



BSI Standards Publication

Smart water management

Part 2: Data management guidelines

National foreword

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A list of organizations represented on this committee can be obtained on request to its committee manager.

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ISO 24591-2

**Smart water management —
Part 2:
Data management guidelines**

Gestion intelligente de l'eau —

Partie 2: Lignes directrices pour la gestion des données

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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Data as an asset	3
4.1 General	3
4.2 Data quality	3
5 Data management	4
5.1 General	4
5.2 Data governance	4
5.3 Data value chain	4
5.4 Basic rules for data management	6
5.4.1 General	6
5.4.2 Data property, security, privacy and confidentiality	6
5.4.3 Data acquisition	6
5.4.4 Data contextualization	7
5.4.5 Data referencing	7
5.4.6 Standardization	8
5.4.7 Data normalization	8
5.4.8 Pre-processing (including data validation)	9
6 People organization around data	10
Bibliography	12

Foreword

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A list of all parts in the ISO 24591 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

To better manage the entire life cycle of water systems, water system owners and operators continually improve operational efficiency, reduce costs and communicate to stakeholders or other systems. In addition, they address safety, regulatory and public authority requirements. One effective approach to achieving these goals is to take advantage of data generated by water systems.

Information-sharing facilities and models established based on these data can provide optimal solutions for the owner or operator of the water systems to meet stakeholder demand for, e.g. drinking water production, transmission and distribution, asset management, risk management, wastewater collection and sanitation, stormwater management and water resource protection. Over the past few years, advances in digital technologies have enhanced the capabilities of data generation; meanwhile, data-processing capacities have also significantly improved.

With the rapid development of new digital technologies, the data generated from water systems are increasing drastically. This “data explosion” has enabled the delivery of new services that:

- increase the operational efficiency of assets and networks;
- reduce or optimize capital expenditures and operating expenses;
- allow better anticipation and assessment of risks;
- enable a smaller environmental footprint;
- enhance regulatory compliance;
- support oversight and substantive accountability to local or national stakeholders;
- improve the level of service to water system customers.

However, large-scale data also dramatically increase the requirements on data storage and data transfer facilities. In addition, it is important to ensure that large-scale data do not result in negative impacts on the environment. Therefore, data management is a challenge for water system owners and operators.

To ensure that the data and information generated by water systems produce maximal values, proper data management approaches should be applied in organizations that work with water systems, e.g. using consistent nomenclature, specifying ownership rules, performing data validation and applying standardization and normalization.