UN Big Data Global Working Group
Standards for Trusted Data Collaboratives

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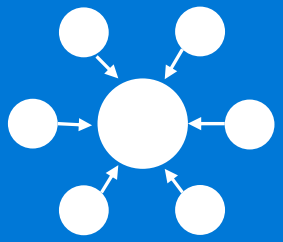
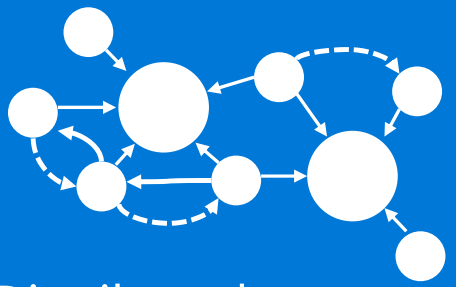
Data Sharing Business Model Patterns

Point to Point
Data Transfers



Centralized
Data Sharing



Distributed
Data Sharing

Elements of Good Governance for Trusted Data Collaboratives

1. Clarity of Purpose/Mission
2. Clarity and representation of Stakeholder Interests
3. Established Authorities and delegated Decision Rights
4. Effective Policies – Internal Policies, Promises, Commitments, Standards and Regulations
5. Responsible and Responsive Actions and Punitive Measures for bad actions/actors
6. Generally Accepted Good Practices, Proven Architectural Patterns and Tools
7. Sustainability (Financial, Environmental, etc.)

A sample of relevant ISO/IEC Standards for Trusted Data Collaboratives

ISO/IEC 17789:2014 Information Technology -- Cloud Computing Reference Architecture

ISO/IEC 19944:2017 Information Technology -- Cloud Computing Cloud Services and Devices

ISO/IEC 27001:2013 Information Security Management

ISO/IEC 27002:2013: Information technology -- Security techniques and code of practice for information security management

ISO/IEC 27005:2011 Information Technology-Security Techniques – Risk Management

ISO/IEC 27017:2015 Information technology -- Security techniques -- Code of practice for information security controls based on ISO/IEC 27002 for cloud services

ISO/IEC 27018:2014 Information technology -- Security techniques -- Code of practice for protection of personally identifiable information (PII) in public clouds acting as PII processors

ISO/IEC 31000:2009 Risk Management Framework

ISO/IEC 31010:2009 Risk Assessment techniques

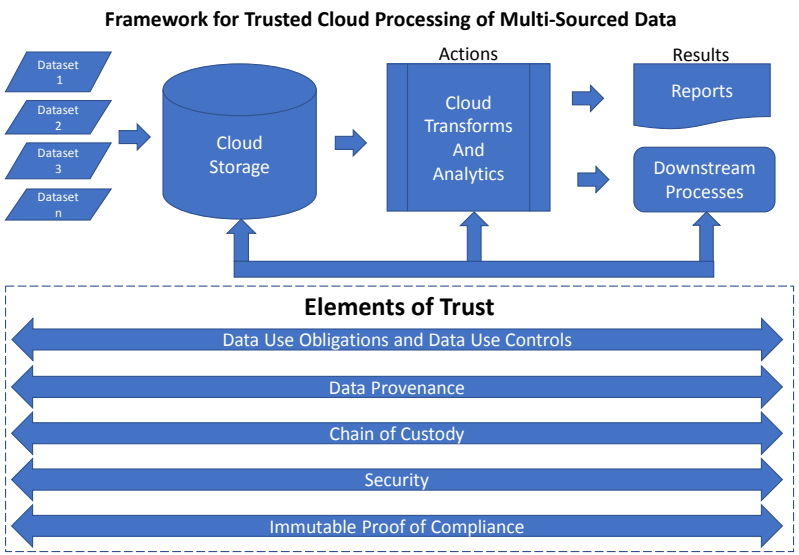
ISO/IEC 38500:2015 Information technology -- Governance of IT for the organization

ISO/IEC 38505-1:2017 Information technology -- Governance of IT -- Governance of data -- Part 1: Application of ISO/IEC 38500 to the governance of data

…and a multitude of regional, national and sectoral standards (and corresponding regulations…) e.g. GDPR.

An emerging ISO/IEC Standard

Trusted Processing of Multi-sourced Data



Draft Report of the SC 38 Study Group on Trusted Processing of Multi Sourced Data

1. High Level Summary

The Study Group recommends that SC 38 take the following actions:

- The SG Trusted Processing of Multi-Sourced Data recommends that SC 38 add a technical report on "*Information Technologies - Cloud Computing-Framework of Trust for Processing of Multi-Sourced Data*" to its program of work with the following scope:

  "*This document describes a framework of trust for the processing of Multi-Sourced Data that includes Data Use Obligations and Data Use Controls, Data Provenance, Chain of Custody, Security and Immutable Proof of Compliance as elements of the framework.*"
- Coordinate with appropriate groups in JTC 1 including SC 27, JTC 1/WG 9 and SC 41 by inviting experts from those and any other interested groups to join this work.
- The SG Trusted Processing of Multi-Sourced Data recommends that the TR be placed in SC 38/WG 5 for development and use the content of this report as a basis.
- A Form4 document and an outline of the proposed TR are supplied as separate documents which accompany this report:
  - SC38_Framework_TPMSD_Form4_v1.docx
  - SC38_Framework_TPMSD_v1.docx

This document describes scenarios and issues related to the processing of multi-sourced data and introduces a framework which includes the elements of trust that are necessary for the trusted processing of multi-sourced data. The elements of trust include Data Use Controls, Data Provenance, Chain of Custody, Security and Immutable Proof of Compliance.

2. Introduction

JTC 1 SC 38 created the Study Group on Trusted Processing of Multi-Sourced Data in March 2017 to identify issues arising from the processing of multi-sourced data using cloud services and how these issues could affect a range of stakeholders including cloud service providers, cloud service customers, cloud service users, governments, other standards organizations and civil society. Additionally, the Study Group was tasked with investigating how processing of multi-sourced data in the cloud could intersect with emerging applications such as artificial intelligence and machine learning.

There are many business and technical aspects relating to the processing of multi-sourced data, but the Study Group believes that trust between cloud service users, cloud service customers and the cloud service provider(s) is a significant market issue.

Cloud processing of multi-sourced data[1] is in its early stages of development in the industry, and it is anticipated that specific customer requirements will differ and will evolve over time. Industry clouds

[1] Multi-sourced data: data that consists of separate data sets that have been generated by multiple, diverse sources and assembled by one or more cloud services from one or more CSPs, which are then subject to combined