INTERNATIONAL STANDARD

ISO 22468

First edition
2020-03

Value stream management (VSM)

Reference number
ISO 22468:2020(E)

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 154, *Processes, data elements and documents in commerce, industry and administration*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The value stream management (VSM) method is an effective tool for the collection, evaluation and continuous improvement of product and information flows within organizations. The VSM methodology includes the analysis, design and planning of value streams. In consideration of an ideal state, the current state of the value stream is mapped according to the gathered data and subsequently analyzed to design a future state with less waste and a reduced lead time. Based on a variety of different VSM approaches, which have been developed in the framework of Lean Production primarily since the 1990s, there are communication and collaboration issues during the application of VSM in practice due to different value stream visualizations and associated calculation procedures. In particular, these challenges occur at the interfaces of departments, corporate groups or entire supply chains (see Figure 1). Therefore, the adherence of rules and guidelines in regard to VSM is required to ensure a common and standardized method for the collection, evaluation and continuous improvement of value streams within cross-enterprise value networks.

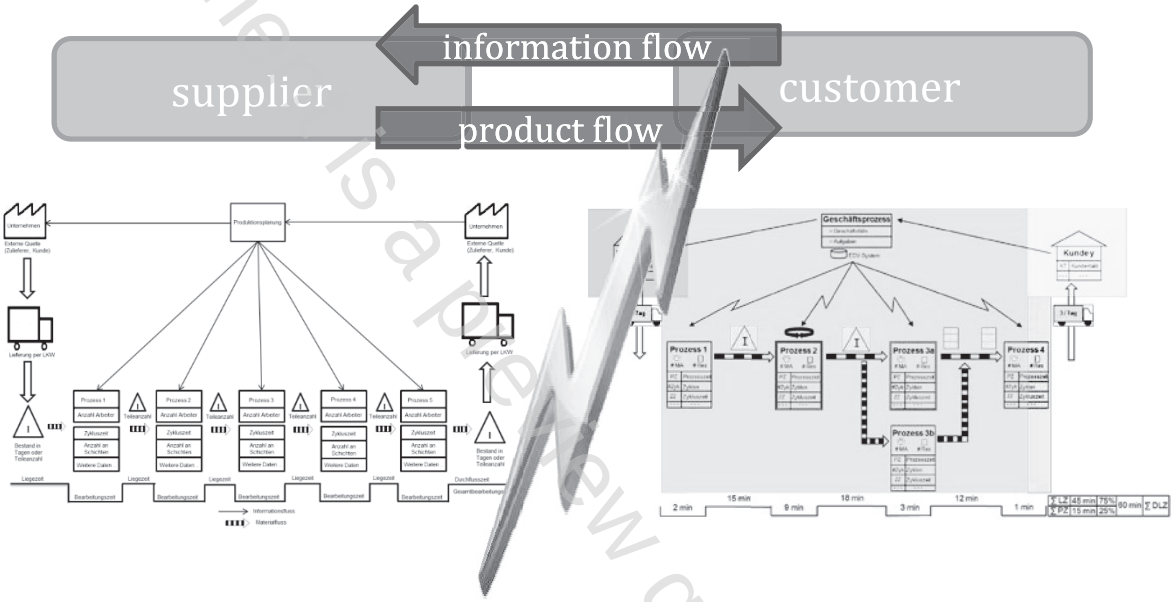

Figure 1 — Communication issues at supply chain interface

This common and goal-oriented application of VSM leads to a reduction or elimination of waste, e.g. unnecessary discussions or the multiple and thus redundant preparation of value stream data targeted to each contact person or auditor are omitted.

With the help of a defined procedure in terms of a unique VSM method, value streams of different sectors and process types are holistically improved. In addition, consistent product and information flows based on a unified VSM method enable a coordinated process planning (see Figure 2).

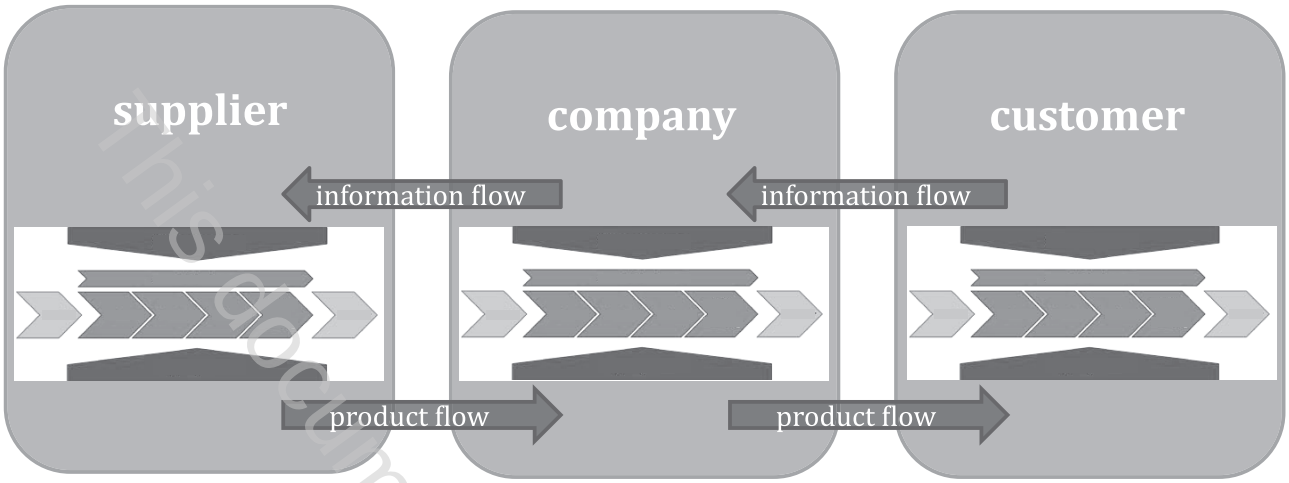

Figure 2 — Integrated supply chain

A common understanding of value streams enables organizations to streamline their internal and external processes. In this regard, the standardized VSM method ensures a unified collection, visualization and calculation of value streams, first within companies or corporations and consequentially along supply chains.

All information or requirements within this document can be transferred to any process type. Figure 3 shows a suitable scheme for the structuring of different process types[2].

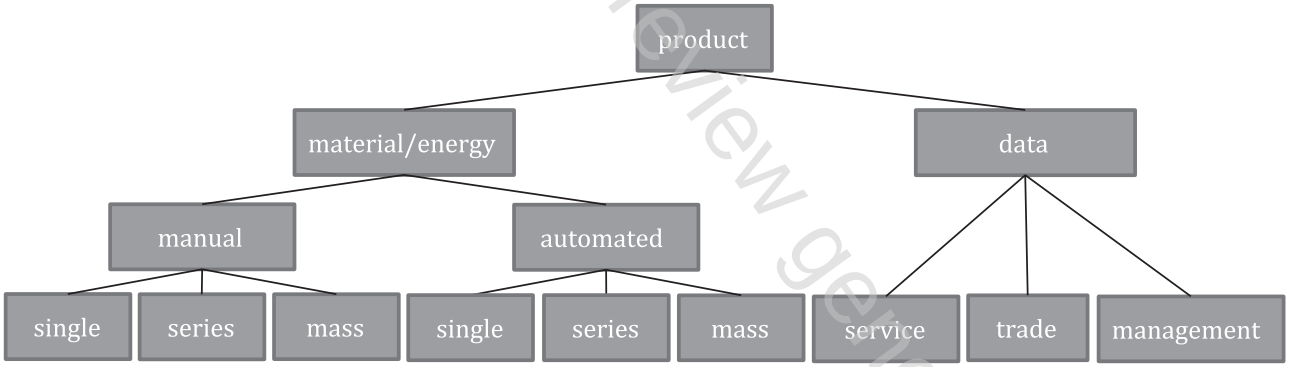

Figure 3 — Main process types

The downstream-oriented product flow in Figure 2 can be generated by material-, energy- or data-related processes. The material- or energy-related processes can be further separated in manual or automated processes of either single, series or mass production. The data-related processes comprise service, trade or management processes.

Value stream management (VSM)

1 Scope

This document provides guidelines for the application of VSM with regard to the collection, evaluation and continuous improvement of value stream relevant data. In addition, it describes the assessment of value streams based on defined key performance indicators.

The VSM method described in this document is generally applicable to material-, energy- or data-related process types. In practice, there are often hybrid forms of these main process types.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
batch size
number of jointly processed (semi-finished) products

3.2
bottleneck
most heavily loaded process (step) in terms of capacity, which is dynamically changing

3.3
continuous improvement
identification of improvement potentials in the sense of a continuous improvement process (CIP) in small steps

3.4
control-ticket
internal purchase requisition, which is used for product flow control (e.g. card, box or electronic)

3.5
customer takt
time interval, which corresponds to the operating time in relation to the (expected) customer demand per period under review

Note 1 to entry: Customer takt is expressed in time unit per piece.

3.6
lead time
time period from the date of order receipt to the transfer of the product to the end customer

3.7
pacemaker process
process step, which sets the pace for the overall process flow