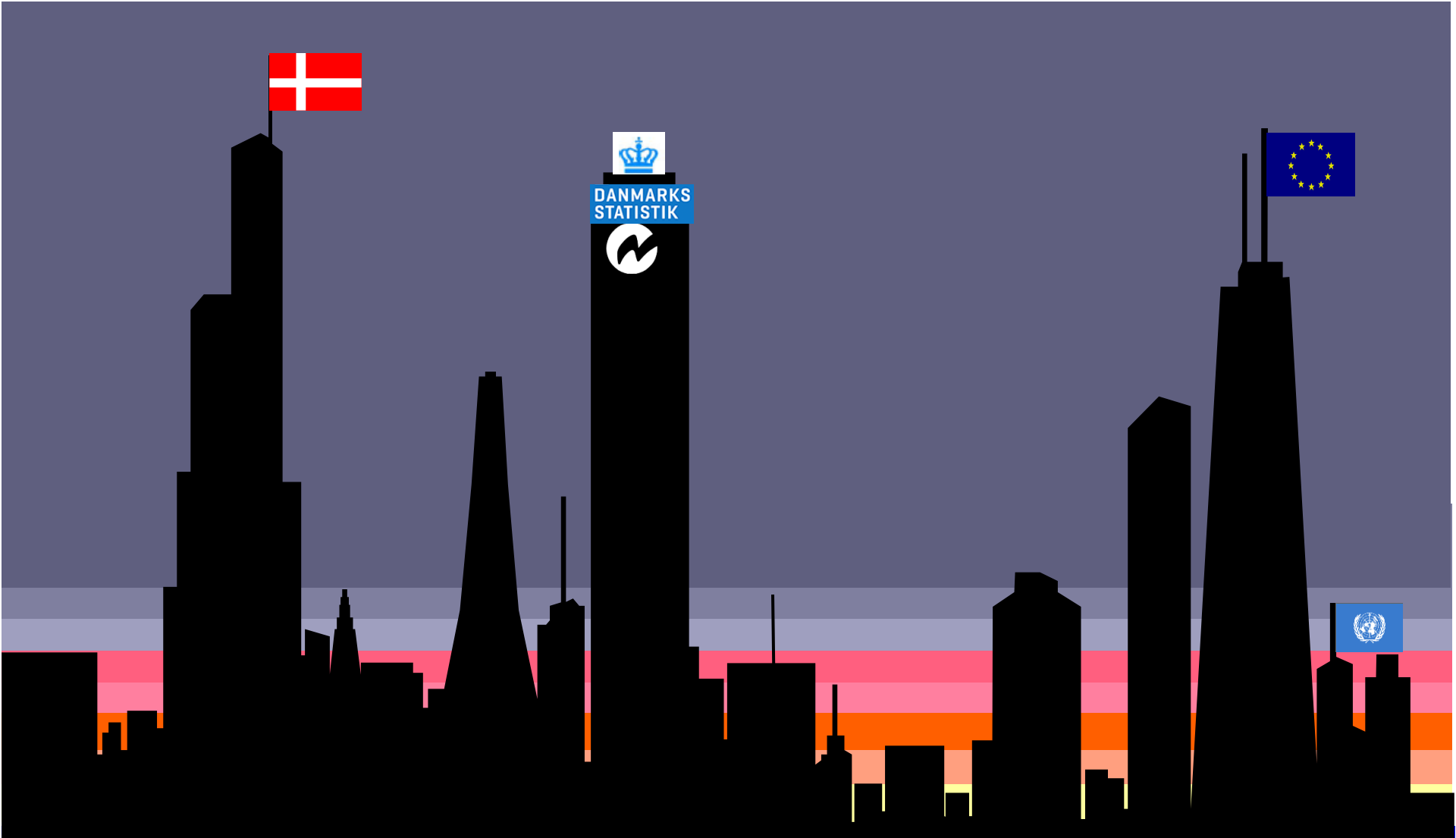
- Data coverage
- Quality
- Coherence
- Longitudinal
- Documentation
- Supplement with own data
- Supplement with survey data



Confidentiality

- All data is de-identified
- Only access to the data needed for the specific research purpose
- **No** micro data ever leaves SDK
- **No** public use data sets
- **No** scrambling or distortion of data
- **No** linking by researcher
- **No** complaints from research community





The End!