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Value stream management

价值流管理

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is equivalent to ISO 22468:2020 "Value Stream Management (VSM)".

The following minimal editorial changes were made to this document.

- a) The name of the standard is changed to "Value Stream Management";
- b) Added a note to 3.13;
- c) Add the following statement before the formula in 4.5.2. "The parameters and variables in the formulas in this chapter can be found in Appendix A";
- d) Add the following statement in B.1. "The symbols in the figure are explained in Appendix A".

Introduction

Value Stream Management (VSM) is an effective tool for collecting, evaluating and continuously improving product and information flows within an organization.

The method includes value stream analysis, design and planning. The ideal state of value stream management is to map the current state of the value stream based on the collected data.

The current state is analyzed to design a future state with less waste and shorter lead time.

It was developed in the 1990s under the framework of lean production. Due to the differences between value stream management methods, value stream management There are communication and collaboration issues in practical applications, especially when different visualization processes and related computational processes are involved. These issues are common in departments, the application of value stream management methods needs to follow relevant regulations.

The company develops principles and guidelines to ensure a common, standard approach to capturing, evaluating and continually improving value streams across the enterprise value network.

Figure 1 Communication issues at the supply chain level

This universal, goal-oriented value stream management application can reduce or eliminate much of the waste or eliminate the need for a single contact or audit.

Accountants perform multiple and redundant value stream data preparation.

The process of developing a unified value stream management analysis method brings comprehensive value stream analysis for different departments and different process types.

At the same time, based on the unified value stream management method, product flow and information flow are formulated to coordinate process planning (see Figure 2).

Figure 2 Integrated supply chain

A common understanding of value streams enables organizations to align their internal and external processes. A standardized approach to value stream management ensures it realizes unified collection, visualization and calculation of value streams within organizations (including companies, institutions, suppliers, etc.) and along the supply chain.

All information or requirements in this document are transferable to any process type.

Figure 3 shows the different process types to which this rule applies.

The product flow in Figure 2 consists of the material/energy and data related processes shown in Figure 3. The material/energy related processes can be further the steps are decomposed into manual or automatic processes. For manufacturing, each process involves single-piece, batch or mass production.

Processes include services, trade or management processes.

Figure 3 Main process types

Value Stream Management

1 Scope

This document provides methods and application guidelines for analyzing, designing, implementing, evaluating, and adjusting value streams.

This document applies to value stream management of various processes related to materials, energy, and data and their combinations.

2 Normative references

This document has no normative references.

3 Terms and definitions

The following terms and definitions apply to this document.

Batch size

The number of products (semi-finished products) processed as a whole.

bottleneck

The process (step) with the heaviest load in terms of capacity, which may change dynamically.

Continuously make small improvements to the process, which can bring potential improvement opportunities.

Board control-ticket Internal purchasing requirements for product flow control (cards, boxes or electronic billboards, etc.).

Customer beat customerertakt Time interval, the production time of a single product to meet customer (expected) needs.

Note: Customer cycle time is expressed in unit time required for each item.

Lead time

The time span from receiving an order to delivering the product to the end customer.

pacemakerprocess

The process step that sets the speed for the entire process flow.

Product Family

A collection of products with the same or similar process steps.

NOTE: The term "product" may be understood to refer to content related to materials, energy or data.