
**Industrial automation systems
and integration — Standardized
procedures for production systems
engineering —**

**Part 5:
Manufacturing change management**

*Systèmes d'automatisation industrielle et intégration — Procédures
normalisées pour l'ingénierie des systèmes de production —*

Partie 5: Gestion du changement de fabrication

ISO 18828-5:2019

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Published in Switzerland

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Foreword

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This document was prepared by Technical Committee ISO/TC 184, *Automation systems and integration*, Subcommittee SC 4, *Industrial data*.

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Introduction

An increasingly dynamic business environment and the rapid changeover from a buyer's to a seller's market have gradually been increasing the complexity that companies are facing over the course of their product creation processes. Shortening product lifecycles, the extension of planning extents across global planning networks and an unwaveringly high expectation of process stability and quality have all turned change management within the product creation process into a vital success factor for internationally active manufacturers. In some of their departments, such as product development and the associated product data management, manufacturers have already begun responding to these developments by establishing sophisticated and technically supported processes that provide change-driven management within the product development process. However, this coordination and structural mapping of product changes [better known as engineering change management (ECM)] covers only a part of the relevant change processes occurring in digital product creation. Although ISO 10303, ISO 15531, ISO 19439 and IEC 62264 offer several data models, the current context of this document focuses on the area of production planning. Heterogeneous information technology (IT) systems and data models are common use due to the high amount of variations in the planning process. The data scheme in this document offers a generic method to structure the data and to present basic object types in order to implement manufacturing change management. In practice, the product systems required for the manufacturing and assembling of the products are likewise subject to many different changes. Some of these changes are preplanned and they are implemented specifically to achieve efficiency increases. Other changes, however, are subject to processes that are less structured or planned, which means that their practical repercussions and follow-up measures often cannot be adequately predicted. Typical for all of these types of change measures is the fact that the production system's applicable documentation and the actual state of production are temporarily or permanently inconsistent with each other, i.e. they are asynchronous (see [Figure 1](#)).

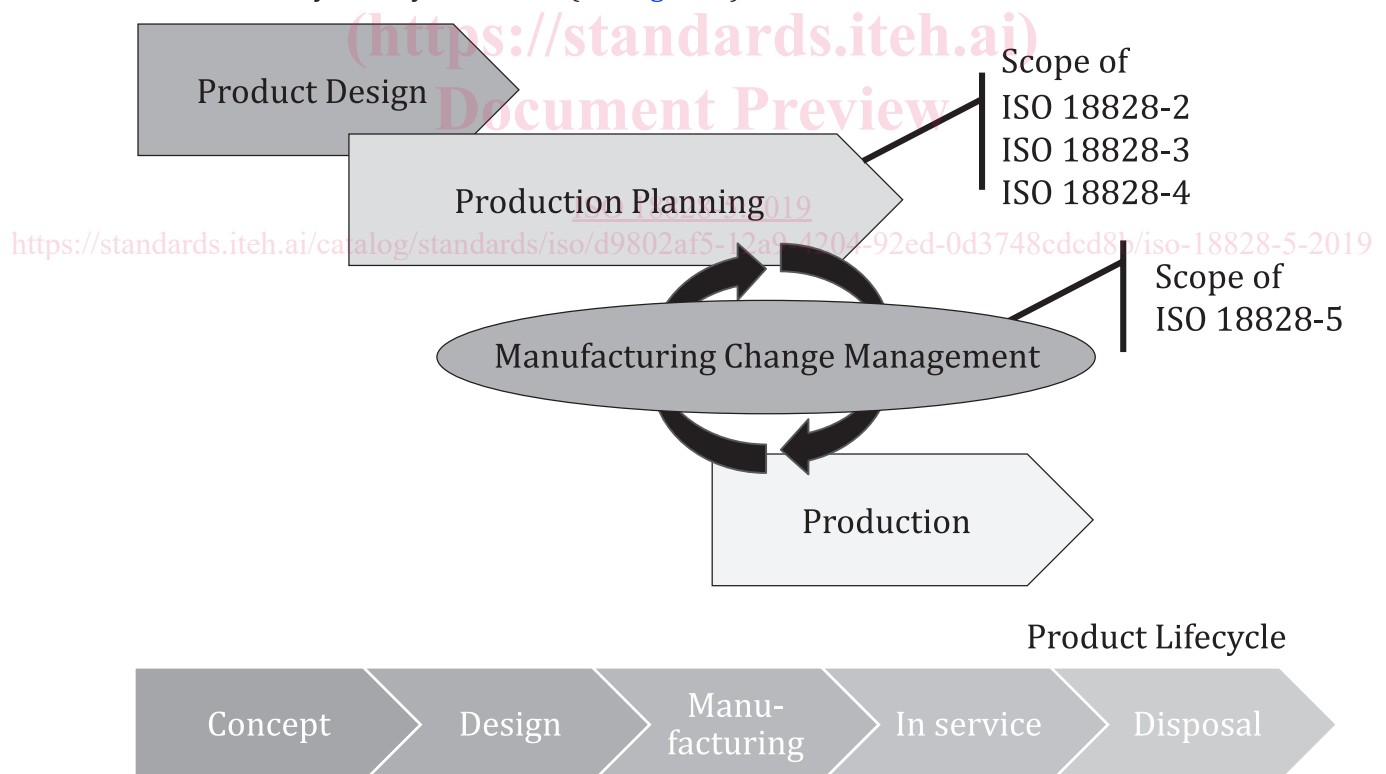


Figure 1 — Context of manufacturing change management

The applicable documentation for the creation, the commissioning and the operation of production systems is provided by the planning documentation. At the start of production, the documents and definitions of the planning departments serve as a reference for everything. Subsequently, some new measures typically emerge that are more practical than the originally planned ones, and they are the