

# ISO 24591-1:2024-01 (E)

## Smart water management - Part 1: General guidelines and governance

---

<b>Contents</b>		Page
<b>Foreword</b>		<b>iv</b>
<b>Introduction</b>		<b>v</b>
<b>1 Scope</b>		<b>1</b>
<b>2 Normative references</b>		<b>1</b>
<b>3 Terms, definitions and abbreviated terms</b>		<b>1</b>
3.1 Terms and definitions		1
3.2 Abbreviated terms		3
<b>4 General</b>		<b>4</b>
4.1 Scope for smart water management		4
4.2 Challenges and constraints		5
4.2.1 Stakeholders		5
4.2.2 Considerations and challenges		5
4.2.3 Constraints		6
4.3 Stakeholder expectations relating to smart water management		6
<b>5 Principles and guidelines for the design of smart water management system</b>		<b>8</b>
5.1 General		8
5.2 Design scheme for smart water management systems		8
5.3 Logical architecture for smart water management systems		8
5.4 Design of logical architecture		9
5.4.1 Sensing layer		9
5.4.2 Monitoring and control layer		10
5.4.3 Application layer		10
5.4.4 Operation layer		12
5.5 Integration of smart water management systems		12
<b>6 Principles and guidelines for operation and maintenance of smart water management systems</b>		<b>13</b>
6.1 General		13
6.2 Verification of system reliability		13
6.2.1 General		13
6.2.2 Infrastructure security		13
6.2.3 Performance indicators (PIs)		14
6.3 Emergency response plans		14
6.4 Smart water management implementation strategy		15
<b>7 Principle and guidelines for the governance of smart water management system</b>		<b>15</b>
7.1 General		15
7.2 Leadership, roles and responsibilities		16
7.2.1 The owner of the smart water management system		16
7.2.2 The leadership team of the owner or water utility		16
7.2.3 The responsible body of the smart water management system		16
7.2.4 The operator of the smart water management system		16
7.2.5 Data management		16
7.3 Workforce organization and change management		16
7.3.1 General		16
7.3.2 Workforce organization		16
7.3.3 Change management		16
<b>Annex A (informative) Overview of online measurements of the sensing layer</b>		<b>18</b>
<b>Annex B (informative) Cybersecurity reference model of a smart water management system</b>		<b>21</b>
<b>Bibliography</b>		<b>22</b>