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The Choice and Accumulation of Decision-making Data in Engineering Project Management

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Abstract

There is massive process data in the course of engineering, how to choose and accumulate data to provide reference for the newly built project in designing and building is a question that project superintendent faces. Constructs the knowledge management platform of engineering project management to realize the accumulate of decision-making data, study the data classification and knowledge management by taking architectural engineering data as example.

Introduction

- **Engineering project management**

- Knowledge Management Platform

- **Knowledge platform framework of engineering project management**

- **Main content and method**

- **Prospect**

Engineering project management

- refs to entire process or certain stage management and service to the engineering project implemented by enterprise engaged in the engineering project management which is entrusted by the owner, and on behalf of the owner according to the contract agreement
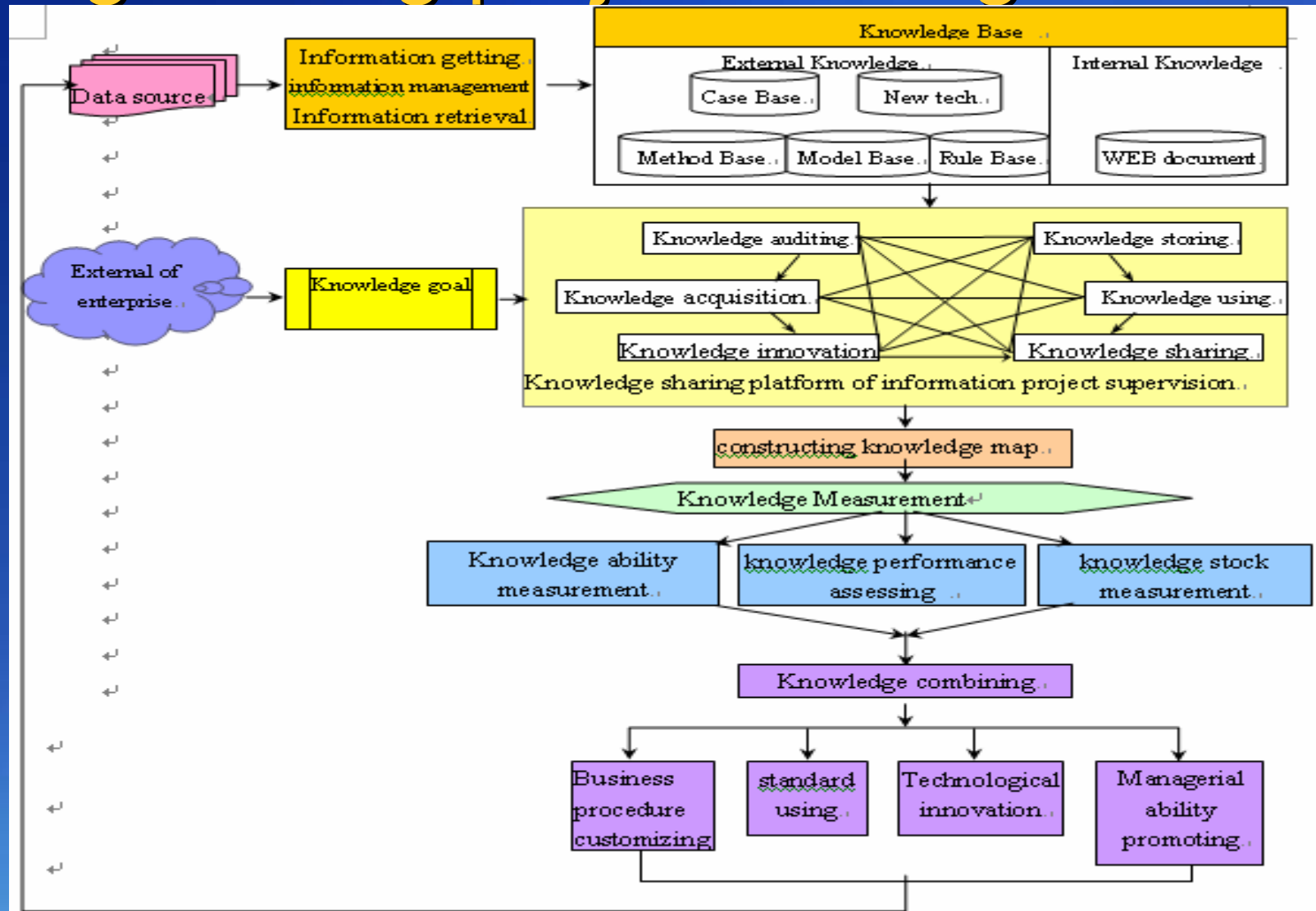
Knowledge Management Platform

- ## Knowledge Management
- **In the middle period of the eighties of the 20th century, PeteDrucker , used the concept of " Knowledge Management "**
- **Now, some foreign universities, such as University of California, offer Knowledge Management course for Doctors.**

- ## The meaning of the information management platform's setup
- **discern, develop , resolve , store , transmit the engineering project management knowledge data**
- **promot the accumulation and sharing of relevant knowledge data, offer decision support for improving key competitiveness of enterprises**

Knowledge platform framework of engineering project management

Main content and method(1)

- **Data source**
  - **various kinds of data sources that engineering project management enterprise demands, including inside data and outside data.**
- **Knowledge base**
  - **External knowledge**
  - **Structurizational knowledge (a example)**
  - **unstructurizational Internal knowledge**

An example of structurizational knowledge

- **Table 1: Engineering construction data standard classification of an architectural engineering project management company as example**

According to overall classification	Engineering construction national standards
	Engineering project construction standard
	Cities construction project profession standard
	Architectural engineering profession standard
	China Engineering construction Standardization Association standard
	Construction industry product standard
	Engineering construction national standards
According to specialized classification	The engineering construction standard compulsory article
	engineering project construction standard
	city and countryside planning
	project reconnaissance surveys
	the cities mass transit
	town road and bridge
	water suppling and draining
	cities fuel gas
	Heating and the heating ventilates
	the city's appearance environmental sanitation
	scenery botanical garden
	project earthquake resistance
	fireproof construction design
	Architecture design
	construct the ground

	foundation engineering structure
	architecture construction
	construction maintenance reinforcement and the real estate
	construction indoor environment
	Information technology
	Industrial architecture
	transportation
	railway engineering
	Energy
	flood prevention and hydraulic engineering
	chemical industry
	mine project

Main content and method(2)

- **Knowledge goal**
  - Pointing out the direction for the knowledge management of engineering project management

- **Knowledge sharing platform of engineering project management**
  - Knowledge auditing
  - Knowledge acquisition
  - Knowledge innovation
  - Knowledge sharing
  - Knowledge utilizing
  - Knowledge storing

Main content and method(3)

- **construct knowledge map**
- **Knowledge Measurement**
  - **Knowledge ability measurement**
  - **knowledge stock measurement**
  - **knowledge performance assessment**

Main content and method(4)

- ## Knowledge combining

- **Integrating synthetically different sources , levels , structure , contents of knowledge using scientific methods, implementing reconstructing to combine and promote single, scattered, new or old knowledge and form the new knowledge system.**

Prospect

- The data resource of engineering project management is the important motive force of wealth and development of engineering project management enterprises. The data resource exists in the course of engineering project management in various forms, but it is difficult to function for precipitating or loss in vain by a lot of engineering project management enterprises' invalidating it .

- In the face of the fierce market competition, the engineering project management enterprises should only strengthen the management innovation, improve the level of knowledge management, strengthen the learning ability of engineering project management and promote knowledge sharing , could the knowledge resource of engineering project management be developed and sufficient used effectively.