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Practical approach in developing the integration of statistics and geospatial information through value chains and data quality

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Statistics Finland
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The context of the presented work

- **Eurostat funded** GSGF in Finland — Integration of geospatial and statistical information in Finland (GSFI) project 2/2023 – 1/2025 (SMP-ESS-2022-GEOS-IBA)
- **Organisations**: Statistics Finland, Finnish Environment Institute, and National Land Survey of Finland. In addition, close collaboration with *The National Network for Integration of Statistical and Geospatial Information in Finland (NISGIF)*

- **GSGF Finland**
  The project seeks to establish a national adaptation of the GSGF model (GSGF Finland), aligning it with the Global Statistical Geospatial Framework (GSGF) and its European counterpart (GSGF Europe).
  - **Current state assessment**
    It was observed that the information value chain is unclear. The proposed approach stems from investigating this.

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Value chains and data quality

- Straightforward value creation
- Complex value creation
  - ➢ Value degradations:
  - Information does not meet the needs
  - There are differing perceptions of quality

How well does information describe reality?

Correctness | Accuracy | Completeness | Consistency | Currentness

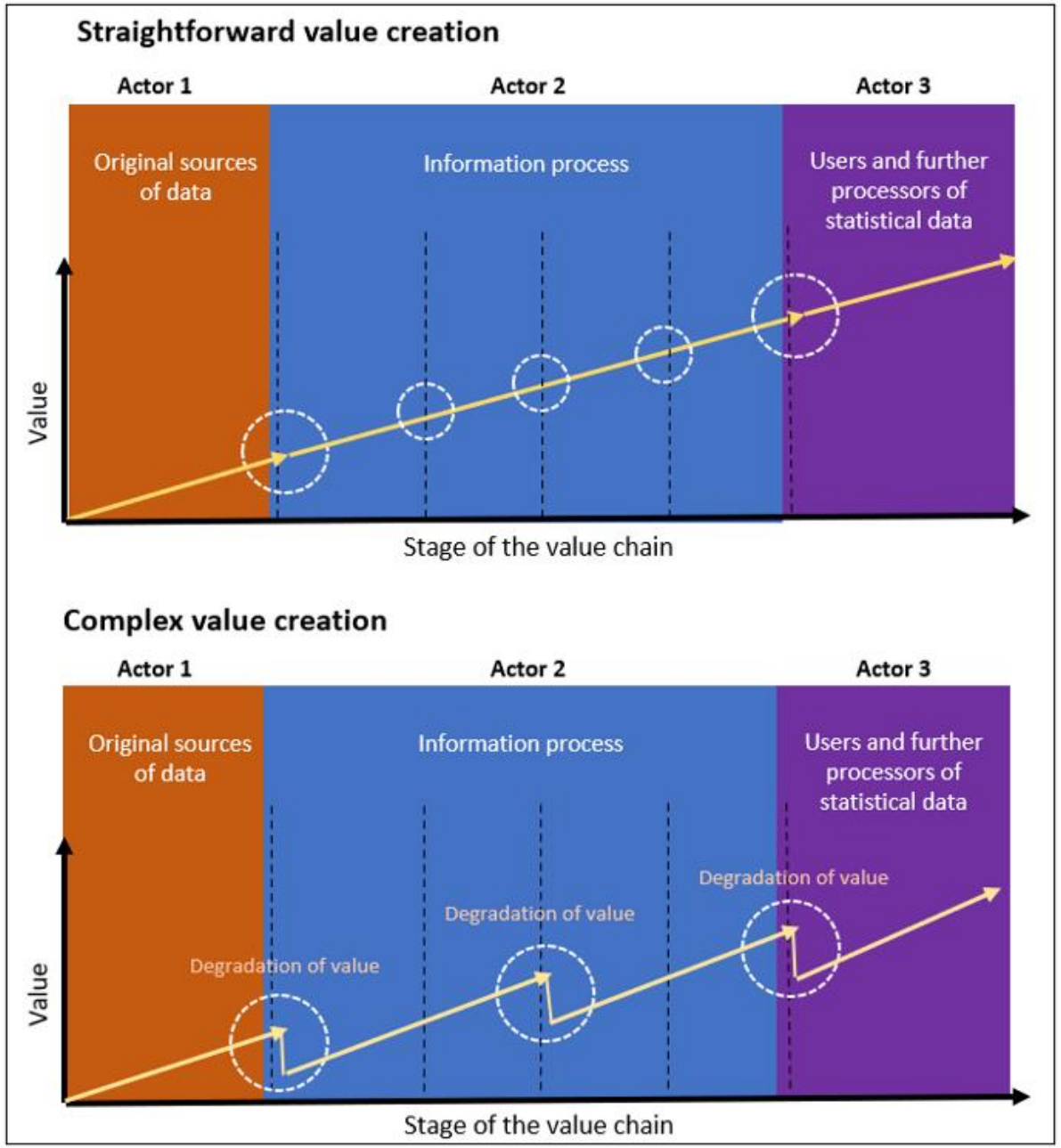
How has the information been described?

Traceability | Understandability | Compliance

How can I use information?

Portability | User rights | Punctuality

The data quality framework



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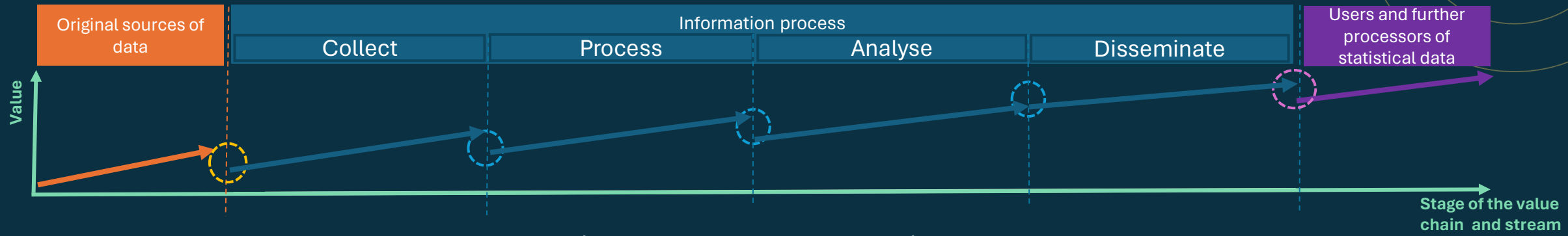
Practical example of a value chain and stream and benefits

Recently renewed Geocoding process of Statistics Finland's Business Register serves as a good practical example on the potential benefits of defining value chains and streams to improve collaboration of different organisations.



The process utilises a comprohensive admistrative data source

The value chain approach can also be applaied to measure the efficiency of a statistical process by defining a value stream and appointig quality measuring points

By only measuring the quality on ready statistical products everything appears to fine

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In the full picture we see that the admistrative data source does not quite suit the statistical needs and further inquieries are needed and the address information is not quite adequate for statistical needs.

The shortages in the data sources couse inefficiencies and manual editing needs in the statistical process.

Further more deficiencies in admistrative data sources, poor quality of address information in our example, might cause inefficiencies through the public sector.

In some cases the inefficiensies of the carried all the way trough to statistical products specially to data used for research and other paid fine level statistical products

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Conclusions and proposals

- Statistical processes can benefit from value chain approach as the focus is understanding the big picture and needs of different actors of the chain.
- The same approach can be used to observe the quality of statistical/ information processes of National Statistical Institutions (and other).
- The need for standard address information has been identified as a key factor in streamlining both the statistical geocoding processes in Statistics Finland and potentially else where in public sector. A further national project has been proposed.

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Thank you for your interest!

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