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**Information technology - Big data - Planning of data
resource**

信息安全技术 大数据 数据资源规划

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Information technology - Big data - Planning of data resource

1 Scope

This document describes the planning process of data resource required by an organization to support the achievement of its business planning objectives, and specifies activities related to data resource preconfiguration and data resource planning.

This document is suitable for guiding organizations to establish data resource planning related documents and activities that meet their business needs.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 26816 Information resource core metadata

GB/T 35273 Information security technology - Personal information security specification

GB/T 37722 Information technology - Technical requirements for big data storage and processing systems

GB/T 38667 Information technology - Big data - Guide for data classification

3 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

3.1

data resource

Data that is viewed as a resource, used to support the achievement of an organization's business objectives.

NOTE: The term "business objectives" in this document refers to the objectives explicitly or implicitly set by an organization around its business and business development areas. To achieve

4 General

Data resources are similar to other types of resources that support an organization's business activities. Data resource planning revolves around the objectives set in the organization's business plan and the characteristics of the data itself. The final product produced by data resource planning activities is a data resource preconfiguration plan that meets business target data requirements, that is, a data resource planning document. The goal of data resource planning is to support organizations in realizing business plans and objectives, taking determined business plans and objectives as input, systematically design and carry out planning and description of each element of data resources, and proposing normative requirements.

5 Data resource planning process

The data resource planning process within an organization is shown in Figure 1, which mainly involves two types of activities.

- a) Activities related to data resource preconfiguration:
 - 1) Such activities include but are not limited to: inventory of the current status of data resources, determination of data resource planning goals, and preparation of data resource planning documents, etc.;
 - 2) Such activities are performed to carry out data resource planning, and the goal is to complete the data resource planning document;
 - 3) Such activities are sequential. For a specific data resource planning task, some activities in the process may be performed multiple times or repeatedly. For example, the process from data resource planning goals to data resource configuration solutions may be iterated and repeated multiple times depending on the actual situation.
- b) Data activities related to data resource planning:
 - 1) Data processing related activities, such as data collection, data storage, data processing, data exchange, data application, data deletion and long-term storage;
 - 2) Data management related activities, such as grading and classification management, data model management, data standard management, metadata management, master data management, data catalog management, data quality management, data security protection and data assurance, etc.;
 - 3) Such activities are independent. For the sequence of activities and whether to perform all activities, this document only gives and describes the activities that

Based on the stage goals and tasks determined in the data resource planning goal activities, combined with the current status and needs of various data resources, conduct a data resource preconfiguration plan, that is, the preparation of data resource planning documents. The data resource planning document includes data processing and data management related content as well as other related factors that affect data resource configuration, such as data architecture, technology platform, business digital transformation, etc.

The specific writing form and content of data resource planning documents depend on the organization's business, technical and other management requirements.

7 Data activities related to data resource planning

7.1 Data processing related activities

7.1.1 Data collection

Data collection activities mainly include but are not limited to the following:

- a) Conduct data collection based on factors such as data source, data magnitude, data format, update method, and frequency;
- b) Conduct data collection according to the characteristics of the data to be collected during the collection activities.

7.1.2 Data storage

Data storage activities mainly include but are not limited to the following:

- a) Select an appropriate storage method based on factors such as data structure characteristics, data magnitude, timeliness requirements, read and write performance requirements, concurrency requirements, access frequency, and data application requirements;
- b) Build a data resource library, to conduct multi-level and classification storage of various types of data resources and data resources in the data transfer process;
- c) Data storage activities shall be carried out in accordance with the relevant contents specified in GB/T 37722.

7.1.3 Data processing

Data processing activities mainly include but are not limited to the following:

- a) Conduct data processing, data transmission, etc. based on factors such as data magnitude, data format, data timeliness requirements, and security requirements;

- b) Conduct data processing according to the characteristics of the data to be processed.

7.1.4 Data exchange

Data exchange activities mainly include but are not limited to the following:

- a) Conduct exchange according to the business needs of collaboration scenarios within the organization;
- b) Conduct exchange based on factors such as real-time requirements for exchange, data magnitude.

7.1.5 Data application

Based on the data preprocessing results, combined with the actual application needs of the organization, use appropriate data processing technology to provide the required data for the organization to develop and/or promote new applications and new models.

7.1.6 Data deletion and long-term storage

Select appropriate data deletion technology, storage media, etc. according to the organization's needs for data deletion, destruction, and long-term data storage.

7.2 Data management related activities

7.2.1 Grading and classification management

Data grading and classification management mainly includes but is not limited to the following:

- a) According to the grading and classification principles, forms, and methods specified by the organization, data resources are distinguished, classified, and graded according to the subject areas involved in the data itself, data sources, and expected data uses;
- b) Determine the specific data classification and data grading scheme. The data classification in this scheme may be multiple schemes with multiple dimensions;
- c) Data classification activities shall be carried out in accordance with the relevant contents specified in GB/T 38667.

7.2.2 Data model management

Data model related activities involve model building and maintenance. Such activities mainly include but are not limited to the following:

- a) Establish corresponding data models based on the characteristics of the data owned by the organization and the needs of data processing activities;

- c) Dynamically supervise the implementation of master data standards to meet the needs of various departments and/or business links within the organization;
- d) Plan the integration relationship and integration standards of master data between business systems, and guide the integration of master data.

7.2.6 Data catalog management

Data catalog management mainly includes but is not limited to the following:

- a) Establish data catalog compilation standards; clarify the structure, level, and scope of application of the data catalog;
- b) Establish a maintenance and monitoring mechanism for the data catalog, so that the data content it contains continues to meet business requirements for data resources.

7.2.7 Data quality management

Data quality activities mainly include but are not limited to the following:

- a) Establish and continuously implement data quality verification rules within the organization;
- b) Establish a data quality inspection mechanism within the organization to detect and solve data quality problems in a timely manner.

7.2.8 Data security protection

Data security protection activities mainly include but are not limited to the following:

- a) Establish a data security management system; continuously implement data security rules and regulations; protect, compliantly use, and process sensitive data;
- b) Establish a data security review system; regularly conduct risk assessments on data types, quantities, risks faced, countermeasures, etc.;
- c) Establish corresponding identification and protection mechanisms for personal information, which shall be carried out in accordance with the relevant content specified in GB/T 35273.

7.2.9 Data assurance

Data assurance mainly includes but is not limited to the following:

- a) Establish the organization's data assurance mechanism, formulate management standards for data-related activities;

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