Supply Chain Capacity Center Information System Design

1 Background

1.1 Business Introduction

JD Logistics is China's leading technology-driven supply chain solutions and logistics services provider. With a mission of driving superior efficiency and sustainability for global supply chain through technology. Based on a logistics network that covers the whole nation and reaches every corner of the globe, JD Logistics has accumulated abundant industry insights and offer a full spectrum of supply chain solutions and high-quality logistics services enabled by technology. JD Logistics is the largest player in China's integrated supply chain logistics services market in terms of total revenue in 2020 and served more than 190,000 corporate customers across a wide array of industries in 2020, such as fast-moving consumer goods (FMCG), apparel, home appliances, home furniture, 3C, automotive and fresh produce, among others. JD Logistics will disassemble indicators and process actions on JD warehouses to achieve top-down business standardization and cost visualization.

1.2 Supply Chain Operational Dashboard Design

In order to be able to divide and decouple all warehousing costs undertaken by the supply chain, the supply chain management dashboard is built according to the following caliber

- Associated warehouse information: architecture code, region, park, system warehouse name, distribution center ID, warehouse ID
- Overall cost: total amount of cost, sequential cost, outgoing unit quantity, outgoing unit quantity sequential cost, average cost per unit, sequential cost per unit
- Cost module: housing cost, labor cost, consumables cost, depreciation cost, transfer cost, lease cost, other costs

2 Supply Chain Capacity Center Information System Design

2.1 Background

Customer customization needs are diversified, personalized operations are increasing, and the standardization process of warehousing operations needs to be improved. The headquarters is not transparent in operation management, which leads to over-service in front-line warehousing; the system has no standardization and customized service combination, and the product service is not matched with the WMS system, resulting in the system Insufficient flexibility, more complicated master configuration.

2.1.1 Status Quo

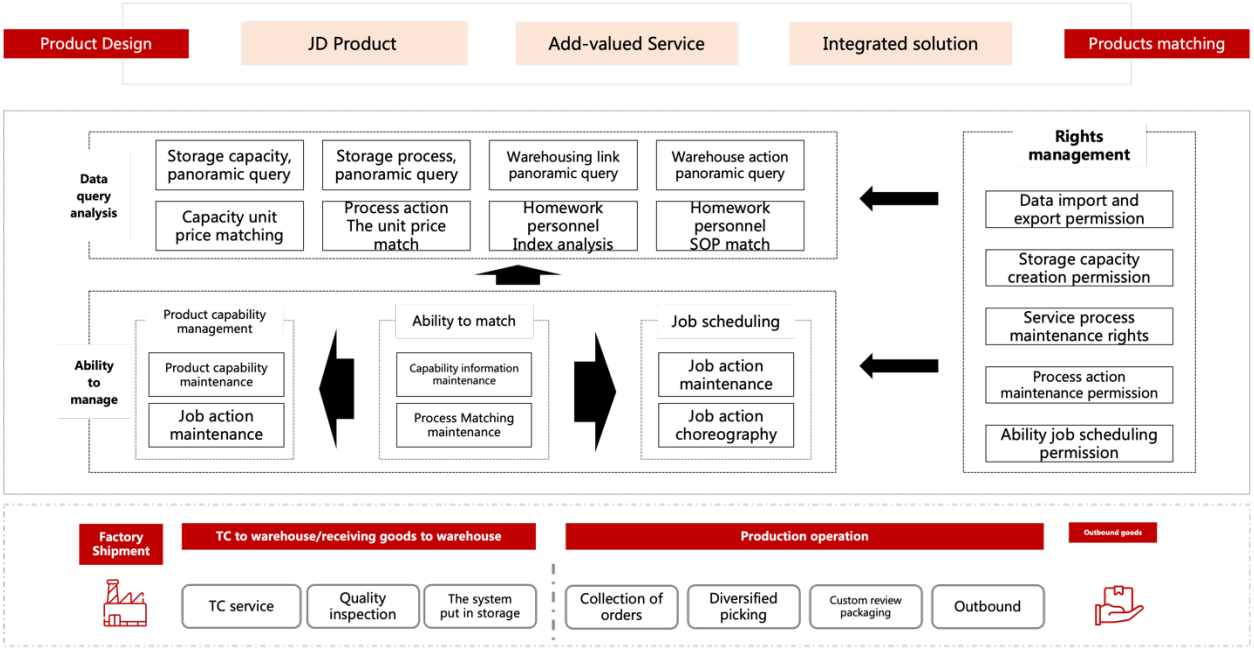
- **Low degree of operation standardization:** human judgment of operation operation, over-service of warehousing; lack of guided operation, high work order rate
- The management in the library is difficult, the business links are many, the process links are intricate, and the management cost of the first-line action process is high
- **Low system connection efficiency:** It is difficult to connect WMS and ECLP/CLPS, and the system transformation and online cycle is long

2.1.2 Planning Direction

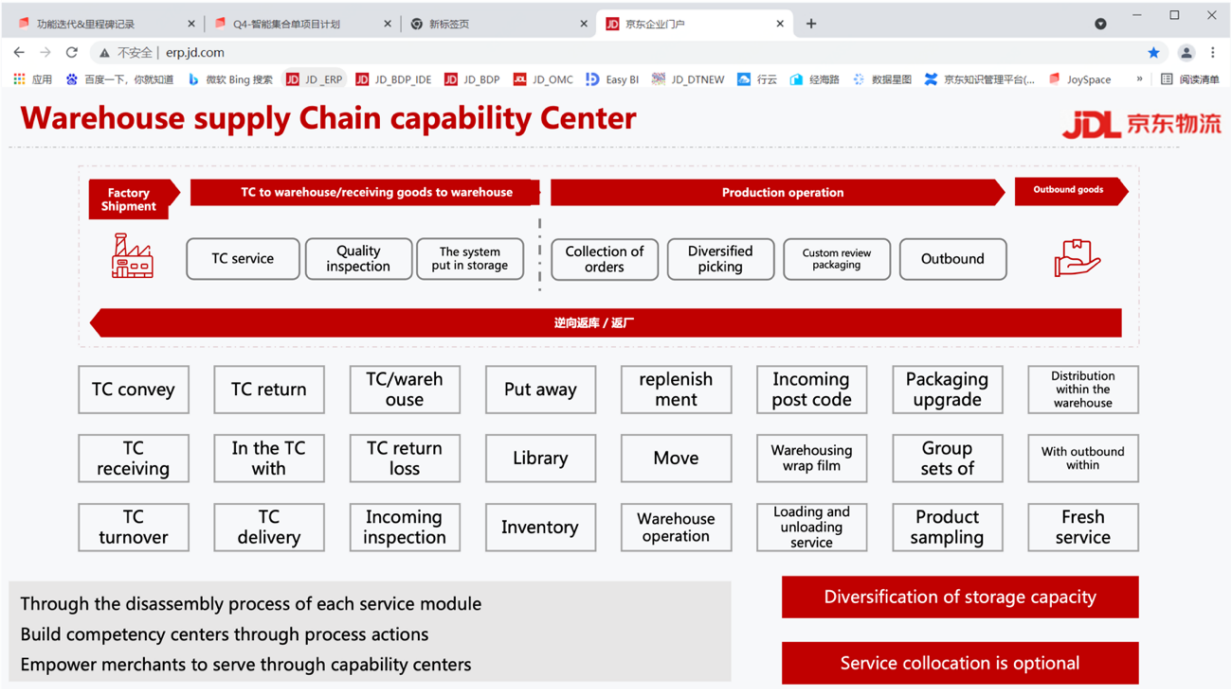
- **Product**: From the unified perspective of customers, sales and products, products guide sales to formulate sales plans, and products provide basic businesss to customers
- **Ability**: Operation planning basic business warehousing process, operation process disassembling basic link action, warehousing ability enabling warehousing products
- **Operation**: The warehouse ability guides the warehouse operation, the warehouse operation is intuitive and transparent, and the system drives the standardized operation of the staff

2.2 Supply Chain Capacity Center Information System Planning

- From the perspective of operational planning, based on the existing operational process, business capabilities are disassembled and sorted according to the process and link of the smallest granularity, planned and combined into various business capabilities to quickly create personalized products.
- Customers can match business capabilities, processes and actions required, and warehouses can provide corresponding businesss according to product requirements.

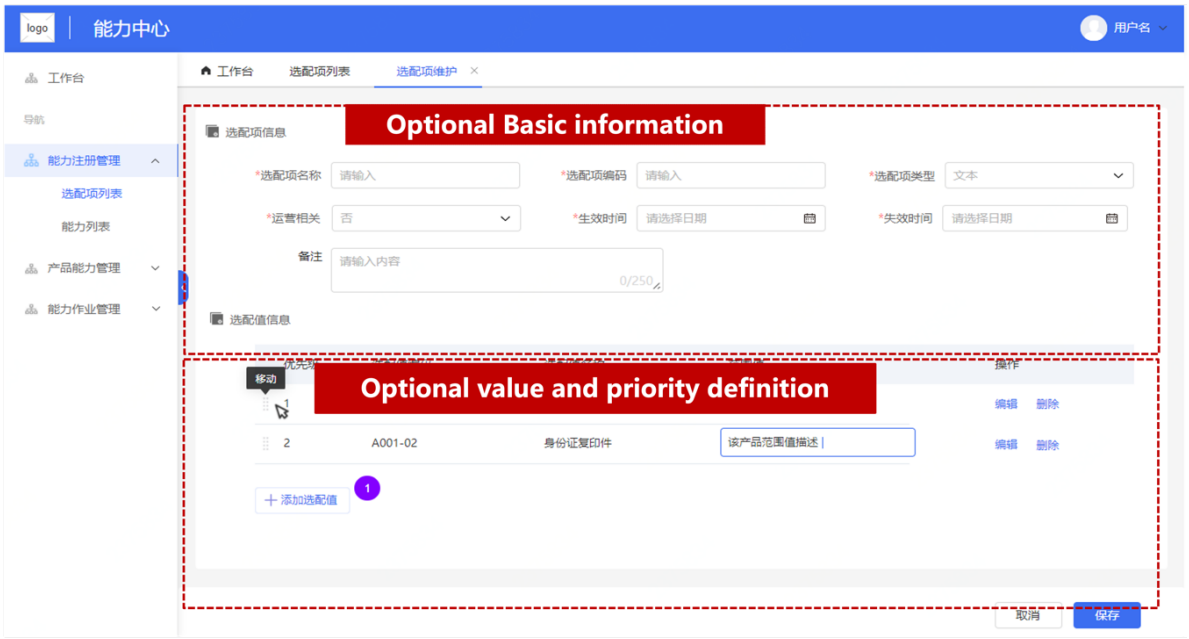


3 Capability Center Information System Interaction Prototype Diagram



3.1 Optional Items Maintenance

- **Function**: You can define public optional items. The bill return capability itself involves multi-dimensional operation steps, and the operation steps in each dimension are differentiated. This dimension can be defined as an optional item.
- ExampleL Signature return has multiple attribute dimensions, such as signature return type (signature, id card copy) and signature return type (signature, seal). The operations corresponding to each dimension are differentiated. In this case, you can use the Capability Registration Management - Capability Optional Item Maintenance function to define multiple dimensions of signature return.



3.2 Capability Binding Optional Items

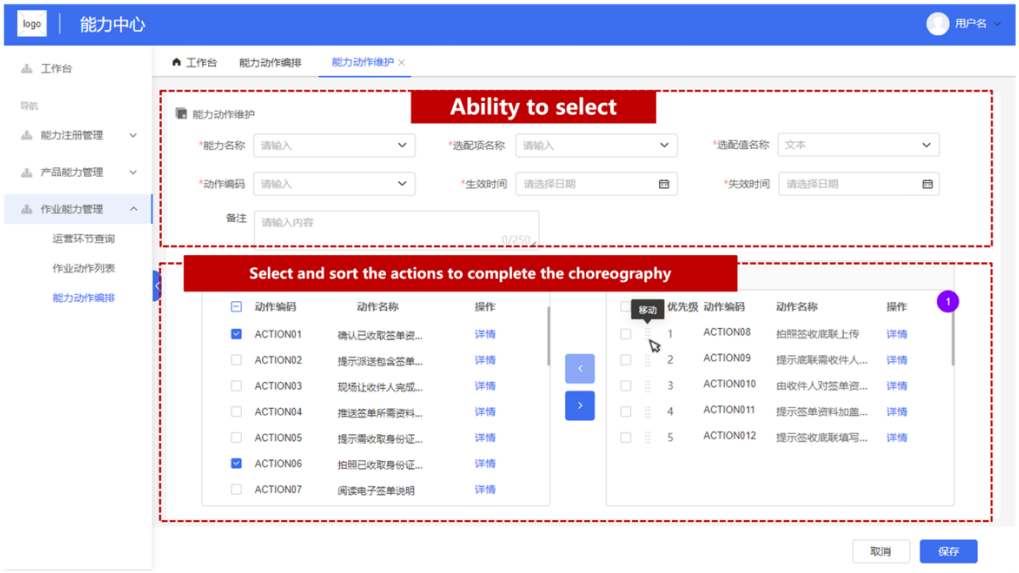
- **Function**: Ability registration requires basic ability information editing and ability matching Settings. Capability options and optional configurations are public information and can be defined in advance.
- **Example**: Sign back in the center of the ability is defined as an ability to operate, can first through the "registration management - ability list - new" page to sign back the definition of basic abilities, such as the ability to name a customizable, ability validity code automatically generated, customizable, positioning check binding to return after the completion of the single type, type of sign after receiving STH such as optional items.

3.3 Job Action Maintenance

- **Function**: Action model is divided into two layers: basic information and action attributes. Action name, meaning, operation hint, example picture upload and other information or constraints are defined through this interface to complete the definition of a basic action.
- **Example**: The operation of PDA can be regulated by defining different operation actions such as operation hints (such as: operation of signing and receiving the signed sheet at the bottom) and sample pictures. In the follow-up, the definition content of operation actions will be enriched with componentization.

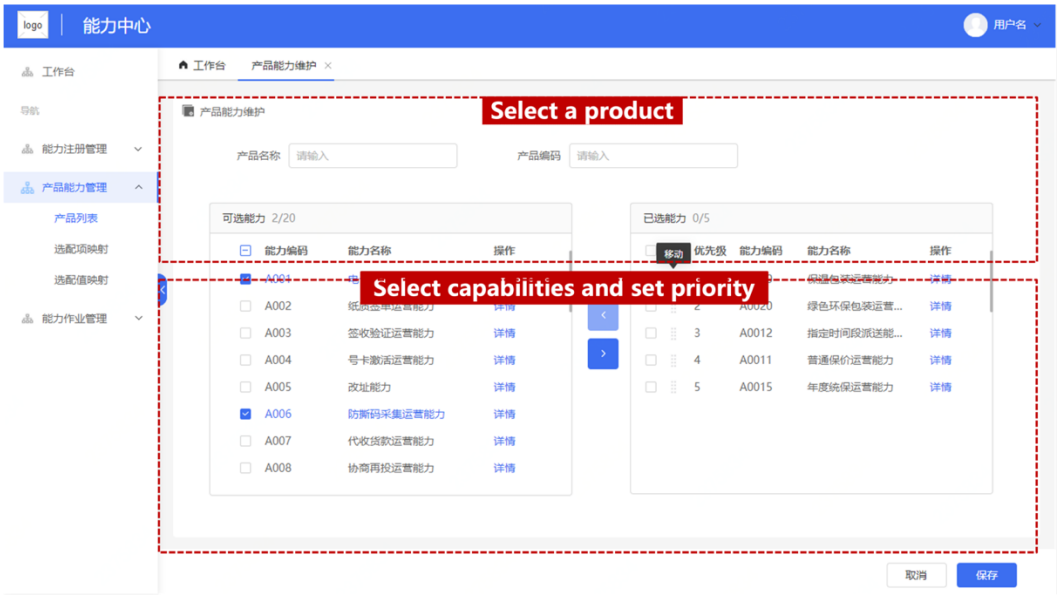
3.4 Ability Scheduling

- **Function**: Through this interface, it can realize the action of borrowing capacity to the smallest dimension and sort the action to guide the operation.
- **Example**: the paper receipt return capability includes the following operations: 1. Operation prompt: Operation of the bottom line of the receipt prompt. 2. 3. Photo taking: The user can take a maximum of 3 photos, which can be flexibly defined in the ability center. And prioritize the actions.

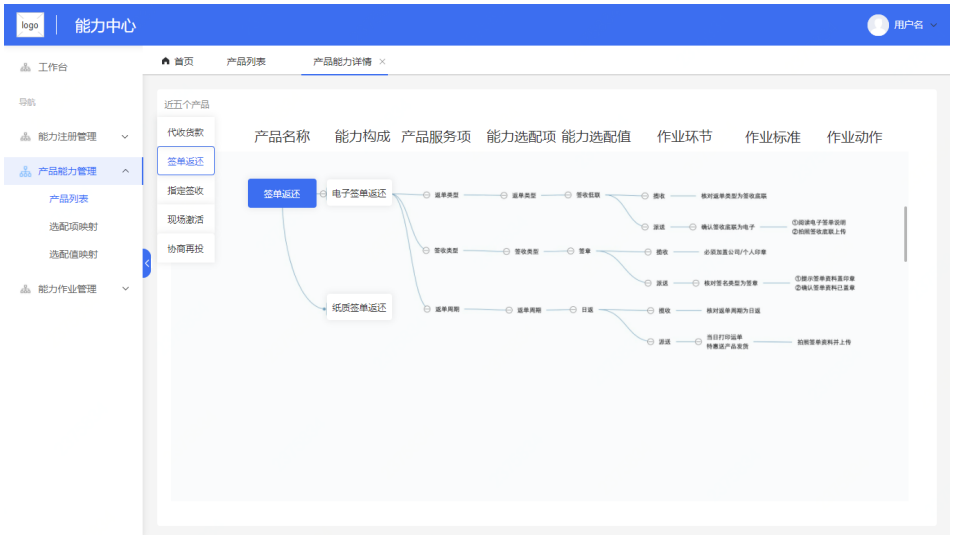


3.5 Binding Product Capabilities

- **Function**: Capability center displays all unbound capabilities in the product center. A product needs to be selected and bound to a product. You can maintain the relationship on the Product List-Add page. Select the product information automatically synchronized from the product center and select the registered capability to save.
- **Example**: If the product is divided into paper signature return capability and electronic signature return capability, select the two capabilities, and save them to bind the product and capability.

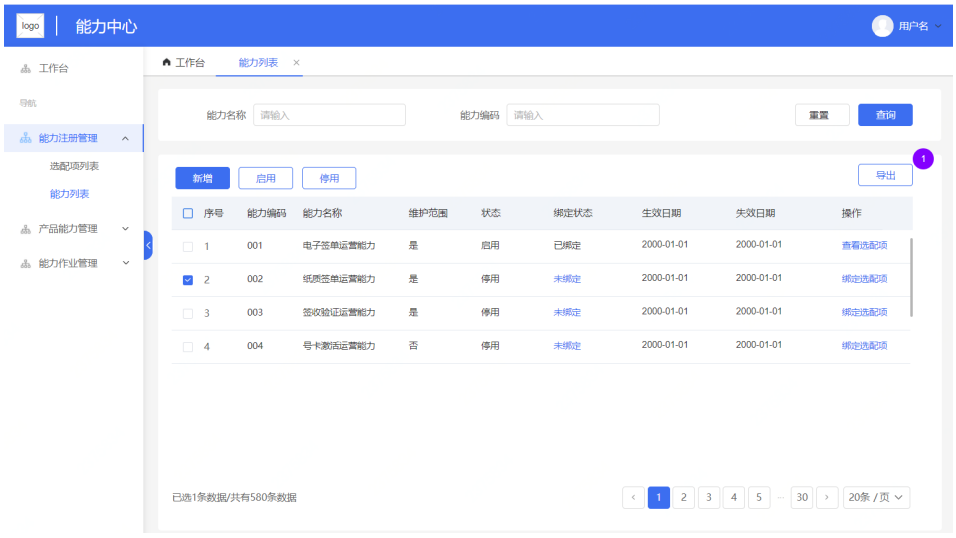


- **Function**: You can view and export the binding relationship between products, capabilities, and jobs on the Product Capability Management - Product Capability Query Panorama page.
- **Example**: There are electronic signature return capability and paper signature return capability. Under this capability, there are different options, such as order return type and signature receipt type, under which different operation links, operation standards and operation actions are defined. Including but not limited to product code, capability code, job code and other query conditions.



3.7 Operational Perspective Capability Panorama

- **Function**: Export capabilities and job relationships from the perspective of operational capabilities (without product-related information). You can view or export them through the Capability Action List function. The visual interface is planned to improve readability.



4 Conclusion

After about 15 days of product design and 2 months of product development, we have completed the test of capability center-V1.0, which can realize the configuration and construction of warehouse capacity in each link and make the warehouse distribution cost structure more clear and transparent.